STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Lindsay Whalin)
MEETING DATE: June 13, 2018

ITEM: **7**

SUBJECT: **Hanson Permanente Cement, Inc., and Lehigh Southwest Cement Company, Permanente Quarry and Cement Plant, Cupertino, Santa Clara County –** Adoption of Waste Discharge Requirements

CHRONOLOGY: Technical reports submitted to the Board pursuant to Section 13267:

2012 – Report of Waste Discharge
2013 – Site History, Potential Pollutant Source Identification, Waste Characterization (solids and liquids), Waste Pile Runoff and Seep Investigation, and Hydrogeologic Characterization, and Groundwater Investigation Reports

DISCUSSION: The Revised Tentative Order (TO) (Appendix A) would regulate wastes, and activities at the Permanente Quarry and Cement Plant (site) that generate wastes, that have the potential to impact groundwater and hydrogeologically-connected surface waters. Potential pollutant sources at the site include operations and waste disposal methods that are current (associated with mining limestone) and historical (e.g., the manufacture of aluminum foil and magnesium incendiary bombs). Prior to developing the TO, Board staff required seven investigations pursuant to Water Code section 13267 to assess whether site activities have impacted or pose a threat to groundwater. Consistent with preliminary assessments performed by the Department of Toxic Substances Control (1989) and U.S. EPA (2012), no impacts have been identified that suggest immediate cleanup action is necessary. However, the potential for impacts necessitates Board oversight of quarrying operations and the containment of current and historical disposal units, as well as the ultimate closure and reclamation of the site, which is anticipated in coming decades.

Adoption of Waste Discharge Requirements contained in the TO is appropriate to implement laws and regulations for the management and disposal of the wastes currently and historically generated at the site. The TO requires the development, implementation, and periodic update of an Operation, Maintenance and Contingency Plan; a Self-Monitoring Program; preliminary and final Closure and Post-Closure Plans; and Financial Assurances to demonstrate that groundwater quality is and will be protected.

We circulated a draft of the TO to interested parties and received comments from the named dischargers and three neighbors (Appendix B). In response to comments received, we made revisions to the TO as appropriate, primarily to fix typos and address inadvertent inconsistencies and omissions. Appendix C documents our responses to the comments.

RECOMMEN-DATION: Adoption of the Revised Tentative Order

APPENDICES:
A – Revised Tentative Order
B - Comments Received
C – Responses to Comments

APPENDIX A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED TENTATIVE ORDER No. R2-2018-XXXX

WASTE DISCHARGE REQUIREMENTS

HANSON PERMANENTE CEMENT, INC.
and
LEHIGH SOUTHWEST CEMENT COMPANY

PERMANENTE QUARRY AND CEMENT PLANT
24001 STEVENS CREEK BOULEVARD
CUPERTINO, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter the Water Board, finds that:

OWNERSHIP AND LOCATION

1. Hanson Permanente Cement, Inc., owns and Lehigh Southwest Cement Company operates a limestone quarry and cement manufacturing plant called the Permanente Quarry and Cement Plant (hereinafter called the Site). These two parties will hereinafter be referred to collectively as the Dischargers.

2. The Site occupies 672.7 acres of a 3,510-acre property located at 24001 Stevens Creek Boulevard in Cupertino, in the unincorporated foothills of western Santa Clara County at the end of Stevens Creek Boulevard. The Site comprises the headwaters of Permanente Creek, which runs along the west, south, and eastern border of the Site. An unnamed tributary to Permanente Creek makes up the Site's northern perimeter (Figure 1).

3. The Site has undergone several changes in name, ownership, and operation, as follows:

   a. Since 1939 and until July 1, 2008, Hanson Permanente Cement, Inc., or its predecessor(s), owned and/or operated the Cement Plant, Quarry, and related property at the Site. The Permanente Corporation, was formed on February 25, 1939. The name of that corporation changed several times between 1943 and 1979 (changed to Permanente Cement Company on February 25, 1943, Kaiser Cement & Gypsum Corporation on July 2, 1964, and to Kaiser Cement Corporation on May 1, 1979). Kaiser Cement Corporation merged twice, once with Kaiser Cement Corporation of Delaware on May 4, 1982 (Kaiser Cement Corporation of Delaware survived) and then with Superlite Builders Supply, Inc., of Arizona on February 3, 1989 (Superlite Builders Supply, Inc., survived and, on the same date, changed its name to Kaiser Cement Corporation). On February 19, 1999, Kaiser Cement Corporation changed its name to Hanson Permanente Cement, Inc. On July 1, 2008, Hanson Permanente Cement, Inc., leased the Cement Plant, Rock Plant, Quarry, and property related to its corporate affiliate Lehigh Southwest Cement Company to operate.

   b. On August 10, 1995, Kaiser Cement Corporation purchased 152 acres from Kaiser Aluminum and Chemical Company (Kaiser Aluminum) where Kaiser Aluminum had previously operated its Aluminum Plant and/or other activities. From 1941 to 1990, Kaiser Aluminum used the Site for the manufacture of magnesium and aluminum foil products and for aluminum research activities. During World War II, the facility was reportedly

used to manufacture magnesium incendiary bombs. Current ownership of the former Aluminum Plant is retained by the Dischargers.

PURPOSE OF ORDER

4. The Water Board issues Waste Discharge Requirements (WDRs) to regulate discharges to land pursuant to California Code of Regulations (CCR) 27 (Title 27) and section 13263 of the California Water Code (CWC). This Order governs wastes and activities that generate waste at the Site that have the potential to impact groundwater and hydrogeologically-connected surface waters for the protection of human health and the environment. This includes current and historical disposal activities, aspects of quarrying operations that generate waste, and reclamation of disposal units. Specifically, these WDRs:

    a. Require that the Dischargers develop a Self-Monitoring Program (SMP) consistent with Title 27 to enable the detection of chemical releases from the Site and to evaluate whether groundwater and hydrogeologically-connected surface waters have been impacted by current or historical activities. In addition, it requires baseline monitoring to dictate reclamation plans, which includes expansion of the existing groundwater monitoring network and development of an updated conceptual site model;

    b. Require an Operation, Maintenance, and Contingency Plan for waste management units (WMUs) to ensure containment procedures and monitoring infrastructure are properly operated and sufficiently monitored and maintained to be effective;

    c. Require Closure and Post-Closure Maintenance Plans to ensure reclamation strategies are adequately protective and that implementation will not impact groundwater or hydrogeologically-connected surface waters; and Preliminary Closure Plans (to be updated biennially) to enable Water Board staff oversight of interim preparations and evaluation of reclamation strategies; and

    d. Require financial assurances to demonstrate that the Dischargers are capable of covering costs associated with closure and post-closure maintenance, as well as corrective actions should a release be identified.

SITE DESCRIPTION AND HISTORY

5. Limestone has been mined at the Site since approximately 1903 for use in the production of cement and/or aggregate materials. Waste materials including overburden and waste rock, as well as processing residuals, are disposed of in two areas of the Site, the West and East Materials Storage Areas (WMSA and EMSA, respectively; see Figure 2). Though this material is naturally-occurring rock, the removal of the material from its native bedrock environment renders it mining waste. Title 27 section 22480 defines mining waste as: "*Waste from the mining and processing of ores and mineral commodities. Mining waste includes: 1) overburden; 2) natural geologic material which have been removed or relocated but have not been processed (waste rock); and 3) the solid residues, sludges, and liquids from the processing of ores and mineral commodities.*"

The threat to water quality from waste rock is greater than from native bedrock. The quarrying process (blasting, excavation, crushing, etc.) transforms bedrock into particles, sized from fine silt to cobbles. This process increases the surface area that is subjected to weathering, increasing its leaching potential. For example, exposure to oxygen and water can result in the solubilization (dissolution and potential mobilization) of some metals and metalloids that would otherwise be bound in the bedrock.

6. Wastes from cement manufacturing are not currently disposed of in the WMSA and EMSA, but the WMSA was used historically for this purpose. The preparation of cement involves rock mining, crushing, and grinding of raw materials comprised of limestone, clay, sand, and iron ore (materials bearing lime, alumina, silica, and ferrite respectively); calcining the materials in a rotary kiln; cooling the resulting intermediate product called clinker; mixing the clinker with gypsum; and then finally milling, storing, and shipping or bagging the finished cement product. Cement wastes, including cement kiln dust and bricks, may contain heavy metals and have a high pH (basic), potentially contributing to alkalinity in waters that come into contact with the wastes. This is relevant because the pH of waters affects the solubility (leaching capability) of metals and metalloids, such as reducing the leachability of some metals and increasing it for some metalloids, including selenium. The WMSA was used historically for disposal of aggregate fines (very small particles) that were a waste product of aggregate production on Site. These materials are classified as designated waste in Title 27 for similar reasons as the waste rock.

7. Several historic disposal units or other potentially-contaminated sites, including the Dry Canyon Storage Area (DCSA), the Former Surface Impoundment (FSI), the Upper Level Landfill (ULL), the Former Asphalt Plant Area (FAPA), and the Former Brine Pond (FBP) are present at the Site, buried beneath the EMSA (see Figure 2). These units were used for the disposal of mining and cement manufacturing wastes; however, waste disposal practices of the time make it likely that other types of wastes may be present, for instance from the manufacture of aluminum foil or incendiary bombs as described in Finding 3.b. These units are considered part of the EMSA under these WDRs and therefore regulated as a WMU to ensure waste remains isolated.

8. **Waste Characterization**: Given the long history of use and the fact that disposal units onsite have been in operation since before recordkeeping was required or this activity was regulated, it is anticipated that the WMSA and EMSA may contain wastes other than waste rock and aggregate fines. These wastes may include kiln bricks, other mining or cement manufacturing wastes, chemical drums, or storage tanks. In addition, limestone that was not deemed sufficiently valuable to process at the time of extraction was disposed of historically. Limestone at the Site contains selenium that, under some conditions, can potentially leach into water it comes into contact with. As discussed further in the Regulatory History section below, the Dischargers conducted a waste characterization investigation of the waste piles, evaluating the solid waste for a comprehensive list of potential constituents of concern (COCs), by drilling subsurface borings. No evidence of such materials was identified.

However, this and other historical waste characterization investigations were restricted by the size and volume of wastes contained within the WMSA and EMSA, which prohibits a comprehensive in situ characterization that would definitively resolve whether other types of wastes are present (i.e., a small, discrete volume of highly contaminated waste can remain undetected). Therefore, to be adequately protective of human health and the environment it is reasonable and necessary to monitor groundwater as an exposure pathway for a broad list of potential COCs. To meet this objective, the Dischargers have been monitoring groundwater since August 2015, and Provision 3 of this Order requires the monitoring network be expanded for both Detection Monitoring (to detect a possible release to groundwater) and Evaluation Monitoring (to investigate evidence that a release may already have occurred). Additional waste characterization will be necessary and possible in the WMSA during reclamation if materials are removed from the pile for use as backfill in the Quarry Pit as is currently proposed in the Site Reclamation Plan. Provision 4 of this Order requires that the Dischargers submit Preliminary Closure Plans, and Provision 5 requires final Closure and Post-Closure Maintenance Plans to demonstrate that reclamation will not adversely impact groundwater. Provision 4 specifically requires WMSA material be further characterized prior to use as Quarry backfill material, if the Dischargers proceed with this approach.

9. **Waste Containment:** Current waste containment practices for the WMSA and EMSA consist of stormwater controls (e.g., best management practices such as berms, wattles, settling ponds, gabion basket check dams, floc logs, or active treatment for stormwater from the EMSA) to minimize the discharge of runoff that has come in contact with mining waste. Stormwater discharges from the Site are regulated under the Site's National Pollution Discharge Elimination System (NPDES) permit (see Appendix A, Regulatory History Outside the Scope of these WDRs). While this Order does not duplicate the NPDES requirements, Provision 7 requires the Dischargers to submit an Operation, Maintenance, and Contingency Plan that will describe the implementation of necessary controls to control contaminant mobility from all WMUs, including the WMSA and EMSA. Section 22470(b) of Title 27 permits the exemption of liner requirements provided that water quality monitoring is sufficient to promptly detect a release and contingencies are in place, which are addressed by Provisions 3 and 7.

10. The cement plant has been operating since 1939 and has supplied cement and other construction materials like stone, sand, and gravel to the Bay Area since 1923. Currently, 95% of the products manufactured on the Site are utilized locally in the Bay Area. Discharges to waters of the United States, including storage in surface impoundments (ponds) associated with the cement manufacturing process, are regulated under the NPDES permit and are therefore not covered under these WDRs.

Regulatory History Related to These WDRs

11. These WDRs address past, current, and future activities with the potential to impact groundwater that are not addressed by other Water Board programs (stormwater, and mining and cement manufacturing process wastewater, and surface impoundment/pond discharges are regulated under an NPDES permit). This Regulatory History section therefore is limited to historical regulatory actions taken related to the development of these WDRs. A brief description of additional regulatory history can be found in Appendix A.

12. The Site has heretofore not been regulated under Title 27 WDRs; however, Water Board staff have required multiple investigations (via letter requirements pursuant to CWC section 13267) to identify whether current or historical activities have impacted or have the potential to impact groundwater. Much of this information was also collected to develop these WDRs, specifically to generate provisions (the technical report requirements in section C of this Order) that ensure the Dischargers are operating the Site and planning future site closure/reclamation in a manner that is protective of human health and the environment. This section describes the purpose and results of historical investigations. Interpretations, conclusions, and justification for these provisions can be found in subsequent findings (18 through 34).

13. **Order No. R2-2013-1005:** Water Board staff issued a letter order pursuant to CWC section 13267 on January 22, 2013 (amended in June 2013), to require the submittal of information to initiate several regulatory actions across Water Board programs. Requirements pertaining to activities regulated by these WDRs include Site History and Potential Pollutant Source Identification Reports. The objective was to determine if the Site has the potential to impact groundwater, either due to current or historic activities. Known activities included limestone mining, cement and former asphalt plant manufacturing, and former aluminum and magnesium research and manufacturing. The 2013 order also required the submittal of chemical inventories, storage and transport information (tanks, trunks, and pipes), and documentation pertaining to past releases. However, the Site was in operation before regulation and before waste records were kept. In addition, a fire at the Site destroyed some documentation. Therefore, it was not possible to predict all potential sources of pollution, and it was therefore not possible to limit the list of potential COCs required in waste characterization and groundwater investigations.

14. **Report of Waste Discharge:** To evaluate if waste storage and disposal practices specifically could be impacting or have impacted groundwater, Water Board staff issued a letter order pursuant to CWC section 13267 on July 20, 2012, to require the Dischargers submit a Report of Waste Discharge (ROWD). This submittal is required of all disposal activities regulated under Title 27, to characterize onsite wastes as potential sources of pollution to State waters. The ROWD submitted by the Dischargers indicated that the WMSA and EMSA and ponds onsite were potential candidates for regulation under Title 27; however, further information was required to develop WDRs, prompting subsequent requirements described below.

15. **WMSA, EMSA, and Pond Waste Characterization Investigation:** In a separate letter order pursuant to CWC section 13267 on January 22, 2013, the Dischargers were required to submit

workplans and reports to characterize mining wastes onsite, including solid material extracted from the Quarry and disposed of in the WMSA and EMSA, and settled solids in onsite ponds. In addition, liquids in ponds that came into contact with solid mining wastes, which could potentially be classified as mining waste (for example, if contaminants were dissolved or entrained in the process), were also characterized. The list of potential COCs included inorganic (metals and metalloids, like selenium) and organic contaminants (including polychlorinated biphenyls or PCBs, pesticides, volatile and semi-volatile organic compounds or VOCs and SVOCs, and petroleum hydrocarbons). The results of these investigations indicated:

a. Liquid waste units: Several ponds contain concentrations of contaminants that exceed the applicable water and soil quality objectives (WQOs and SQOs, respectively) for the protection of drinking water and/or aquatic habitat. Concentrations of selenium, cadmium, molybdenum, nickel, and vanadium were elevated in samples from the water column, but were within an order of magnitude of WQOs. Mercury and total petroleum hydrocarbons (as diesel and motor oil) were greater than an order of magnitude above WQOs. In pond sediments, concentrations of metals, selenium, and arsenic exceeded several SQOs for the protection of ecological health.

   Water Board staff have subsequently determined it is appropriate to regulate surface water discharges under the NPDES and Total Maximum Daily Load (TMDL) programs and not under Title 27. Data was therefore provided to Water Board staff responsible for the NPDES permit and development of the selenium TMDL for Permanente Creek to aid regulation of surface water at the Site. Since this investigation was performed, the Dischargers have substantially modified and improved the onsite ponds. Several were excavated and lined; others were abandoned or use has been severely restricted, with flow redirected to lined ponds.

b. Solid waste units: The solid waste units consist primarily of limestone quarry overburden waste rock. Overburden waste placed in the solid waste units consists of rocks of the Franciscan Complex and Santa Clara Formation rocks, including chert, greenstone, and low-grade limestone that, at the time of quarrying, was not profitable for use in cement production. These wastes were chemically characterized and leaching tests conducted and determined to contain metals and metalloids, including arsenic, selenium, thallium, cobalt, vanadium, mercury, and copper above soil and groundwater quality objectives, the latter pursuant to leaching tests. The leaching tests suggested relatively low metal solubility in de-ionized water, which typically has a neutral or slightly acidic pH (due to reaction with the air); however, groundwater at the Site is neutral to basic (6.7-9.5). The solubility of selenium and arsenic may therefore be higher than the leaching tests indicate. These results prompted Water Board staff to require further waste characterization of the WMSA and EMSA in June 2013 (see below Waste Pile Runoff and Seep Investigations).

   These results confirmed that the WMSA and EMSA contain waste materials that have the potential to contaminate groundwater and hydrogeologically-connected surface

water, thus meeting the classification for Group B mining wastes (as defined by Title 27). These waste disposal units are therefore regulated as WMUs in these WDRs. Contaminant transport of the particulate fraction is relevant for surface water discharges, which is regulated by the Site's NPDES permit and is also being evaluated in the development of the TMDL for selenium in Permanente Creek. Potential impacts to groundwater necessitated a groundwater investigation, described below.

16. **Waste Pile Runoff and Seep Investigation:** On June 26, 2013, Water Board staff issued a letter order pursuant to CWC section 13267, in which the Dischargers were required to evaluate runoff and seeps from the WMSA and EMSA. The objective was to identify whether COCs were mobilized by contact of the wastes with stormwater (note that this analysis occurred prior to the Dischargers later implementing best management practices and interim reclamation activities designed to improve water quality). Results showed elevated concentrations of metals and metalloids, indicating particulate transport, and elevated concentrations of dissolved selenium. The results found that total (unfiltered) concentrations of mercury, copper, selenium, lead, silver, thallium, and zinc were elevated, and dissolved (filtered) selenium concentrations were above WQOs. Subsequent sampling of stormwater runoff conducted pursuant to requirements from Santa Clara County support the conclusion that selenium concentrations are elevated. This confirmed that inorganic contaminants are mobilized by stormwater running over and through the waste piles. Surface water impacts are regulated under the Site's NPDES permit; however, these results increased Water Board staff's concern about potential impacts to groundwater, prompting a hydrogeologic investigation requirement.

17. **Hydrogeologic Characterization and Groundwater Investigation:** In the same June 26, 2013 letter order, the Dischargers were required to submit a workplan and then conduct a hydrogeologic characterization and groundwater investigation, including the development of a Conceptual Site Model. The primary objectives of the characterization were to determine if the WMUs have contaminated groundwater and to characterize groundwater flow to identify potential contaminant flow pathways and receptors (including the interaction of groundwater and surface water). A groundwater well network was installed by the Dischargers during autumn 2015 (see Figure 3). Difficulty gaining access or agreements to drill and install monitoring wells offsite prohibited the installation of groundwater wells north of the Site within a reasonable timeframe; therefore, seeps from the fractured bedrock were monitored in this area. A description of the results can be found below in the Current Hydrogeological Conceptual Site Model and Monitoring Program section.

Geologic Setting

18. The Site is located within California's Coast Range geomorphic province and overlies three geologic formations as illustrated in Figure 4:

    a. The western portion of the Site (including most of the WMSA) overlies fractured bedrock of Mesozoic metavolcanics (Mzv), including andesite, rhyolite, greenstone, volcanic breccia, and other pyroclastic rocks, in part strongly metamorphosed. This

portion of the Site includes volcanic rocks of the Franciscan Complex (basaltic pillow lava, greenstone, and minor pyroclastic rocks).

b. The center of the Site (including the eastern portion of the WMSA, the Quarry Pit, and the Quarry Office/Maintenance Area) overlies Cretaceous-Jurassic marine sedimentary and meta-sedimentary rocks (KJf). These units are also part of the Franciscan Complex, including sandstone with smaller amounts of shale, chert, conglomerate, as well as the limestone that is mined for cement production. The limestone units are of limited extent and occur within a structural block that is truncated and surrounded by greenstone and greywacke.

c. The eastern portion of the Site (including the EMSA and the cement manufacturing plant) overlies Pliocene-Pleistocene non-marine (continental) sedimentary rocks of the Santa Clara Formation (QPc), which consists primarily of loosely consolidated sandstone, shale, and gravel deposits and which in turn overlie rocks of the Franciscan Complex.

Seismicity

19. The Site is located approximately two miles east-northeast of the San Andreas fault zone, which is capable of a Richter Magnitude 8 earthquake. For design purposes, ground shaking at the Site was estimated using probabilistic methods for an earthquake with a 10 percent probability of exceedance in a 50-year period. Using the 2008 Update of the United States National Seismic Hazards Maps (Peterson, et. al., 2008), which utilizes the findings of the next Generation Attenuation Relation Project, it is estimated the design peak ground accelerations for the Site are approximately 0.57g.

20. The San Andreas Fault Zone is located approximately two miles southwest of the Quarry (Figure 5). The Sargent Berrocal Fault Zone (SBFZ), part of the Santa Cruz Mountains front-range thrust fault system, parallels the San Andreas to the east and forms the eastern-most structural boundary to the Permanente Terrain. Near the Site, the SBFZ consists of two northwest-trending, sub-parallel faults, the Monta Vista Fault Zone on the northeast and the Berrocal Fault Zone on the southwest. The Monta Vista Fault Zone is located approximately one mile to the northeast of the Quarry along the northeastern boundary of the Site and forms the fundamental geologic and hydrogeologic boundary between the basement bedrock units at the Site and the much younger water-producing alluvial units downgradient of the Site in the Santa Clara Valley. A strand of the Berrocal Fault Zone extends beneath the cement plant area, south of the EMSA, and extends westward into other portions of the Site. The Monta Vista Fault Zone forms the fundamental geologic and hydrogeologic boundary between the basement bedrock units at the Site and the much younger water-producing alluvial units downgradient of the Site in the Santa Clara Valley. The fault zone redirects shallow groundwater and surface water flow from the Site north and then east, as described in the next section.

Hydrogeology and Hydrology

21. The Site is located in upland bedrock terrain that slopes eastward toward the Santa Clara Valley. Surface water and groundwater flow from the bedrock hills towards the alluvial valley. The primary groundwater basin near the Site is the Santa Clara Valley Groundwater Basin. The Site lies just to the west of the Santa Clara sub-basin (2-9.02) of the Santa Clara Valley Groundwater Basin, and the remaining portion of the Site overlies fractured bedrock that drains to these basins. The western boundary of the Santa Clara Valley Groundwater Basin is generally considered to be the contact of the alluvial valley deposits with the consolidated bedrock formations in the hills. The contact between the alluvial valley and the bedrock formations is the Monta Vista Fault Zone, which may limit hydraulic communication between the bedrock and alluvium (*Hanson, R.T., Li, Zhen, and Faunt, C.C., 2004, Documentation of the Santa Clara Valley regional ground-water/surface water flow model, Santa Clara County, California: U.S. Geological Survey Scientific Investigations Report 2004–5231*).

22. Groundwater typically occurs at depths of 80 to 120 feet in the upland hillside terrain and at shallower depths (10 ft to 40 ft) at lower elevations. Structural complexity also creates locally perched and semi-confined conditions. In general, first-encountered groundwater at the Site occurs under unconfined conditions. Groundwater occurs within the Santa Clara Formation in the eastern portion of the Site in both secondary openings (i.e., fractures, joints, shears zones, and faults) and potentially in primary pore spaces within the more permeable sandstones and conglomerates. Groundwater also occurs in the fractured bedrock in the remainder of the Site; however, the occurrence of groundwater at depth within the Franciscan bedrock is almost exclusively within secondary openings such as joints, fractures, shear zones, and faults, in contrast to primary porosity or pore spaces within the rock. Because of the limited amount of storage capacity and the relatively low permeability, the Franciscan is considered by the State Department of Water Resources (DWR) to be “nonwater-bearing” with respect to production of usable quantities of water. However, groundwater flow in the highly weathered upper portion of the Franciscan bedrock is not necessarily fracture-controlled but similar to an equivalent porous media.

23. In general, the Santa Clara Formation rocks overlie the Franciscan Assemblage, and the formations are in hydraulic communication. In some areas, the Santa Clara Formation is considered to be part of the alluvial valley deposits that make up the Santa Clara Valley Groundwater Basin. However, the portion of the Santa Clara Formation that is considered to be water-bearing is that which dips beneath the younger alluvial deposits in the large valley areas, northeast of the Monta Vista Fault, and not that portion of the formation that is located west-southwest of the Monta Vista Fault Zone. The Site is located in upland bedrock terrain west of this basin. The boundary of the Santa Clara Valley Groundwater Basin is generally considered to be the contact of the alluvial valley deposits with the consolidated bedrock formations at the surface and beneath the alluvium. As discussed above, the contact between the bedrock and the alluvium is a fundamental structural boundary formed by the Monta Vista Fault Zone that may limit hydraulic connection between the bedrock and the alluvial basins. At the Site, this contact is located just northeast of the Site property line. (Hanson USGS, 2004).

24. Figures 6 and 7 illustrate groundwater flow in wet and dry seasons in the vicinity of the WMSA and EMSA, respectively. Groundwater levels and flow directions are controlled primarily by the terrain and geology of each sub-basin of the WMSA and EMSA. The flow direction in the WMSA appears to be controlled by the ridgeline that runs from west to east, which acts as a groundwater divide to the north of all but a very small portion of the WMSA. Groundwater south of this ridgeline flows to the south and southeast toward Permanente Creek. Groundwater from the western and northern parts of the WMSA flow to the south and southeast, and, along the eastern portion of the WMSA, flow is to the south and southwest. A divide is present along the eastern limit of the WMSA that is influenced by quarry operational activities.

    The EMSA sits astride two sub-drainage basins separated by a prominent north-south trending ridge. Groundwater in this area appears to flow toward the southwest and south. The eastern portion of the EMSA is situated to the east of the north-south ridge in a separate sub-drainage basin that drains predominately to the south and east toward Permanente Creek. Along the northern ridgeline, groundwater flow is to the north and northeast.

25. In 2000, the State Water Resources Control Board (State Water Board), Division of Water Quality, created a California map identifying soil or rock conditions that may be more vulnerable to groundwater contamination. Based on information from DWR Bulletin 118-1 (Appendix A, pg. 85), the Santa Clara sub-basin has been designated as a Hydrogeologically Vulnerable Area. These areas are considered more susceptible to groundwater contamination due to hydrogeological conditions that "allow recharge at rates substantially higher than in lower permeability or confined areas in the same groundwater basin." The designation includes mountain or foothill areas of fractured rock that provide primary recharge to it; thus, the entirety of the Site is covered under this Hydrologically Vulnerable designation. A shape file and documentation of this designation can be found at https://www.waterboards.ca.gov/water_issues/programs/gama/publications.shtml.

26. The regional-scale direction of groundwater flow is interpreted to be from west to east, flowing from the topographic high at Black Mountain toward the Santa Clara Valley. Based on fundamental hydrogeologic principles and supported with hydrogeologic data collected to date, groundwater flow in the area of the main Permanente Creek drainage basin is interpreted to flow toward the north from the steep groundwater divides/ridges separating Permanente Creek from Monte Bello Creek to the south and to the south from the ridge separating Permanente Creek from Ohlone Creek (also known as Wildcat Canyon Creek) to the north. In other words, groundwater flow is generally from the main ridge crests toward the primary drainages in the region, where it subsequently discharges. Groundwater is also captured by the Quarry, which acts as a local sink due to the dewatering from mining in the Quarry and resulting head reversal from the Creek to the Quarry. That stretch of Permanente Creek is captured by the Quarry, which has been mapped and defined as part of prior investigations associated with the Reclamation Plan. Based on existing data, groundwater flow is preferentially within the more permeable limestone units; however, because the limestone units are of limited extent, the

overall basin-scale groundwater flow system is controlled by the lower permeability of the greenstone/graywacke units.

27. Recharge to the overall groundwater system is primarily by the infiltration of precipitation. The areas with flatter slopes or areas in topographic lows receive more uniform recharge, because runoff of rainfall is less than the runoff generated from the steeper slopes. Runoff from the steeper slopes can accumulate in topographically low spots, thereby focusing infiltration in these locations. Natural recharge to the Santa Clara Valley Groundwater Basin occurs primarily as infiltration from streams that exit the upland areas within the drainage basin onto the alluvium of the valley floor and from direct percolation of precipitation that falls on the valley floor. As noted below, the Santa Clara Valley Water District monitors municipal wells and has confirmed that drinking water has not been impacted by selenium, the primary COC identified at this Site.

28. The predominant drainage for the Site is Permanente Creek, which drains the vast majority of the developed portions of the Site. Permanente Creek is situated just south of the existing Site and is entrenched in limestone where it lies adjacent to the Quarry. To the west and east of the Quarry, Permanente Creek is mostly underlain by greenstone, greywacke, and undifferentiated Franciscan mélange. Permanente Creek is generally dry adjacent to the Quarry during the dry season, due to head reversal caused by mine dewatering. Otherwise, in the foothill reaches, Permanente Creek is a perennial stream that typically flows year-round both upstream of and downstream from the Quarry and is typically a gaining stream (i.e., baseflow from groundwater in the Creek sustains the perennial stream). In upland bedrock terrain such as this, the groundwater table mimics the topography with recharge in the uplands and sideslopes and discharge to drainage channels in the form of seeps, springs, and baseflow.

    Downstream, where Permanente Creek flows out onto the relatively flat alluvial plain of the Santa Clara Valley, and in particular near the mountain front where the alluvium is expected to be coarse-grained, the Creek becomes a losing stream and contributes recharge to the primary groundwater basins of the Valley. To the north of the WMSA and Quarry is Ohlone Creek, which is a tributary to the West Branch of Permanente Creek. Ohlone Creek flows intermittently, receiving overland runoff from north of the WMSA based on its current topography. Ohlone Creek runs parallel to Permanente Creek until it joins the West Branch of Permanente Creek and then Permanente Creek approximately one mile downstream from where Permanente Creek leaves the Site at the eastern edge of the property. An unnamed tributary to Permanente Creek is present just north of the EMSA, but south of the West Branch of Permanente Creek, near the Gate of Heaven cemetery. The unnamed tributary joins Permanente Creek just north of the Site after Permanente Creek makes its sharp bend to the northwest. Permanente Creek and the San Francisco Bay Estuary are currently listed as impaired due to selenium, which is identified as a COC at this Site. Permanente Creek and Stevens Creek are also listed as impaired due to toxicity, the cause of which is currently under investigation by Water Board staff working on the TMDL for selenium. It is mentioned here because a COC at the Site could be responsible.

29. The Site and surrounding foothills comprise the headlands of the Permanente Creek watershed. Permanente Creek flows for four miles along the south and east perimeter of the Site, with contributions from the West Branch of Permanente Creek tributary, Hale Creek tributary, and the unnamed creek that borders the north edge of the Site. Permanente Creek then flows approximately three more miles to the Stevens Creek Diversion channel where some or all of the flow in Permanente Creek can be diverted to Stevens Creek. Both Permanente and Stevens creeks ultimately discharge to the San Francisco Bay Estuary via either Permanente Creek (through Mountain View Slough) or Stevens Creek.

30. The regional climate is Mediterranean with the majority of precipitation occurring between November and April. Average annual precipitation is about 22 inches, consistent with the intermediate altitudes of the Santa Clara Valley, and more than 50 inches in the surrounding mountains. The climate is also temporally variable with dryer and wetter seasons from year to year. Groundwater recharge is estimated to range from about 2 to 6 inches per year based on previous work and average precipitation rates. This information is necessary to identify appropriate waste cover requirements as required by Provision 4 (Preliminary Closure Plans that include cover requirements for wastes disposed of in place, as is the current plan for the EMSA). It is potentially also useful to estimate potential loading (or flux) of COCs to groundwater and hydrogeologically-connected surface water, which is required by Provision 3. This is consistent with an Evaluation Monitoring Program, in accordance with Title 27 section 20385(a)(2).

Current Hydrogeological Conceptual Site Model and Monitoring Program

31. Geologic and hydrogeologic information for the Site was incorporated into a Conceptual Site Model (CSM) developed by the Dischargers in response to the June 26, 2013, requirement for a Hydrogeologic Characterization and Groundwater Investigation (Finding 17 in Regulatory History section). The Dischargers concluded that results of the investigation support their proposed CSM, in which groundwater flows primarily through weathered and fractured bedrock following historical topography and discharges primarily to surface waters that surround the Site. However, an update is necessary to ensure the subsurface is sufficiently characterized to predict and prevent deleterious impacts of reclamation, particularly backfilling the Quarry Pit with waste from the WMSA, as is currently proposed, and recognizing the complexity of characterizing groundwater flow through fractured bedrock. Provision 3 of these WDRs requires the Dischargers to develop a Self-Monitoring Program (SMP), including an update to the CSM.

32. Evaluations to date do not indicate drinking water impacts from the Site. No domestic water supply wells were identified within a two-mile radius of the Site in a search of the Groundwater Ambient Monitoring and Assessment Program (GAMA) database. The nearest water supply well is located more than two miles northeast of the Site. The Santa Clara Valley Water District monitors municipal wells and has confirmed that drinking water has not been impacted by selenium, which is the primary COC from the Site.

However, historical waste handling activities, including the disposal of mining waste, aluminum and magnesium foil manufacturing and research wastes, and potentially unknown wastes disposed of prior to Site regulation, and the current disposal of mining waste, have the potential to impact groundwater. The June 26, 2013, requirement included a hydrogeologic investigation (Finding 17 in Regulatory History section), with groundwater evaluated for a list of potential COCs that included inorganic (metals and metalloids, like selenium) and organic contaminants (including PCBs, VOCs, and petroleum hydrocarbons). Results of this investigation indicated that some metals are present at elevated concentrations, primarily in unfiltered groundwater samples (meaning they are attached to particles above 45um and may have limited mobility). Selenium concentrations are elevated in filtered and unfiltered samples (and selenium is therefore anticipated to be more mobile). In general, COC concentrations in groundwater decrease as groundwater moves from within, beneath, then away from the WMUs towards surface waters. This may be explained by attenuation of metals and metalloids via sorption and possibly precipitation as groundwater migrates through the subsurface.

Paired groundwater and surface water sampling locations suggest that groundwater containing elevated selenium may be discharging to Permanente Creek but at lower concentrations (and likely volumes) than observed in surface water discharges (as monitored by the NPDES and TMDL programs at the Water Board and Santa Clara County). Regardless, the contribution from groundwater may be significant. Provision 3 of these WDRs requires an estimate of loading (or flux) of COCs to groundwater and hydrogeologically-connected surface waters (including drinking water aquifers, if impacts are possible) as part of an SMP. This constitutes an Evaluation Monitoring Program, one of the three types of monitoring outlined in Title 27 section 20385:

a. Detection Monitoring: To identify (or detect) a release from a WMU, which will be required by the SMP;

b. Evaluation Monitoring: To investigate whenever there is evidence of a release from a WMU, which will also be required by the SMP due to elevated concentrations of COCs in groundwater at perimeter wells; and

c. Corrective Action Monitoring: To evaluate the efficacy of corrective actions taken when Evaluation Monitoring confirms a release from a WMU, which will be required at the Site if remediation is deemed necessary based on conclusions from Detection and Evaluation Monitoring.

33. Potential COCs from solid or liquid wastes listed in the historical documents and investigations summarized above include selenium and arsenic; mercury, cadmium, chromium, aluminum, nickel, copper, cobalt, vanadium, zinc, lead, and potentially other metals; petroleum hydrocarbons; chlorinated solvents such as tetrachloroethylene (PCE) and trichloroethylene (TCE); VOCs and SVOCs such as acetone, toluene, xylene, methylene chloride, and naphthalene; fluoride and cyanide from potliner waste; pesticides such as DDD and DDE; and salts (magnesium, chloride, sulfide, etc.) associated with brine. Most of these compounds have not been detected in Site groundwater; however, they may be present in the subsurface and

should therefore be considered COCs in the development of the SMP, as required by Provision 3.

34. The wastes characterized in these studies are classified as Group B mining wastes, as defined in Title 27 section 22480, because they "consist of or contain nonhazardous soluble pollutants of concentrations which exceed water quality objectives for, or could cause, degradation of waters of the State".

Waste Management Units (WMUs)

35. **Current WMUs:** The WMSA and EMSA (and the units buried beneath the EMSA) are classified as WMUs and regulated as such by these WDRs because they are temporary or permanent solid waste disposal units that have the potential to impact groundwater. In accordance with Title 27 section 22470 (a) and (b), extensive monitoring procedures will be required in lieu of siting, construction, liner, and leachate collection and removal system requirements for all WMUs, unless it is determined via the SMP that they are necessary to protect groundwater. Title 27 section 22490 (d) and (h) requires registered professionals to design and supervise construction of containment structures and specifies precipitation and drainage controls.

    a. West Materials Storage Area (WMSA): The WMSA is an approximate 172.6-acre area that stores approximately 48 million tons of wastes, primarily waste rock. However, fines from aggregate production (crushing of non-limestone materials mined from the Quarry Pit) were disposed of here when the Rock Plant was in operation. Cement kiln dust was reportedly disposed of in unspecified areas from 1950 to 1981, and kiln bricks may also be present. This disposal unit has been in operation since approximately 1903, and it is therefore anticipated that unknown wastes, possibly from former aluminum and magnesium manufacturing and research, may also be present within the waste mass. Waste characterization studies suggest that metals and metalloids are COCs; however, additional potential COCs remain a concern because comprehensive in situ evaluation of the waste was infeasible due to size/volume of the waste mass. Provision 3 of these WDRs requires monitoring of groundwater and hydrogeologically connected surface waters downgradient of the WMSA. Provision 7 requires submittal of an Operation, Maintenance, and Contingency Plan to ensure actions necessary to contain waste are being implemented. Provision 8 requires the Dischargers demonstrate the financial capability to close the Site in accordance with approved reclamation and closure plans; to monitor and maintain the Site after closure; and to implement corrective actions should waste migration be detected.

    The Dischargers plan to use wastes in the WMSA as backfill for the Quarry Pit to reclaim the Site. These WDRs include several requirements to address concerns about potential impacts to groundwater and hydrogeologically-connected surface waters in this process:

        i. Provision 4 requires Preliminary Closure Plans, which include characterization of wastes prior to disposal in the Quarry Pit, as well as an adequate evaluation regarding preventative measures necessary to immobilize COCs in the Quarry Pit

(for example, amendments to sorb reactive COCs or adjust geochemical conditions to prevent dissolution of COCs), should these methods be employed.

ii. Provision 3 requires the development of an SMP that expands the current groundwater monitoring network to include the entire perimeter of the Site, including the Quarry Pit. Monitoring must be conducted prior to reclamation to establish a baseline and to inform modelling/predictions with respect to waste or contaminant mobility associated with closure plans and activities.

iii. Provisions 5 and 6 require final Closure and Post-Closure Maintenance Plans and completion reports.

b. East Materials Storage Area (EMSA): The EMSA is an approximate 75.2-acre area that is designed to hold up to 6.5 million tons of wastes, primarily waste rock. However, fines from aggregate production are stored here as well. This disposal unit has been operating in its current capacity since approximately 2012. The EMSA overlies or is adjacent to several areas of concern as potential sources of contamination due to historic use and/or results of investigations. These include:

i. *Dry Canyon Storage Area (DCSA)*: The DCSA occupies approximately 0.6 acres and is now buried beneath the EMSA. This disposal unit contains concrete manufacturing and mining wastes. The general location of this and other former disposal units in the area was investigated in the 1990s, where elevated concentrations of PCBs, VOCs, total petroleum hydrocarbons (TPH), metals, and metalloids were found in some soil samples.

ii. *Former Surface Impoundment (FSI)*: The FSI occupies approximately 0.5 acres, and is also located beneath the EMSA. This disposal unit contains liquid and sludge wastes from cement manufacturing. The general location of this and other former disposal units in the area was investigated in the 1990s and was found to contain elevated concentrations of PCBs, TPH, metals, and metalloids in some soil samples.

iii. *Upper Level Landfill*: The dimensions of this unit, which is buried beneath the EMSA, are unknown. However, previous investigations have indicated various COCs, including acetone, chromium associated with the disposal of cement kiln bricks, metals associated with cement kiln dust, and TPH.

iv. *The Former Asphalt Plant Area*: Reportedly abandoned in the 1950s and buried beneath a landslide, this area was not investigated but may contain TPH.

v. *The Former Brine Pond*: The presence of a brine pond was reported in this general location but was not identified in previous investigations. COCs associated with this type of unit would typically be salts.

The above units are buried beneath the EMSA and are considered a potential threat only to groundwater as no other migration pathway is possible under the current land use and Site reclamation plans.

vi. *The Aluminum Plant Area*: This area contained mercury, TPH, and pesticides, but was addressed in 1990-91; its underground storage tanks were removed and closed in 1988.

Waste characterization studies suggest that metals and metalloids are COCs from the EMSA and the units beneath it; however, additional potential COCs remain a concern because comprehensive in situ evaluation of the waste was prohibited due to its size/volume. Groundwater monitoring conducted recently indicated localized impacts to groundwater from VOCs, SVOCs, and cyanide likely from the units beneath the EMSA but generally at concentrations below WQOs. These COCs are not observed in downgradient wells, suggesting that COCs may be relatively immobile; however, it is necessary for the Dischargers to ensure wastes are adequately isolated. Therefore, Provision 3 of these WDRs requires monitoring of groundwater and hydrogeologically-connected surface waters beneath and downgradient of the EMSA.

The Runoff and Seep investigation required in June 2013 described in the Regulatory History section confirmed that the EMSA is a source of inorganic COCs to stormwater and potentially groundwater. To address this, an interim cover is being installed of non-limestone waste material, which is expected to be of less concern than the limestone material with respect to selenium content and mobility. The Dischargers have completed vegetation studies to determine whether soil amendments are necessary to adequately revegetate and stabilize slopes. Final cover must sufficiently reduce not only selenium but other inorganic COCs in stormwater and groundwater.

Provision 4 requires a Preliminary Closure Plan that includes evaluation of the interim cover and proposed final cover. Provision 5 requires final Closure and Post-Closure Maintenance Plans and completion reports. A proposal, with supporting analysis, will be required for a final cover that protects human health and the environment. Models exist to adequately predict infiltration given site-specific climate, geologic, and hydrologic factors.

36. **Future WMUs**: As the Site is reclaimed, additional disposal units will become WMUs and be regulated by these WDRs. This includes the Quarry Pit and potentially onsite process wastewater and stormwater ponds currently regulated under an NPDES permit. Other areas of potential contamination identified in Site History and Potential Pollutant Source Identification Reports include the former Aluminum Plant Area that had a research building, an underground storage tank, and a substation; the current cement process area that formerly contained an emergency generator underground storage tank and service station; and the Rock Plant area that contains fill with cement kiln bricks and dust. The Aluminum Plant Area has been clean closed and the substation removed. Provision 4 requires Preliminary Closure Plans and Provision 5 final Closure and Post-Closure Maintenance Plans for disposal units that it is currently known will become WMUs, including the Quarry Pit. It is possible that additional future WMUs will be created or identified. Therefore, Provision 4 requires reporting of all historic, current, and planned future solid and liquid waste disposal units, to identify whether these units may require closure, which will also be addressed by Provision 5.

37. The above findings demonstrate the need for technical reports to ensure groundwater quality, and therefore human health and the environment, are protected from mining and reclamation activities. The burden, including costs, of the requirements bears a reasonable relationship with the need and benefits obtained.

BASIN PLAN

38. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Board, the Office of Administrative Law, and U.S. EPA, where required.

ANTIDEGRADATION POLICY

39. Title 40 of the Code of Federal Regulations, part 131.12, requires that state water quality standards include an anti-degradation policy consistent with federal policy. The State Water Board established California's anti-degradation policy through State Water Board Resolution 68-16, which is deemed to incorporate the federal anti-degradation policy where the federal policy applies. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal anti-degradation policies. This Order is consistent with both the State and federal anti-degradation policies because it does not allow degradation.

BENEFICIAL USES

40. The Order protects the following existing beneficial uses of Permanente Creek and Stevens Creek, tributaries to San Francisco Estuary (Bay), via Mountain View Slough:

    a. Fish spawning;
    b. Wildlife habitat;
    c. Water contact recreation;
    d. Non-contact water recreation;
    e. Industrial service supply;
    f. Ocean, commercial, and sport fishing;
    g. Estuarine habitat;
    h. Fish migration;
    i. Preservation of rare and endangered species;
    j. Cold freshwater habitat;
    k. Warm freshwater habitat;
    l. Navigation; and
    m. Groundwater recharge (Stevens Creek only).

41. The Order protects the following existing and potential beneficial uses of the groundwater in the Santa Clara sub-basin (Basin No. 2-9.02) of the Santa Clara Valley Groundwater Basin, which underlies the east portion of the Site and receives recharge from Site surface water drainages, including Permanente Creek:

    a. Municipal and domestic supply
    b. Industrial process and service supply, and
    c. Agricultural water supply.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

42. Adoption of this Order is exempt from CEQA pursuant to CEQA Guidelines sections 15061(b)(3) and 15306. CEQA applies only to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. This Order requires the Dischargers to continue Site monitoring and maintenance activities, and these will not result in any additional actions that may have an effect on the environment beyond the existing baseline conditions. The CEQA Guidelines recognize that information collection does not result in a major disturbance to environmental resources. In addition, this action is an Order pertaining to an existing facility. There is no expansion of use beyond that existing under prior orders. For these reasons, the project is also exempt from the application of CEQA pursuant to CEQA Guidelines section 15301.

43. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use and by prohibiting discharges that cause or contribute to exceedances of maximum contaminant levels in receiving water.

NOTICE AND MEETING

44. The Water Board has notified the Dischargers and interested persons of its intent to issue WDRs for the Site and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

45. The Water Board, at a public meeting, heard and considered all comments pertaining to this issuance of WDRs for the Site.

IT IS HEREBY ORDERED pursuant to the authority in CWC sections 13263 and 13267 and Title 27 that the Dischargers shall meet the applicable provisions contained in Title 27 and shall comply with the following:

A. PROHIBITIONS

1. The treatment, discharge, or storage of waste or other materials that may impact the beneficial uses of groundwater or surface water shall not be allowed to create a condition of pollution, contamination or nuisance as defined in CWC section 13050, nor degrade the quality of waters of the State or of the United States.

2. Migration of pollutants through subsurface transport to waters of the State is prohibited.

3. There shall be no discharge of wastes to surface waters except as permitted under the Site's NPDES permits.

4. Excavation within or reconfiguration of any WMU is prohibited without prior concurrence of Water Board staff (for instance, via an acceptable Operation, Maintenance, and Contingency Plan as required by Provision 7). Minor excavation or reconfiguration activities, such as the installation of signs or minor routine maintenance and repair, do not require prior Water Board staff concurrence.

5. There shall be no discharges to an unregulated surface impoundment, and any residual liquids and sludge shall be removed expeditiously if it is determined that any surface impoundment is leaking or there is a failure that causes a threat to groundwater quality.

6. If it is determined that a WMU or surface impoundment is leaking or there is a failure that causes a threat to water quality, there shall be no discharges to that WMU or surface impoundment, and any residual liquids and sludge shall be removed expeditiously.

7. The creation of any new WMU is prohibited without prior Water Board amendment of these WDRs.

8. The relocation of wastes to or from WMUs is prohibited without prior Water Board staff written concurrence (for instance, via the Operation, Maintenance, and Contingency Plan required by Provision 7) and shall not create a condition of pollution or nuisance as defined in CWC section 13050(l) and (m). Wastes shall not be relocated to any location where they can be discharged into waters of the State or of the United States.

9. The discharge of hazardous waste at the Site is prohibited. For the purpose of this Order, the term "hazardous waste" is as defined in Title 27, section 20164.

10. The discharge of leachate or wastewater (including from surface impoundments, process waters, and runoff from the Site's operation areas) is prohibited, unless permitted under the Site's NPDES permit, where that leachate or wastewater:

a. Has the potential to cause corrosion or decay, or otherwise reduce or impair the integrity of the containment structures;

b. If mixed or commingled with other wastes in the unit, could produce a violent reaction including heat, pressure, fire, explosion, or the production of toxic by-products;

c. Requires a higher level of containment than provided by the unit; or

d. Is "restricted hazardous waste".

11. Activities associated with subsurface investigations and cleanup that will cause significant adverse migration of pollutants are prohibited.

12. Wastes shall not be disposed in any position where they may migrate from the disposal site to adjacent geologic materials, waters of the State, or waters of the United States during disposal operations, closure, and the post-closure maintenance period.

13. The Dischargers shall not cause the following conditions to exist in waters of the State at any place outside of the Site:

    a. **Surface Waters**

        i. Floating, suspended, or deposited macroscopic particulate matter or foam;

        ii. Bottom deposits or aquatic growth;

        iii. Adversely altered temperature, turbidity, or apparent color beyond natural background levels;

        iv. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or

        v. Toxic or other deleterious substances to be present in concentrations or quantities that may cause deleterious effects on aquatic biota, wildlife, or waterfowl, or that render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

    b. **Groundwater**

        i. Degradation of groundwater quality; and

        ii. Subsurface migration of pollutants associated with the Dischargers' operations to waters of the State.

B. SPECIFICATIONS

1. The Dischargers shall comply with all applicable requirements of Title 27 that are not specifically referenced in this Order.

Reporting Specifications

2. All technical reports submitted pursuant to this Order shall be prepared under the supervision of and signed under penalty of perjury by a California registered civil engineer, registered geologist, and/or certified engineering geologist.

3. The Dischargers shall implement any Self-Monitoring Program (SMP) issued by the Executive Officer. The purpose of the SMP is to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from surface impoundments or mining waste or any unreasonable impairment of beneficial uses associated with the Site's past or present activities.

4. The Dischargers shall manage WMUs to isolate wastes and wastewater from waters of the State and to prevent a statistically-significant monitoring parameter concentration from existing in the waters passing through points of compliance, as defined in Title 27, sections 20405 and 20420.

5. The existing containment, drainage, and monitoring systems at the Site shall be maintained for as long as the wastes and leachate pose a threat to water quality. The Dischargers shall continue the water quality monitoring program, pursuant to Title 27, section 20410, as long as the threat of a release from WMUs exists.

6. At any time, the Dischargers may file a written request (including supporting documentation) with the Executive Officer, proposing modifications to any SMP. If the proposed modifications are acceptable, the Executive Officer may issue a letter of approval that incorporates the proposed revisions into the SMP.

7. The Dischargers shall notify the Water Board immediately of any waste containment system failures occurring at the Site. Any failure that potentially compromises the integrity of containments structures shall be promptly corrected after approval of the method and schedule by the Executive Officer.

8. The Dischargers shall notify the Water Board at least 180 days prior to beginning any intermediate or final closure activities. This notice shall include a statement that all closure activities will conform to the most recently approved closure plan and that the plan provides for Site closure in compliance with all applicable regulations.

WMU Specifications

9. Closure of all WMUs shall be in compliance with the requirements of Title 27, section 21400.

10. If the Water Board determines that any WMU is polluting or threatening to pollute State waters, the Water Board may require the Dischargers to immediately cease the discharge.

11. Title 27, section 20310, requires that construction of new Class II surface impoundments be designed and constructed to prevent migration of wastewater from the impoundment to

adjacent geologic materials, groundwater, or surface water during operations, closure, and the post-closure maintenance periods.

12. As required by Title 27, section 20370 (seismic design), the Dischargers ensure that all WMU engineered structures (including, but not limited to, containment structures) shall have a foundation capable of: 1) providing support for the structures; 2) withstanding hydraulic pressure gradients; and 3) preventing failure due to settlement, compression, or uplift and all effects of ground motions including the maximum credible earthquake event.

13. New WMUs shall be designed, constructed, and operated to withstand ground accelerations associated with the maximum credible earthquake without damage to the foundation, the containment structures, or other structures which control wastewater, surface drainage, or erosion.

14. All new WMUs must isolate wastewater from waters of the State. In most cases, this is accomplished by a low permeability liner.

15. The Dischargers must isolate and contain all Class B mining wastes to prevent migration of COCs to adjacent geologic materials, groundwater, or surface water during operations, closure, and the post-closure maintenance periods. The containment systems must be designed to isolate leachate from the waters of the State. All containment structures must be maintained to preclude failure as a result of potential rapid geologic changes.

16. The Dischargers shall operate waste containment systems to prevent the migration of contamination. They shall be designed and operated to function without clogging and shall be inspected a minimum of three times per week when operating. The Dischargers shall operate and maintain WMUs according to a detailed operating, maintenance, and contingency plan, which will include at a minimum, procedures for routine inspections, investigations of the impact of any detected releases, and prompt notifications of agencies. Provision 7 of this Order requires the Dischargers to update the Site's Operation, Maintenance, and Contingency Plan for this purpose.

17. The Dischargers shall maintain final low-permeability caps over closed WMUs to minimize infiltration. Provisions 4 and 5 of this Order require that the Dischargers evaluate cover requirements to protect human health and the environment upon closure. The Site's Operation, Maintenance, and Contingency Plan, which includes requirements for maintenance of the mining waste WMUs, will be updated as disposal units are closed and WMUs are created.

18. WMUs at the Site shall be protected from any washout or erosion of wastes or covering material. Final cover systems for WMUs shall be graded and maintained to promote lateral runoff and prevent ponding and infiltration of water.

19. The Dischargers shall notify the Water Board immediately of any failure that threatens the integrity of any containment and/or control facilities, structures, or devices. Any such failure

shall be promptly corrected after approval of the method and schedule by the Executive Officer.

20. The Dischargers shall maintain the WMUs so as to prevent a statistically significant increase in water quality protection standards (WQPS) at points of compliance as provided in Title 27 and in any SMP.

21. The Dischargers shall have continuing responsibility for correcting any problems that arise in the future as a result of waste discharge or related operations or site use.

Monitoring Specifications

22. If the Executive Officer determines the existence of an imminent threat to the beneficial uses of surface or subsurface waters of the State, the Dischargers may be required to perform additional monitoring and/or undertake corrective action measures, including submittal of a site investigation report.

23. The Dischargers shall install, maintain in good working order, and operate efficiently any monitoring system necessary to assure compliance with these WDRs.

24. If it is determined by the Executive Officer that water quality at or beyond the point of compliance wells becomes degraded, the Dischargers will be required to submit and implement a site-specific groundwater corrective action proposal.

25. The Dischargers shall conduct monitoring activities according to the approved groundwater monitoring workplan from October 2014, until an SMP (as required by Provision 3) is submitted and approved. The Executive Officer may amend the SMP to verify the compliance of WMU with updated WQPS.

26. Any additional monitoring wells installed at the Site shall be constructed in a manner that maintains the integrity of the drill hole, prevents cross-contamination of saturated zones, and produces representative groundwater samples from discrete zones within the groundwater zone each well is intended to monitor.

27. All borings for monitoring wells shall be continuously cored unless prior concurrence of another boring/logging method is provided by Water Board staff. The drill holes shall be logged during drilling under the direct supervision of a California professional geologist whose signature appears on the corresponding well log. Logs of monitoring wells shall be filed with DWR and uploaded to GeoTracker. All information related to well construction shall be submitted to the Water Board upon well completion.

28. The groundwater sampling and analysis program shall ensure that groundwater quality data are representative of the groundwater in the area that is monitored.

29. All samples shall be analyzed by State-certified laboratories, or laboratories accepted by the Water Board, using approved U.S. EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Water Board review. This provision does not apply to analyses that can only be reasonably performed onsite (e.g., pH). Exceptions may be made for atypical, but potentially useful methodologies, such as speciation analysis or sequential extraction.

Soil Contamination

30. The Dischargers shall notify the Water Board of any soil contamination not previously identified in subsurface investigations that is discovered during any subsurface investigation or excavation work conducted on the Site that may potentially adversely impact water quality.

C. PROVISIONS

1. **Compliance:** The Dischargers shall comply immediately, or as prescribed by the time schedule below, with all Prohibitions, Specifications, and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability.

2. **Authority:** All technical and monitoring reports required by this Order are requested pursuant to CWC section 13267. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Dischargers to enforcement action pursuant to CWC section 13268.

3. **Develop and Implement Self-Monitoring Program (SMP):** The Dischargers shall submit technical reports necessary to develop and implement a SMP to demonstrate that wastes are contained and groundwater and hydrogeologically-connected surface waters have not been and will not be impacted by the storage and disposal of wastes onsite. This SMP shall meet all requirements of a Detection Monitoring Program (DMP), pursuant to Title 27 section 20385, for groundwater beneath the Site as well as Evaluation Monitoring consistent with section 20385, where data indicates a release to groundwater has or is currently occurring. Specifically, the Dischargers shall submit:

   a. Conceptual Site Model (CSM) Update Workplan - A workplan, acceptable to the Executive Officer, to update the CSM to sufficiently characterize the subsurface of the Site, including groundwater flow directions and rates and potential receptors/exposure pathways. Characterization must be sufficient to predict and prevent deleterious impacts due to current mining operations as well as reclamation activities. An evaluation of potential impacts to surface water and drinking water must be included, including an estimate of loading of COCs to groundwater and hydrogeologically-connected surface waters.

      COMPLIANCE DATE: September 30, 2018

b. CSM Update Report and SMP Proposal – Submit a technical report that describes the results of the CSM update and uses this information to support a proposed SMP, acceptable to the Executive Officer, and, in accordance with Title 27 section 20385 through 20430, includes, at a minimum:

   i. A proposal for Water Quality Protection Standards, including a comprehensive list of COCs, regular Monitoring Parameters, and Concentration Limits, as defined by Title 27 section 20390;

   ii. A plan to monitor groundwater along the entire perimeter of the Site and downgradient of WMUs, as feasible, establishing monitoring points and points of compliance as defined by Title 27 section 20390. This will require defining the extent of waste;

   iii. A plan to monitor groundwater / surface water interaction;

   iv. A plan for facilities inspections for waste containment and monitoring facilities not covered under the Operation, Maintenance, and Contingency Plan (Provision 7); and

   v. A proposal for monitoring and reporting schedule, followed by immediate implementation, including at a minimum quarterly sampling and semi-annual reports, and confirming that the SMP will be implemented upon concurrence by Water Board staff.

   COMPLIANCE DATE: March 31, 2019 (or 6 months after Water Board staff concurrence with Workplan, whichever is later)

4. **Preliminary Closure Plans:** A Reclamation Plan was approved by Santa Clara County on January 7, 2012, in accordance with the Surface Mining and Reclamation Act. While reclamation and closure is not imminent, the Dischargers must ensure the approach (including reclamation implementation and methods) adequately protects water quality and complies with laws, policies, and regulations promulgated by the Water Board. The Dischargers are therefore required to submit preliminary closure plans, acceptable to the Executive Officer and updated periodically, that describe planned reclamation and closure methodologies and demonstrate that they will be adequately protective of water quality. The plans must include the following:

   a. A report and waste characterization of all historical, current, and future planned solid and liquid disposal units and a schedule of anticipated closure;

   b. A report detailing historical or ongoing reclamation activities;

   c. A description of planned or draft reclamation activities and closure methods, an evaluation of potential impacts to water quality, and an assessment of methods that could be employed to mitigate potential impacts or alternatives; and

   d. An evaluation of potential groundwater impacts from the interim cover currently installed on the EMSA.

The current reclamation plan proposes to cap the EMSA in place and use WMSA waste materials to backfill the Quarry Pit. If these (or similar) approaches are implemented, the following are also required:

e. Characterization of wastes that may be used for backfill of the Quarry Pit;

f. A proposal for final cover for the EMSA (and any waste materials that will remain at the surface post-closure) with a demonstration that impacts to surface and groundwater quality will be prevented; and

g. An evaluation of the Quarry Pit as a potential source of pollutants to groundwater and hydrogeologically-connected surface waters, including a fate and transport analysis of potential COCs, for example from any waste materials that may be proposed for use as fill. This evaluation shall also include an evaluation of potential methods to immobilize contaminants, if necessary.

The plans should include a proposal to model groundwater flow, surface water interaction, potential contaminant transport, and potential mitigation measures, as well as include results of a literature search to identify potentially applicable case studies for backfilling a Quarry Pit in proximity to a surface water body.

COMPLIANCE DATE: June 30, 2019 and updated every two years

5. **Closure and Post-Closure Maintenance Plans**: The Dischargers shall submit a Closure and Post-Closure Maintenance Plan for the closure of all current and future WMUs, acceptable to the Executive Officer, as outlined in Title 27, sections 21090-21200. This notice shall include a statement that all closure activities will conform to the most recently approved closure plan and that the plan provides for site closure in compliance with all applicable regulations.

   COMPLIANCE DATE: A minimum of:

   - **WMSA and Quarry Pit – 3 years prior to closure**
   - **EMSA – 2 years prior to closure**
   - **Other WMUs – 1 year prior to closure**

6. **Closure Completion Report**: A completion report, acceptable to the Executive Officer, shall be submitted within 60 days of closure to demonstrate the disposal unit was closed and reclaimed in accordance with approved plans and to confirm initiation of post-closure maintenance and monitoring.

   COMPLIANCE DATE: Within 60 days of closure of each unit

7. **Operation, Maintenance, and Contingency Plan**: The Dischargers shall develop, submit, and implement an Operation, Maintenance, and Contingency Plan, acceptable to the Executive Officer. The objectives are to demonstrate that quarrying and disposal activities are performed in a manner that is protective of State waters (including groundwater) and to demonstrate that waste containment infrastructure for all WMUs is being maintained and operated in a manner that will minimize the potential for discharge of wastes or waste contaminants to State waters. The Plan shall also identify what actions the Dischargers will take to respond to discharges to

waters of the State, such as a waste release from a mining waste containment unit. The Plan must include the following, at a minimum:

a. The scheduled periodic inspection and maintenance of waste containment features and monitoring infrastructure;

b. A contingency plan in the event of a release due to mining or disposal activities from any unit regulated by these WDRs, including plans for notification of agencies and actions required to initiate an investigation, if necessary; and

c. A description of operations that could that generate waste (solid and liquid) and a demonstration that State waters are being protected. This must include at a minimum the WMSA, EMSA, and the Quarry Pit, and includes permanent, semi-permanent, or temporary placement of fill or waste.

COMPLIANCE DATE: December 31, 2018, and updated every two years thereafter or whenever a new WMU is created (a disposal unit is closed)

8. **Financial Assurance**: In accordance with Title 27 section 22510(f), the Dischargers are required to provide adequate funding to pay for the costs of closure and post-closure maintenance. The Dischargers shall submit to the Water Board evidence of an irrevocable post-closure fund acceptable to the Executive Officer, to ensure monitoring, maintenance, and any necessary remediation actions for all wastes onsite with the potential to impact waters of the State that are regulated by these WDRs. Every five years, for the duration of the post-closure monitoring period, the Dischargers shall submit a report that includes an outline of the financial assurance mechanism and verification that the fund has been created. The fund value shall be supported by calculations, to be included with this submittal, providing cost estimates for all post-closure monitoring, maintenance, repair and replacement of WMU or waste containment, cover, and monitoring systems, including activities associated with monitoring and maintenance. The cost estimates and funding shall be updated to reflect change to monitoring systems as they occur. The post-closure maintenance period shall extend as long as the wastes within the WMU pose a threat to water quality.

   If a lead agency acting under the authority of section 2774(a) of the Public Resources Code requires assurances of financial responsibility, these assurances can be used to fulfill all comparable requirements, under certain circumstances outlined in Title 27 section 22510(g).

   Additionally, cost estimates must be provided for corrective action for known or reasonably foreseeable releases, consistent with contingency plans required in Provision 7. The fund value shall be based on the sum of these estimates.

   COMPLIANCE DATE: October 15, 2018, and updated every five years with an annual update for inflation

9. **Change in Discharge:** In the event of a material change in the character, location, or volume of a discharge, the Dischargers shall file with the Water Board a new Report of Waste Discharge. A material change includes, but is not limited to, the following:

   a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste;

   b. Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water or change in the method of treatment that would significantly alter the characteristics of the waste;

   c. Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems;

   d. Increase in flow to a WMU or water body beyond that specified in the WDRs; or

   e. Increase in area or depth to be used for solid or liquid waste disposal beyond that specified in the WDRs.

   COMPLIANCE DATE: 120 days prior to any material change

10. **Availability**: A copy of these WDRs shall be maintained by the Dischargers and shall be made available by the Dischargers to all employees or contractors performing work (maintenance, monitoring, repair, construction, etc.) at the WMUs.

11. **Notification for Projects that Might Impact Subsurface Mining Waste**: In the event of any proposed project the Dischargers become aware of that might disturb subsurface mining waste regulated by these WDRs or associated infrastructure, the Dischargers are required to notify the Water Board division responsible for the remediation project (currently, the Groundwater Protection Division). The notification must include the nature of the project and describe how mining waste or associated infrastructure could be impacted, contact information of project responsible parties, and a satellite image indicating the potentially affected area and property ownership information.

    COMPLIANCE DATE: 180 Days prior to project implementation (sooner is recommended to obtain Water Board staff input)

12. **Change in Ownership**: In the event of any change in control or ownership of the Site presently owned or controlled by the Dischargers, the Dischargers shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Water Board upon a final change in ownership. To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer within 30 days of the change of ownership. Any change in the Dischargers named on this Order requires an update or amendment to the WDRs by action of the Water Board. The request must contain the requesting entity's full legal name, mailing address, electronic address, and telephone

number of the persons responsible for contact with the Water Board. Failure to submit the request shall be considered a discharge without WDRs, a violation of CWC section 13260.

COMPLIANCE DATE: 30 days after a change in Site control or ownership

13. **Revision**: This Order is subject to Water Board review and updating, as necessary, to comply with changing State or federal laws, regulations, policies, or guidelines; changes in the Basin Plan; or changes in discharge characteristics. The Water Board will review this Order periodically and may revise its requirements when necessary.

14. **Submittal Revisions**: Where the Dischargers become aware that they failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Water Board, they shall promptly submit such facts or information.

15. **No Vested Rights**: This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Dischargers from liability under federal, State, or local laws, nor do they create a vested right for the Dischargers to continue the waste discharge.

16. **Severability**: Provisions of these WDRs are severable. If any provisions of these requirements are found to be invalid, the remainder of these requirements shall not be affected.

17. **Operations and Maintenance**: The Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Dischargers to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

18. **Reporting Requirements**: All reports submitted pursuant to this Order must be in accordance with the State Water Board-adopted regulations requiring electronic report and data submittal to the State's GeoTracker database (CCR Title 23, §§3890-3895). Email notification should be provided to Water Board staff whenever a file is uploaded to GeoTracker. In addition, the Dischargers shall submit hard copies of reports to Water Board staff, if requested. The Dischargers are responsible for submitting the following via GeoTracker:

    a. All chemical analytical results for soil, water, and vapor samples;

    b. The latitude and longitude of any sampling point for which data is reported, accurate to within 1 meter and referenced to a minimum of two reference points from the California Spatial Reference System, if available, unless specified in the SMP;

    c. The surveyed elevation relative to a geodetic datum of any permanent sampling point;

d. The elevation of groundwater in any permanent monitoring well relative to the surveyed elevations;

e. A site map or maps showing the location of all sampling points;

f. The depth of the sampling point or depth and length of screened interval for any permanent monitoring well;

g. PDF copies of boring logs; and

h. PDF copies of all reports, workplans, and other documents (the document, in its entirety [signature pages, text, figures, tables, etc.] must be saved to a single PDF file) including the signed transmittal letter and professional certification by a California professional civil engineer or a professional geologist.

19. Upon request, monitoring results shall also be provided electronically in Microsoft Excel® to allow for ease of review of site data and to facilitate data computations and/or plotting that Water Board staff may undertake during the review process. Electronic tables shall include the following information:

    a. Well designations;

    b. Well location coordinates (latitude and longitude);

    c. Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, screen interval elevation, and a characterization of geology of subsurface the well is located in);

    d. Groundwater depths and elevations (water levels);

    e. Current analytical results by constituent of concern (including detection limits for each constituent);

    f. Historical analytical results (including the past five years unless otherwise requested); and

    g. Measurement dates.

20. **Reporting of Hazardous Substances Release**: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it probably will be discharged in or on any waters of the State, the Dischargers shall:

    a. Report such discharge, as soon as it is safe to do so, to the following:

        i. The Water Board by calling (510) 622-2369 during regular office hours (Monday through Friday, 8 a.m. – 5 p.m.); and

        ii. The California Office of Emergency Services (Cal OES) at (800) 852-7550.

    b. A written report shall be filed with the Water Board within five working days. The report shall describe:

        i. The nature of the waste or pollutant;

        ii. The estimated quantity involved;

iii. The duration of the incident;

iv. The cause of the release;

v. The estimated size of the affected area, and nature of the effect;

vi. The corrective actions taken or planned and a schedule of those measures; and

vii. The persons/agencies notified.

This reporting is in addition to reporting to Cal OES as required by the Health and Safety Code.

21. **Reporting Releases to Cal OES**: Except for a discharge that is in compliance with these WDRs, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall immediately notify Cal OES of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with section 8574.7) of the Government Code and immediately notify the Water Board of the discharge as soon as:

    a. That person has knowledge of the discharge;

    b. Notification is possible; and

    c. Notification can be provided without substantially impeding cleanup or other emergency measures.

    This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of CWC section 13271 unless the Dischargers are in violation of a prohibition in the Basin Plan.

22. **Release Reporting Requirements to Water Board**: In the case of a release (as defined in Provision 20), the following must be provided to the Water Board within five days of knowledge of the release:

    a. Site map illustrating location and approximate size of impacted area;

    b. Photographs of the impacted area before and after remediation; and

    c. A report detailing the remediation method chosen and its efficacy and illustrating that the release contingency plan was effective, or else proposing modifications to the contingency plan to increase its effectiveness.

23. **Endangerment of Health or the Environment**: The Dischargers shall report any noncompliance that may endanger human health or the environment. Any such information shall be provided orally to the Executive Officer, or authorized representative, **within 24 hours** from the time the Dischargers become aware of the circumstances. A written submission

shall also be provided within five days of the time the Dischargers become aware of the circumstances. The written submission shall contain:

a. A description of the noncompliance, and its cause;

b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; and

c. The anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

24. The Dischargers shall immediately notify the Water Board and the Local Enforcement Agency if additional groundwater contamination or potential contamination is detected. The Dischargers shall immediately initiate corrective action to stop and contain the migration of pollutants from the surface impoundment or mining waste.

25. The Dischargers shall notify the Water Board of any previously unknown soil or groundwater contamination discovered during any subsurface investigations conducted at the Site, which may potentially have an adverse impact on ground or surface waters.

26. **Entry and Inspection**: The Dischargers shall allow Water Board staff, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Dischargers' premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this order or as otherwise authorized by the CWC, any substances or parameters at any location.

27. **Discharges to Navigable Waters**: Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to §404 of the federal Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Water Board (40 Code of Federal Regulations or CFR §122.21).

28. **Monitoring Devices**: All monitoring instruments and devices used by the Dischargers to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

Unless otherwise permitted by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Water Board's Division of Drinking Water. The Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136) promulgated by U.S. EPA.

29. **Treatment**: In an enforcement action, it shall not be a defense for the Dischargers that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the Dischargers shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost.

30. **Document Distribution**: Copies of correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the Water Board and any other interested agencies.

31. **General Prohibition**: Neither the treatment nor the discharge of waste shall create a pollution, contamination, or nuisance, as defined by CWC §13050, CWC §13263, and Cal. Health & Safety Code §5411.

32. The Dischargers shall remove and relocate any wastes that are discharged at this Site in violation of these WDRs.

33. The Dischargers shall immediately notify the Water Board of any flooding, equipment failure, slope failure, or other change in Site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures. Any such failure shall be promptly corrected after approval of the method and schedule by the Executive Officer.

34. **Earthquake Inspection**: The Dischargers shall submit a detailed Post Earthquake Inspection Report, acceptable to the Executive Officer, in the event of any earthquake generating ground shaking of Richter Magnitude 6.5 or greater at or within 30 miles of the Site. The report shall describe the containment features, groundwater monitoring, and control facilities potentially impacted by the static and seismic deformations of any WMU or waste containment system. Damage that may result in discharge or threatened discharge to State waters must be reported immediately to the Executive Officer.

COMPLIANCE DATE: Verbally as soon as the data becomes available and in writing within two weeks of a triggering seismic event. Any damage that may cause negative impacts to waters of the State must be reported immediately upon discovery to the Water Board's Spill Hotline at (510) 622-2369 and by sending an email to Rb2SpillReports@waterboards.ca.gov. In addition, report to Cal OES at (800) 852-7550.

35. **Maintenance of Records**: The Dischargers shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurements;
    b. The individuals who performed the sampling or measurements;
    c. The date(s) analyses were performed;
    d. The individuals who performed the analyses;
    e. The analytical techniques or method used; and
    f. The results of such analyses.

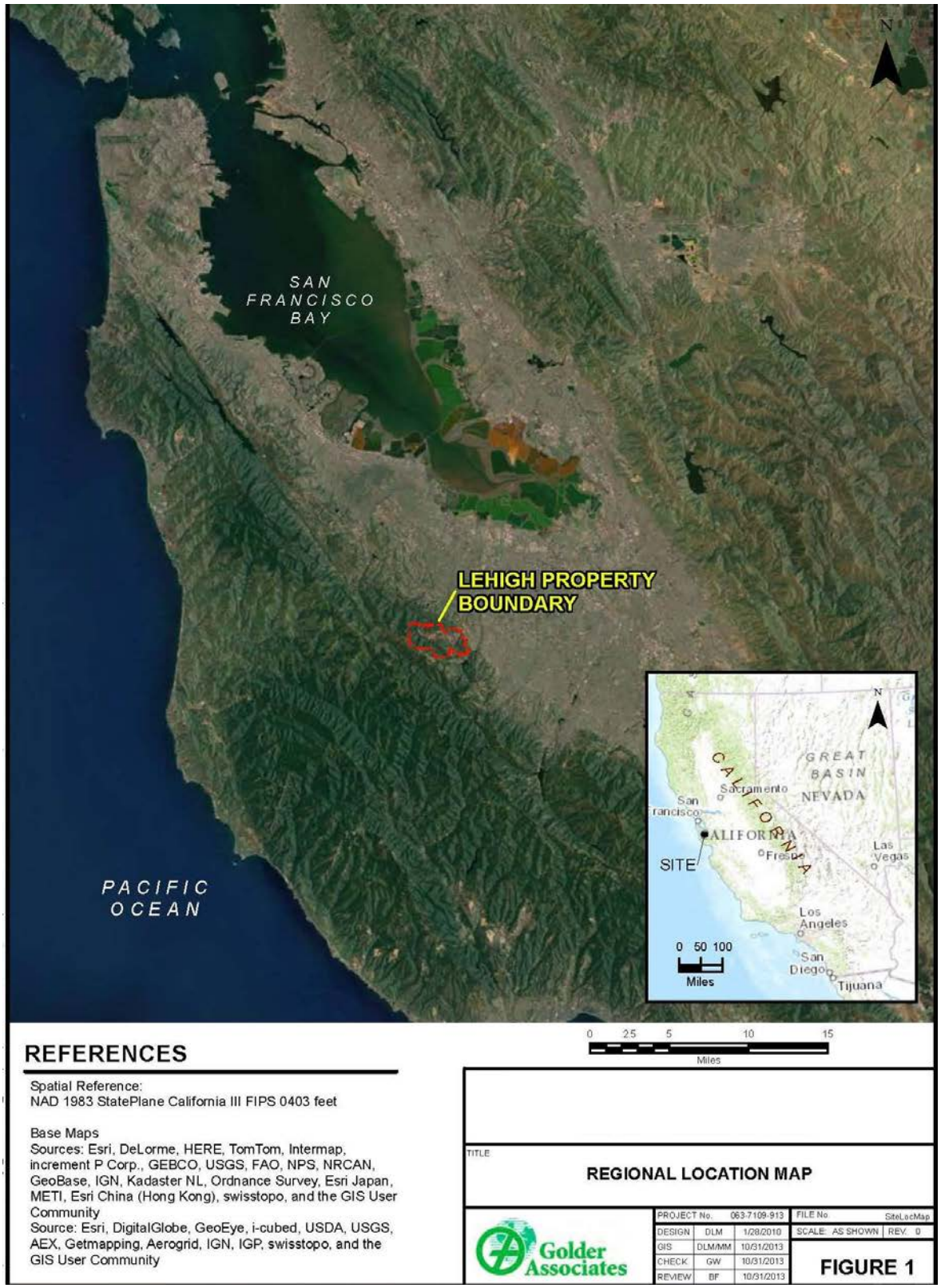
36. This Order is subject to Water Board review and updating, as necessary, to comply with changing State or federal laws, regulations or policies, or guidelines; changes in the Water Board's Basin Plan; or changes in discharge characteristics.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 13, 2018.

_____
Bruce H. Wolfe
Executive Officer

Attachments:

Figure 1 - Site Location
Figure 2 - Site Plan
Figure 3 – Current Groundwater Monitoring Well Network
Figure 4 – Site Geology


N
SAN FRANCISCO BAY
LEHIGH PROPERTY BOUNDARY
PACIFIC OCEAN
N
GREAT BASIN
NEVADA
Sacramento
San Francisco
CALIFORNIA
Fresno
Las Vegas
SITE
Los Angeles
San Diego
Tijuana
0 50 100
Miles
REFERENCES
Spatial Reference:
NAD 1983 StatePlane California III FIPS 0403 feet
Base Maps
Sources: Esri, DeLorme, HERE, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
0 2.5 5 10 15
Miles
TITLE
REGIONAL LOCATION MAP
Golder Associates
PROJECT No. 063-7109-913
DESIGN DLM 1/28/2010
GIS DLM/MM 10/31/2013
CHECK GW 10/31/2013
REVIEW BF 10/31/2013
FILE No. SiteLocMap
SCALE: AS SHOWN REV: 0
FIGURE 1

LEGEND

- Stream
- Ponds (Ponds 1, 4a, 11, 17, 20, 1250 are lined)
- Property Boundary
- Area outline (Approximate)
- Former Aluminum Plant/Research Building Area (clean closed 1991, Peregren Environmental Group)

Potential Areas of Concern:

1) Former Dry Canyon Storage Area
2) Former Upper Landfill Area
3) Former Asphalt Plant Area
4) Former Brine Pond
5) Former Surface Impoundment

NOTES

1) Locations based on conversion from local coordinates or Google Earth placement.

REFERENCES

1)Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
2) Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
3) Potential Areas of Concern locations are based on Figure 2 from EMCON's Environmental Evaluation Report, Kaiser Aluminum & Chemical Corporation Permanente Facility, 1993.
4) February 13, 1991, "Cleanup and Facility Decommissioning Report for Kaiser Aluminum and Chemical Corporation 23333 Stevens Creek Boulevard, Cupertino, California, Peregren Environmental Group

1,200 0 1,200
Feet

PROJECT

PERMANENTE QUARRY
SANTA CLARA COUNTY, CALIFORNIA

TITLE

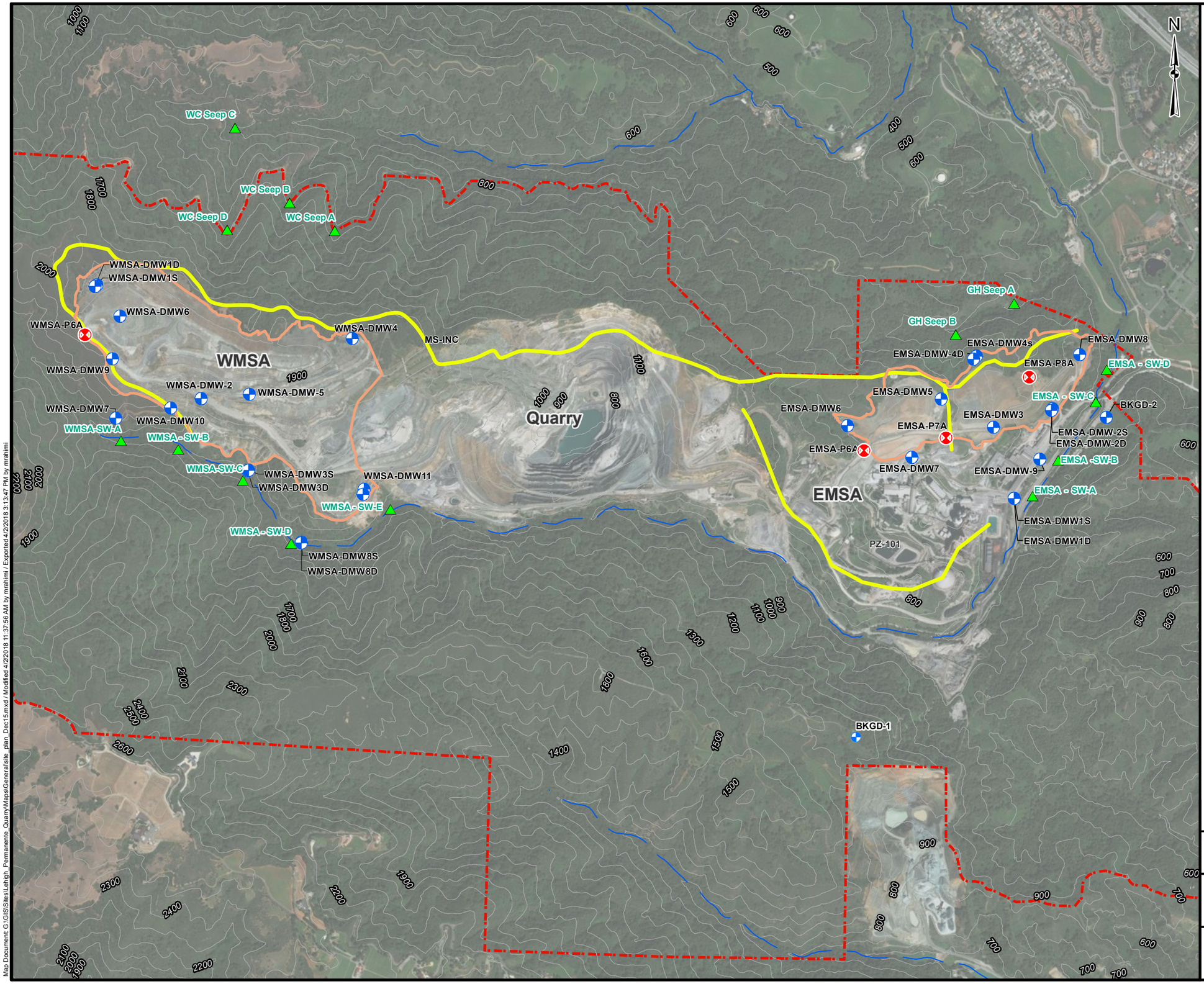
SITE OVERVIEW

GOLDER

PROJECT No.		063-7109	FILE No.		SitePlan.mxd
DESIGN	DZF	10/31/2013	SCALE:	AS SHOWN	REV. 0
GIS	DZF	4/17/2018			
CHECK	GW	4/17/2018			
REVIEW	GW	4/17/2018			

FIGURE 2

Map Document: G:\GIS\Sites\Lehigh_Permanente_Quarry\Maps\General\SitePlan.mxd / Modified 4/17/2018 11:45:22 AM by mrahimi / Exported 4/17/2018 11:54:59 AM by mrahimi



LEGEND

Well Type

- Monitoring Well
- Piezometer
- Seep and Surface Water Sample Location
- 100 ft surface elevation contour
- Former Ridgecrest
- Property Boundary
- EMSA/WMSA Boundary (Approximate)

REFERENCES

1) USGS 1/9th Arc NED DEM based off of 2006 LIDAR Survey
2) Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
3) Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
4) Former Ridgecrest created from 1952 Cupertino and 1955 Mindego Hills Quadrangle USGS Topographic Maps.

1,200 0 1,200 Feet

1 in = 1,300 feet

PROJECT

PERMANENTE QUARRY
SANTA CLARA COUNTY, CA

TITLE

SITE PLAN

GOLDER

PROJECT No.	063-7109-914		FILE No.	site_plan_Dec15.mxd
DESIGN	MM	4/2/2013	SCALE: 1:15,600	REV. 0
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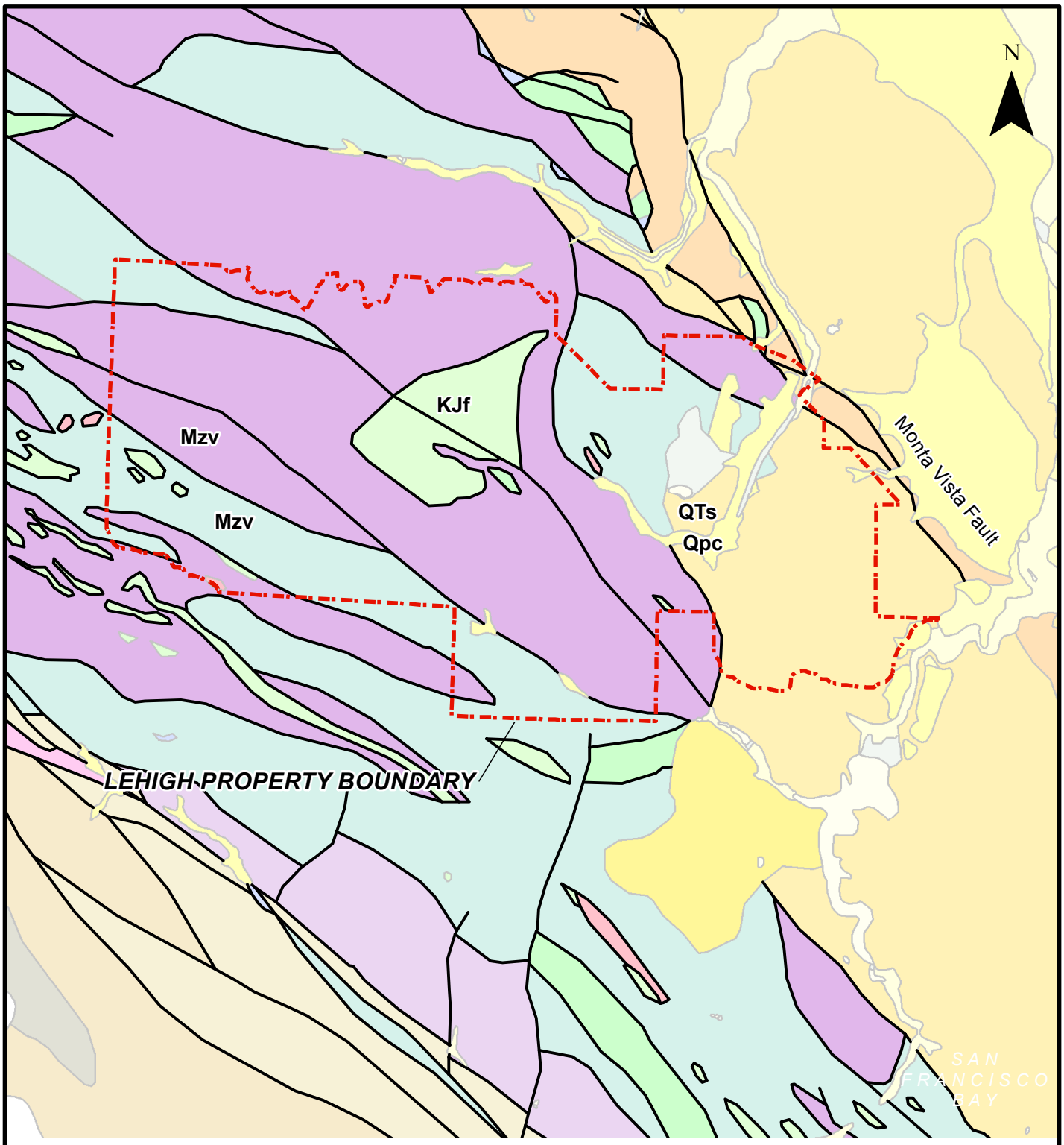
CHECK	GW	4/2/2018		
REVIEW	GW	4/2/2018		

FIGURE 3



0 0.5 1
Miles

REFERENCES

US Geological Survey, Geologic Map and Map Database of the Palo Alto 30' x 60' Quadrangle, California; Brabb, E.E., R.W.Graymer, and D.L., Jones, 2000. MF Studies Map MF-2332.
(http://pubs.usgs.gov/mf/2000/mf-2332/mf2332m.pdf)

PROJECT

PERMANENTE QUARRY
SANTA CLARA COUNTY, CALIFORNIA

TITLE

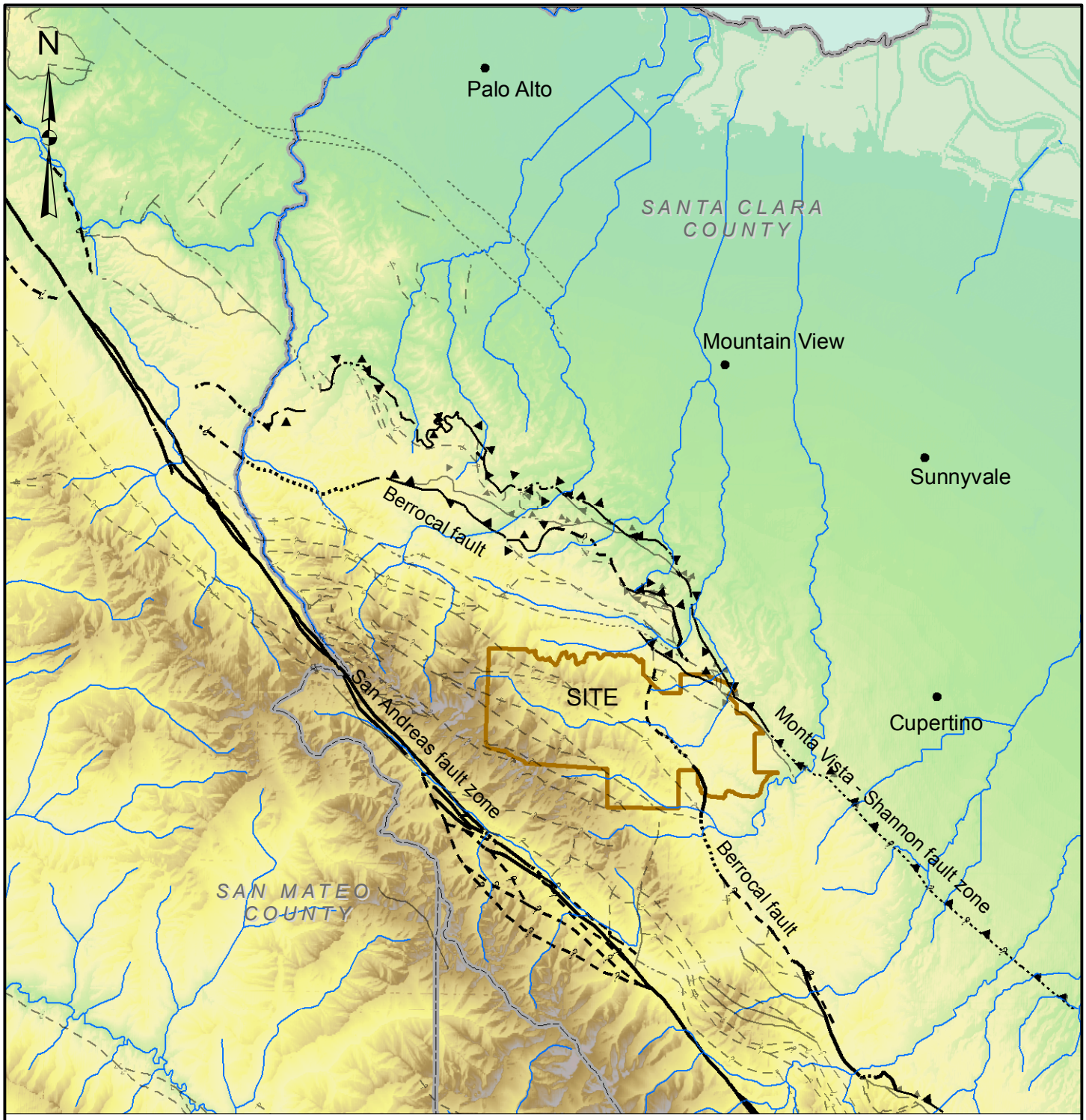
REGIONAL GEOLOGIC MAP

GOLDER

PROJECT No.		063-7109	FILE No.	
DESIGN	MR	04/03/2018	SCALE: AS SHOWN	REV. 0
GIS	MR	04/03/2018		
CHECK	GW	04/03/2018		
REVIEW	WLF	04/03/2018		

FIGURE 4

Map Document: G:\GIS\Sites\Lehigh_Permanente_Quarry\Maps\General\H_Regional\GeologicMap.mxd / Modified 4/3/2018 10:11:39 AM by mrahimi / Exported 4/3/2018 10:11:47 AM by mrahimi



Legend

- Stream
- *Fault (surface expression):*
- Certain
- Concealed
- Inferred
- Thrust (teeth in dip direction)

Dashed where approx., querried where uncertain; dotted where concealed.

Fault source: Brabb, et. al. (2000)
Faults discussed in text have heavier line weight.

PROJECT

PERMANENTE QUARRY
SANTA CLARA COUNTY, CA

TITLE

REGIONAL GEOTECTONIC SETTING

GOLDER
Sunnyvale, CA

PROJECT No.		063-7109	FILE No.
DESIGN	MR	4/02/2018	SCALE: AS SHOWN REV. 0
GIS	MR	4/02/2018	
CHECK	GW	4/02/2018	**FIGURE 5**
REVIEW	GW	4/02/2018	

G:\Projects\063-7109 (Hanson Permanente Quarry\GIS\Hanson_geotectonic_map_20Mar2009.mxd

WC Seep D
WC Seep A
N
WMSA-DMW-1D
(1742.22)
WMSA-DMW-1S
(1739.23)
1800
WMSA-DMW-6
(1644.38)
WMSA-P6A
(1855.32)
WMSA-DMW-4
(1771.66)
MS-INC
WMSA-DMW-9
(1793.65)
1700
1600
WMSA-DMW-2
(1479)
WMSA-DMW-5
(1522.09)
1500
WMSA-DMW-7
(1568.54)
WMSA-DMW-10
(1556.36)
WMSA-SW-A
WMSA - SW-B
1400
WMSA-SW-C
WMSA-DMW-3D
(1356.71)
WMSA-DMW-3S
(1366.87)
WMSA-DMW-11
(1400.94)
WMSA - SW-E
WMSA-DMW-8D
(1283.54)
1300
WMSA-DMW-8S
(1283.83)
WMSA - SW-D

LEGEND

Well Type

- Monitoring Well
- Piezometer
- VWT Piezometer
- Surface Water Sample Location
- Groundwater elevation Contour (03/2017)
- Former Ridgecrest
- Property Boundary
- EMSA/WMSA outline

NOTES

- Deep groundwater monitoring wells not used in contouring.

REFERENCES

1) USGS 1/9th Arc NED DEM based off of 2006 LIDAR Survey
2) Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
3) Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
4) Former Ridgecrest created from 1952 Cupertino and 1955 Mindego Hills Quadrangle USGS Topographic Maps.

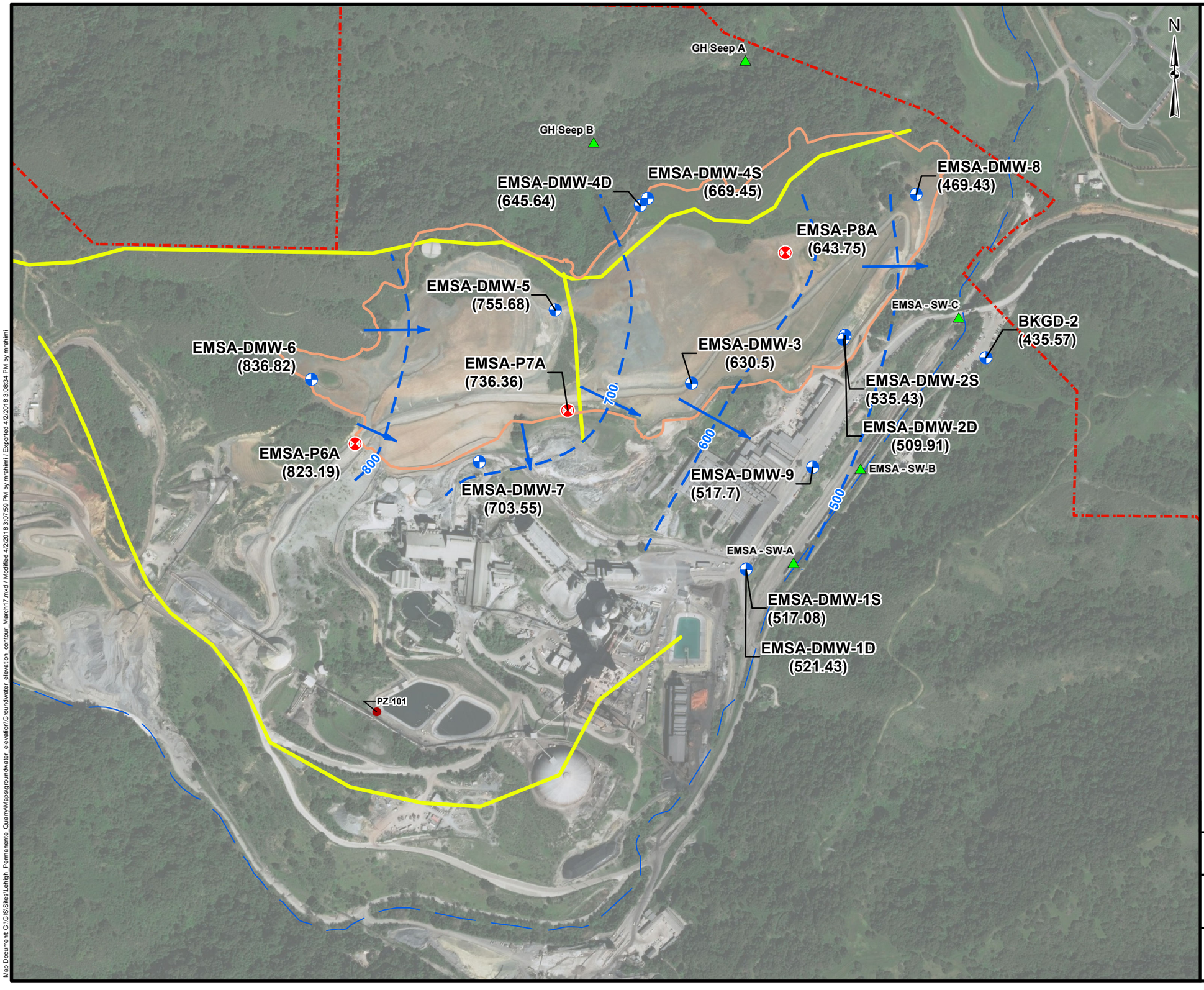
500 0 500 Feet
1 in = 524 feet

PROJECT
PERMANENTE QUARRY
SANTA CLARA COUNTY, CA

TITLE
WMSA GROUND WATER ELEVATION CONTOUR MARCH 2017

GOLDER

PROJECT No.	063-7109-914		FILE No.	Groundwater_elevation_contour_March17.mxd
DESIGN	MM	4/2/2013	SCALE: 1:6,290	REV. 0
GIS	MR	4/2/2018		
CHECK	GW	4/2/2018	**FIGURE 6**	
REVIEW	GW	4/2/2018		



Map Document: G:\GIS\Sites\Lehigh_Permanente_Quarry\Maps\groundwater_elevation\Groundwater_elevation_contour_March17.mxd / Modified 4/2/2018 3:07:59 PM by mrahimi / Exported 4/2/2018 3:08:34 PM by mrahimi

LEGEND

Well Type

- Monitoring Well
- Piezometer
- VWT Piezometer
- Surface Water Sample Location
- Groundwater elevation Contour (03/2017)
- Former Ridgecrest
- Property Boundary
- EMSA/WMSA outline

NOTES

- Deep groundwater monitoring wells not used in contouring.

REFERENCES

1) USGS 1/9th Arc NED DEM based off of 2006 LIDAR Survey
2) Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
3) Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
4) Former Ridgecrest created from 1952 Cupertino and 1955 Mindego Hills Quadrangle USGS Topographic Maps.

500 0 500 Feet

1 in = 499 feet

PROJECT

PERMANENTE QUARRY
SANTA CLARA COUNTY, CA

TITLE

EMSA GROUND WATER ELEVATION CONTOUR MARCH 2017

GOLDER

PROJECT No.	063-7109-914		FILE No.	Groundwater_elevation_contour_March17.mxd
DESIGN	MM	4/2/2013	SCALE: 1:5,990	REV. 0
GIS	MR	4/2/2018		
CHECK	GW	4/2/2018		
REVIEW	GW	4/2/2018		

FIGURE 7

APPENDIX A

Regulatory History Outside the Scope of these WDRs

1. **Santa Clara County Regulation:** Santa Clara County regulates the Site under the Surface Mining and Reclamation Act (SMARA) under the oversight of the California Department of Conservation's Office of Mine Reclamation (Mine ID# 91-43-0004). The County also regulates the Site under the Department of Environmental Health Hazardous Materials Program and Local Oversight Programs.

2. **Water Reclamation Requirements:** Water Board Order No. 94-038 was adopted for Kaiser Cement Corporation, permitting the use of reclaimed water from the Wastewater Treatment Facility. Order No. 94-038 allows treated and disinfected sewage to be reused in the cement manufacturing processes and for dust compaction.

3. **Treated Wastewater and Stormwater Discharges:** Stormwater discharges at the Site have been regulated by the Water Board since August 1974, when Kaiser Cement and Gypsum Corporation was issued Waste Discharge Requirements Order No. 74-65, which was rescinded by Order No. 97-061 when the Site obtained coverage under the State Water Board's General Permit for Stormwater Discharges Associated with Industrial Activity (Industrial General Permit). General stormwater permits are standard for quarry sites; however in 2012, Water Board staff began developing individual NPDES permits for the Site's surface water discharges, due to the identification of constituents of concern beyond those typical for quarries, chiefly selenium.

   The Site's mining and cement manufacturing process water and stormwater discharges are regulated under NPDES Permit CA0030210, Order No. R2-2014-0010, which was amended in July 2017 by Order No. R2-2017-0030. Industrial process water from cement manufacturing and stormwater from process and storage areas (including seepage collected from the EMSA from a french drain) are collected, reused, and/or treated for selenium, metals, suspended solids and pH by the Upper Final Treatment System (formerly the pilot treatment system) and discharged to Permanente Creek. The Lower Final Treatment System, which is under construction as of the date of this Order, is anticipated to treat and discharge to the creek additional stormwater, as needed. The combined capacity of the Final (Upper and Lower) Treatment System will be 2.7 MGD, and stormwater exceeding this capacity will be stored in the Quarry until treatment is feasible. Remaining stormwater discharges are regulated with Best Management Practices to reduce suspended solids, settleable solids, and pH. All current site ponds that discharge to Permanente Creek are covered under the NPDES permit and are not regulated by these WDRs.

   Historical permits for the Site include the Industrial General Permit, which required that the Dischargers develop and implement a Storm Water Pollution Prevention Plan. This order superseded the Site's individual permits (Order No. 97-061 and Order No. 74-65), which have been rescinded. Site stormwater was regulated under the Industrial General Permit until February 2011, when the Water Board determined that the Industrial General Permit was insufficient to protect water quality and required that Lehigh apply for an individual NPDES permit. Site discharges were covered under the General Permit for Aggregate Mining and Sand

Washing/Offloading, Order No. R2-2008-0011, as an interim measure pending adoption of Order No. R2-2014-0010.

4. **Permanente Creek Selenium TMDL:** A Total Maximum Daily Load (TMDL) is in development for Permanent Creek due to its impairment by selenium, which exceeds applicable water quality objectives in the water column. Water Board staff have evaluated selenium concentrations in creek water and sediment, as well as in Lehigh's wastewater and stormwater discharges, and identified that these discharges are a major source to the watershed. It is expected that onsite runoff control measures and water treatment systems in place and planned for the future, as required by the NPDES permit, will remove most selenium in the discharge, resulting in substantial improvements in creek water and sediment quality.

5. **Cleanup and Abatement Order and Section 401 Water Quality Certification**: In 1999, the Water Board issued Cleanup and Abatement Order (CAO) 99-018 to the Lehigh Southwest Cement Company to address excessive inputs of sediment to Permanente Creek associated with Quarry operations, cement manufacturing operations, and disposal areas for mining overburden. CAO 99-018 required several modifications to operations at the facility to provide off-channel settling basins, to direct stormwater runoff away from direct discharge to Permanente Creek, and to reduce the contribution of overburden deposits to in-creek turbidity. In addition, the CAO required that Lehigh provide a long-term restoration plan for Permanente Creek. Per the CAO, Lehigh prepared and submitted creek restoration plans that were evaluated by Water Board staff, who required revisions in several iterations. Prior to settling on a final creek restoration plan, the Sierra Club sued for completion of the plan to advance creek restoration, and the final long-term restoration plan was ultimately set forth in a Consent Decree. The Water Board and other environmental agency staff provided significant input to ensure the plan is sustainable and appropriate for the setting and minimizes impacts to threatened species. Permit applications for the restoration project have been submitted, and the project is undergoing environmental review to support future permitting. Once the environmental review process is complete, the Water Board may issue a Water Quality Certification pursuant to section 401 of the federal Clean Water Act (i.e., "401 Certification") for reclamation and creek restoration activities.

APPENDIX B

Comments from

Cathy Helgerson

To: San Francisco Bay Regional Water Quality Control Board

Attn: Lindsay Whalin – Groundwater Protection Division

Regarding: Tentative Order No. R2-2018-XXXX Waste Discharge Requirements

Company: Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc.

Location: 24001 Stevens Creek Boulevard Cupertino, Ca. Santa Clara County

From: Cathy Helgerson – Comments Due May 17, 2018

OWNERSHIP AND LOCATION

3. b. States On August 10, 1995, Kaiser Cement Corporation purchased 152 acres from Kaiser Aluminum and Chemical Company (Kaiser Aluminum) where Kaiser Aluminum had previously operated its Aluminum Plant and/or other activities. From 1941 to 1990, Kaiser Aluminum used the site for the manufacture of magnesium and aluminum foil products, and for aluminum research activities. Current ownership of the former Aluminum Plant is retained by the Dischargers.

Comment: The EPA Superfund Site Division conducted an investigation some years ago, per my request the Lehigh Southwest Cement and Quarry qualified but the EPA would do nothing to close them down and do a Superfund Site Cleanup I was never told why. I think that the State Regional Water Quality Control Board and Staff should take a look at this information.

The East Material Storage area overburden is covering the site that was the manufacturing of magnesium and aluminum foil products and it has never been cleaned up. I complained about this years ago and Santa Clara County and the EPA would do nothing to test or clean up this area. The area has high levels of Selenium and Santa Clara County and the State Regional Water Quality Control Board are very much aware of this. This area needs to be part of a Super Fund Site Cleanup but the EMSA overburden would have to be removed in order to do so.

The Lehigh Southwest Wastewater Treatment Plant is now being built to address the pollution at the Lehigh Southwest Cement and Quarry and it is not clear what exactly the chemicals and pollution that will be cleaned up by this Plant. The Waste water that contains all kinds of pollution will not be treated down to Zero levels this is a problem because of the cumulative effect on aquatic life and also human life. This water flows down the Permanente Creek and the Steven Creek Creek and eventually ends up in our aquifer below the Silicon Valley. The Santa Clara Valley Water District is in charge of the Stevens Creek Reservoir which has been contaminated by the Stevens Creek Quarry who uses the Reservoir as their own personal toilet. The water from the aquifer is then pulled up by the San Jose Water Company and the California Water Service Company this water is sold to the public and is our drinking water.

The Superfund Site Report mentions the pollution and the hazards that include Mercury, PCBs, cadmium, and selenium have been detected at elevated concentrations in site soils. Mercury, arsenic, beryllium, cadmium, chromium, and lead have been detected at elevated concentrations in cement kiln

dust from the site. Cadmium, selenium, and arsenic have been detected in on-site monitoring wells. Antimony, arsenic, hexavalent chromium, barium, boron, cadmium, copper, manganese, nickel, selenium, thallium, vanadium, and zinc have been detected in surface water collected from the quarry bottom. The Lehigh Cement Plant back in 2010 the facility's unaudited Toxic Release Inventory report indicated that the site released 22.1 pounds of chromium compounds, 32,521 pounds of hydrochloric acid, 5.548 pounds of lead compounds, and 613.15 pounds of mercury that gaseous elemental mercury (GEM) ranged from 0.749 to 19.5 nanograms per cubic meter (ng/m3). I am not sure now what the levels are but I can assure you that it is still a very dangerous situation and the public needs to be protected from this pollution and they are not.

PURPOSE OF ORDER

4. The Water Board issues Waste Discharge Requirements - & more

a. Require the Discharger Develop a Self-Monitoring Program & more – b. Require Operation, Maintenance and Contingency Plan for waste management units & - more c. Require Closure and Post-Closure Maintenance Plans & - more d. Require financial assurance & more

Comment: There needs to be more than a Self-Monitoring Program and true enforcement programs by the Agencies. The agencies also need to talk and work together sharing information. The Santa Clara County needs to do more in the work of enforcement with the polluters, this is not happening. The EPA Region 9 and the Federal EPA in Washington need to be more involved with the local agencies to make sure that they are doing a good job in protecting the public from pollution contamination. It seems unless the public complains no one seems to take an interest in stopping this ongoing pollution and this cannot continue. The Purpose of the Order does not state a real clean that could be handled by a EPA Super Fund Site Cleanup Division, and this needs to take place if the public is going to be protected. The financial cost for reclamation does not reflect a major Super Fund cleanup and this would be difficult to really know how much it would cost without including the EPA Super Fund Site professionals. The land needs to be hospitable to the possibility of using the land for other things besides mining such as building homes or a State and Federal Park.

SITE DESCRIPTION AND HISTORY

5. Limestone has been mined at the Site since approximately 1903 for use in the production of cement and/or aggregate materials. Waste materials including overburden and waste rock, as well as processing residuals are disposed of in two area of the site, the West and East Material Storage Areas (WMSA and EMSA, respectively see Figure 2). & more

Comment: Item 5 basically states that the overburden and waste rock is mining waste Title 27 section 22480 defines mining waste as: "Waste from mining and processing of ores and mineral commodities. Mining waste includes 1) overburden; 2) natural geologic material which have been removed or relocated by have not been processed (waste rock); and 3) the solid residues, sludge's, and liquids from the processing ores and mineral commodities."

Important issue- The threat to water quality from waste rock is greater than from native bedrock and there is a potential for leaching from blasting, excavation, and crushing bedrock. The Lehigh Southwest Cement and Quarry have been polluting the Air, Water and Soil for over 90 years and the public has been subjected to ongoing pollution that has caused many illnesses and even death to humans, animals and aquatic life. The public was continually told by Lehigh and the Santa Clara County that as the EMSA was being used that there was nothing wrong with the overburden they placed there it was just dirt, this was not the case. The public continually complained and complained no one stopped Lehigh dumping the waste material there and the mountain of polluted overburden grew and grew all the way up to the mountain ridge line limit. Finally after many years it was determined by the State Regional Water Control Board due to the public outcry that there was a serious threat to the Permanente Creek from Selenium pollution poisoning than an only then did the Santa Clara County have to do something about this pollution problem and they informed Lehigh to stop dumping overburden. They decided to put top soil on top of the overburden to see it that would help contain the Selenium which was not completely full proof but they kept trying. The Sierra Club got involved went to court and Lehigh was forced to build a Lehigh Waste Water Treatment Plant to handle the pollution at Lehigh. I am and have been continually concerned and worried that there still will be pollution going into the Permanente Creek and the Steven Creek that will contaminate the aquifer below the valley. The Treatment Plant will not treat down to zero pollution and this will not be acceptable. There needs to be more than a Self-Monitoring System in place we should not trust Lehigh to monitor themselves. The EPA Region 9 and the State Regional Water Quality Control Board should be the major monitoring regulator and they should do their own tests.

6. Wastes from cement – more

Comment: Cement wastes, including cement kiln dust and bricks, do contain heavy metals and they do have a high pH (basic), potentially contributing to alkalinity in waters that come into contact. The WMSA was used historically for disposal of aggregate fines (very small particles) that were a product of aggregate production on Site and considered waste. Lehigh and Santa Clara County again told the public that this was not a waste site that the overburden could not and would not harm anyone. The WMSA and the EMSA are waste disposal sites and the overburden is and has always been a waste material site. The dust from both sites and the water contamination issues have been known to harm the human, aquatic life and animal life and it is time to stop this pollution with very strong regulations and if necessary shut down the cement plant and quarry. I could not and cannot understand why it has taken 13 years of fighting with the agencies in order to get some kind of enforcement the public has suffered and is still suffering please move things along and stop this polluter from any further polluting of the Silicon Valley and the SF Bay Area.

7. Several historic disposal units or other potentially contaminated sites, - more

Comment: I cannot believe what I am reading and am absolutely horrified how can this waste remain isolated it needs to be removed? I asked the EPA Superfund Site Department to do a Superfund Site investigation and they did and Lehigh did qualify but no one would do anything to stop or remove the contaminated waste my question is why not? It seems to be time to unearth the EMSA and remove what is and has been buried beneath it for so many years and counting. I do not think covering up the

EMSA with overburden or soil is enough there needs to be a major Super Fund Site Cleanup in order to make sure that the contaminated soil is removed and transported to a place where the population can no longer be exposed to this contamination. The WMSA is also a contaminated site and this soil also needs to be removed and transported away from the valley and just filling up the mine pit will not be enough so a Super Fund Site must be created to handle the problem. It seems to me that Santa Clara County and some of the agencies just want to cover up the pollution with a layer of top soil and leave the polluted soil underneath this is not going to be enough. I am not sure how the Lehigh Waste Water Treatment Plant can handle the water coming off of the WMSA and EMSA but they would have to. How can this pollution be stopped unless the waste material is taken away and disposed of correctly?

8. Waste Characterization: more –

Comment: The WMSA and the EMSA may contain wastes other than waste rock aggregate that may include kiln bricks, other mining or cement manufacturing wastes or chemical drums or storage tanks. It would seem that drilling subsurface borings does not do the job and groundwater monitoring would be necessary. The mention of filling the quarry pit upon reclamation needs to be reconsidered due to the serious contamination of the waste material. The possible release into the groundwater is serious and I can only propose that the soil not be put into the quarry pit but removed taken away and disposed of correctly. The land will eventually be used for other purposes and if so it will need to be suitable for those other purposes. This I am sure will be costly and so maybe it will take a Major Superfund Clean up to do what is necessary to protect the public.

9. Waste Containment: - more

Comment: I do not believe Best Management Practices are sufficient for active treatment for storm water from the EMSA. I am very upset about the exemption of liners in the ponds and there needs to be a type of liner in all the ponds at Lehigh. I am not sure what they even consider water quality monitoring that is sufficient to what standards? There is the cumulative effect that is never considered when discussing pollution for a source and how is the population effected. It is time to take a more serious outlook on the monitoring of polluters in order to protect the public from harm. The WMSA, EMSA Cement Plant, Lehigh property with their buildings, and the ponds are all polluted and contaminated with polluted dust which is every place. The dust from Lehigh Southwest Cement and the Quarry has been polluting our homes and causing all kinds of sicknesses there just is no way to control the dust it is all over our homes. It is time that the Governments City, State and Federal Government ban together and stop this pollution because if Lehigh decides to mine a new pit because they are running out of limestone, we the public will not be able to live in this valley any longer.

10. The cement plant has been operating since 1939 – more

Comment: I am very upset to hear that the NPDES gives permits for the cement manufacturing process that allows the public to be contaminated in this way the discharges to waters of the United States, including storage in surface impoundments (pond). They do not investigate to the degree after giving these permits that protect the public from harm what is wrong here is the lack of real oversite and

enforcement of the permit rules which in the case of the Lehigh Southwest Cement and Quarry has been going on since the beginning.

Regulatory History Related to These WDRs

11. These WDR's address past, current, and future activities with potential to impact groundwater – more

Comments: When regulating a facility such as Lehigh with WDRs Waste Discharge Requirements it must be apparent that there will be real enforcement to the point of closing them down this has never taken place even temporarily. The ongoing continued disregard by Lehigh for controlling their pollution has been evident in the long list of serious violations one cannot say that they did not know they were violating the Regulations and Rules that were already in place. The permit were given out from Santa Clara County and the agencies without any real in depth review and this went on for so many years that the public wanted to know how come there was not enforcement. The public complained and so the agencies had to answer in some way in order to comply with set rules.

12. The Site has heretofore not been regulated under Title 27 WDRs, - more

Comment: Santa Clara County has conducted inspections of the Lehigh site in order to comply with closure/reclamation and have never sited Lehigh for anything this is against agency Regulations and Rules. The Reclamation plan is not part of the Cement Plant in any way and does not regulate the cement plant they seem to leave all of that up to the Bay Area Air Quality Management District. The Dischargers are planning to start the Reclamation plan the quarry pit and WMSA and I do not believe the EMSA is part of that Reclamation plan. I am worried about what they propose to do and how they are going to do it because it would leave the polluted site there and that it would only cover up the quarry pit with polluted overburden.

13. Order R2-2013-1005: - more

Comment: The Lehigh site has away been a source of pollution for groundwater and continues to be the activities are plain to see. The groundwater investigations have provided information that should have shut down the cement plant, quarry, WMSA, EMSA and the whole Lehigh property and no agency is willing to do their job. The public continues to be polluted to death and we are even facing another possibility of Lehigh wanting to mine a new pit and with the Lehigh Waste Water Treatment plant it is just a matter of time that Santa Clara County will give them a permit to do just that. I ask the State Regional Water Quality Control Board, Staff, and Agencies, County, Cities and the public to not allow this tragedy to take place.

14. Report of Waste Discharge: - more

Comment: The EPA Superfund Investigation was carried out in May of 2012 and Lehigh qualified but they decided to leave the matter in the hands of the regulating agencies which was a mistake. The report letter states that if the air and water regulatory activities reveal new information that suggests that additional work under Superfund may be needed to protect public health or the environment, we

will consider appropriate action. I think that it has come to this and that the EPA Superfund Department can help with the clean up because the public wants to make sure that there is a cleanup and that it is handled accordingly. My contact at the EPA was Karen Jurist and her phone number is 415-972-3219.

15. WMSA, EMSA, and Pond Waste Characterization Investigation: - more

Comments: a. Liquid waste units: It seems that several ponds contain concentrations of contaminants that exceed the applicable water and soil quality objectives (WQOs. and SQOs, respectively) for the protection of drinking water and/or aquatic habitat. This has been going on for over 90 years and counting when will the Lehigh Southwest Cement and Quarry be shut down? There is a question that should be answered, where is the pollution from the Cement Plant and Quarry going now and how is it being handled? What is under the lined ponds was this soil taken away and can it still be a problem? The ponds that were abandoned or their use has been severely restricted; with flow redirected to lined ponds is there still a hazard? I would like the EPA Superfund Division to look into this matter in order to make sure the public is protected. I would like to know who decides if the test on groundwater is acceptable at (6.7-9.5) making it neutral? It was stated that the solubility of selenium and arsenic maybe therefore be higher than leaching tests indicate if so what is being done about this?

It is stated that the results confirmed that the WMSA and EMSA contain waste materials that have the potential to contaminate groundwater and hydro geologically connected surface water. I will mention again for many years we the public have been subjected to ongoing pollution and the polluter has been allowed to continue to pollute it is time to put a stop to this criminal act.

16. Waste Pile Runoff and Seep Investigation: - more

Comment: The history speaks for itself in June 26, 2013 results showed elevated concentrations of metals and metalloids, indicating particulate transport, and elevated concentrations of dissolved selenium, including a finding that total (unfiltered) concentrations of mercury, copper selenium, lead, silver, thallium, and Zinc were elevated and dissolved (filtered) selenium concentrations were above WQOs. The selenium problem has been a problem and still is, no one seems to bring up the other pollutants and what is being done about them? Will the Lehigh Wastewater Treatment Plant treat all of the pollution at Lehigh or not? I have been told that they will not be able to treat the water down to Zero pollution levels so the public is still threatened by the pollutions. The fact is that cumulative effects are real how does this pollution in the Air, Water and Soil effect our health over many years of being exposed it is evident we are all seriously made ill from the pollution. I would like the EPA Superfund Division, EPA Region 9 and the Federal EPA Engineers and Scientists to look into this matter and declare the Lehigh Southwest Cement plant, quarry and grounds to be under the EPA Superfund cleanup which would eventually close down the facility.

17. Hydrogeologic Characterization and Groundwater Investigation: - more

Comment: I do believe that the wells at Lehigh are all continuing to be contaminated with pollution from the Lehigh Cement Plant and the groundwater and surface water issues need to be reviewed by the

EPA's Water Division at EPA Region 9. The Superfund Site cleanup would clean up the wells or shut them down permanently.

Geologic Setting

18. The Site is located – more

Comment: No need comment

19. There is a very strong possibility that if Lehigh decides to mine a new quarry pit that the public is facing the next major earthquake in California. The San Andreas Fault zone which is capable of a Richter Magnitude 8 earthquake is possible. There have been many earthquakes in the past and just recently to make us all wonder what would a new Lehigh quarry pit do to the land? There are tiny earthquakes that we do not feel when the Lehigh mine blasting is set and it is very hard to imagine that the next Lehigh proposed mine/pit will not cause a serious Richter Magnitude 8 earthquake. I do not think that anyone wants to chance the possibility of this catastrophe.

20. The San Andreas Fault Zone is located approximately two miles southwest of the Quarry (Figure 5. The Sargent Berrocal Fault Zone (SBFZ), part of the Santa Cruz Mountains front-range thrust fault system, parallels the San Andreas to the east and forms the eastern-most structural boundary to the Permanente Terrain. Note: There is more information read it for yourself. It is stated that a strand of the Berrocal Fault one extends beneath the cement plant area south of the EMSA, and extends westward into other portions of the Site. The new Lehigh Southwest Cement Quarry would be mined directly below the existing Quarry on the other side of the Permanente Creek much closure to the fault lines. I believe that the new mine explosions will set off the Sargent Berrocal Fault that will trigger the San Andreas Fault and there will be a major earthquake of a Magnitude of 8. This earthquake will take place up and down the California coast and even as far as Mexico. I ask that all involved and concerned stop this tragedy from taking place please, Lehigh should not be able to mine a new pit and the cement plant and old quarry should be closed up and a Superfund Site cleanup conducted I just cannot stress this enough.

Hydrogeology and Hydrology

21, & 22 – Information no comment

23. The Santa Clara Valley Groundwater Basin is threatened by Lehigh it is stated that bedrock and alluvium is a fundamental structural boundary formed by the Monta Vista Fault Zone which may limit hydraulic connection between the bedrock and the alluvial basins. At the site, this contact is located just northeast of the site property line. Ref. (Hanson USGS, 2004)

Comment: Lehigh should not be allowed to mine a new pit and the property should all be subject to a Superfund Site Cleanup. I believe that the Silicon Valley and California have been lucky so far not to have a major earthquake but the thought of mining a new pit should put shivers up everyone's spine because Lehigh will usher in the next major earthquake in California and it will destroy the cities it will be devastating. The public safety is at stake, is mining limestone to make cement more important or should

we not value people's lives over the revenue that will be gained from taxes and Lehigh Corporate profit. The agencies, Cities, Counties and State of California need to stop this terrible life threatening possibility no new pit and they need to close down Lehigh Southwest Cement and Quarry. It seems that there is no real enforcement and safety issues have not been able to close them down what is the public supposed to do? Allowing Lehigh to monitor themselves is foolish and especially when we read that they had a fire at the site and records were lost in the fire this should send a major warning to the agencies, you cannot and should not trust Lehigh.

24. Figures 6 and 7 illustrate groundwater flow – more

Comment: I want to bring up the issue of the Permanente Creek and the pollution from Lehigh Southwest Cement and Quarry who have been using it for their own personal toilet for 90 years and counting. This will continue for another 90 years if we do not stop them from mining a new pit. In order to mine a new pit Lehigh will have to destroy 30 thousand trees and 600 acres the benefits of these trees will be lost. The other thing is that many animals will be displaced because of this destruction and the Mid-Peninsula Preserve will be flooded with animals coming over who are frightened and want to save their lives. Many animals will die and there homes will be destroyed. The Permanente Creek and the Steven Creek will still be used as a toilet because even with the Lehigh Waste Water Treatment Plant the water will not be cleaned to Zero pollution levels. I think this is still a violation of the Clean Water Act regarding rivers and streams that no amount of pollution shall from and contaminate the rivers and streams of the United States. Lehigh should have been prosecuted for their crimes and fined but no agency will do the job of bringing Lehigh to justice.

25. DWR Bulletin 118-1 (appendix A, Page 85) designates the Santa Clara sub-basin as a Hydrogeologically Vulnerable Area. These areas are considered more susceptible to groundwater contamination due to hydrogeological conditions that "allow recharge at rates substantially higher than in lower permeability or confined areas in the same groundwater basin." The designation includes mountain or foothill areas of fractured rock that provide primary recharge to it, thus the entirety of the Site is covered under this Hydrologically Vulnerable designation.

Comment: It is time to take the warning to heart groundwater contamination is a serious matter and Lehigh can never operate a Cement Plant and Quarry without polluting our precious groundwater that feeds into our aquifers under the Silicon Valley and SF Bay Area. If I am reading this information correctly the agencies and the public should not wait and must stop this contamination to our groundwater.

26. The regional-scale direction of groundwater flow - more

Comment: The Permanente Creek has been under major investigation for a long period of time and Santa Clara County has been trying to keep the pollution from the Quarry pit and the ponds from going into the creek which has been a great problem. They have put in intern treatment units to control the Selenium at the site and especially with regards to the EMSA at what control levels I am sure that the levels are not down to Zero emissions. The site has many contaminants that also need to be addressed at what levels are acceptable to keep the public safe. I will mention here that the Clean Water Act states

that no river or stream should be polluted with anything. The Clean Air Act does not state that it is ok to have some pollution so how can Lehigh just treat the water to a certain level that is not at Zero pollution and release it into the streams. It also looks as if there is the Monte Bello Creek & Ohlone Creek (also known as Wildcat Canyon Creek) that is in jeopardy from pollution from Lehigh. There needs to be a reminder here that the Lehigh Cement Plant is constantly polluting the Air, Water and Soil and that they cannot pollute the rivers and streams. This Tentative Order by the State Regional Water Quality Control Board should be an enforcement order and serious fines need to be put in place against Lehigh right away. I am not clear or happy with giving them continue chances to clean up their act at the being they should have been sited because as a Cement Plant and Quarry owner they should know the Law and even if they do not that is no excuse ignorance of the law is not acceptable.

The Heidelberg Cement Company is Lehigh's mother company in Germany they have 139 Cement Plants with an annual cement capacity of 176 million tons more than 1,500 ready-mixed concrete production sites, and over 600 aggregates quarries. They employ 60,000 employees at 3,000 locations in more than 60 countries. The company was founded in 1874 as Portland Cement Company, and is 140 years old. I felt it was important to share this information with you because I am pretty sure that the Lehigh Southwest Cement and Quarry were and are very aware of the pollution that they have emitted to the Air, Water and Soil. The agencies should fine them for any violations and there should not be any leeway giving them multiple chances to clean up their act. The fact that the cement plant is not included in the Reclamation and that it is an old plant under the old grandfathering method is one of the great problems. The new plants are under stronger regulations and work more efficiently causing less pollution and this plant has an old kiln that keeps breaking down this old equipment that emits way too much pollution. I ask that all the agencies do their jobs and site this polluter for their lack of compliance.

27. Recharge – more

Comment: I find it very hard to believe that Selenium has not impacted the wells and would like a full investigation by the Water Board because Santa Clara County Water District that monitors these wells is not reliable in this matter. They sell water to the San Jose Water Company and the California Water Service Company who in turn sells this water to the public. I believe there are many pollutants in our drinking water and have looked at the EWG .org web site a nonprofit that receives reports from the water companies Selenium is not on their list at this time. There are many other pollutants in our tap water that are regulated and unregulated by the EPA that are a problem to the public. The State Regional Water Quality Control Board and the EPA Region 9 need to look into this matter to make sure we the public are receiving uncontaminated drinking water and they should not take the word of the Santa Clara County Water District or the Water Companies who have all to gain by their misinforming the public.

28. The predominant drainage for the Site is Permanente Creek – more

Comment: This item states that the Permanente Creek is generally dry adjacent to the Quarry during the dry season, due to head reversal caused by mine dewatering. Otherwise in the foothills reaches, Permanente Creek is a perennial stream that typically flows, year-round both upstream of and

downstream from the Quarry and is typically a gaining stream. (i.e., baseflow from groundwater in the Creek sustains the perennial stream). The problems caused by the Lehigh Cement Plant and Quarry and the dewatering of the Permanente Creek due to the mine is unacceptable and this needs to end right now in order to protect the aquatic life but also to protect the creek. This lack of flow had damaged the Permanente Creek and now they have had to do a restoration of the creek. Lehigh has been in violation for 90 years and counting and has damaged the Permanente Creek, gotten away with this and will continue to do so if we allow them to dump polluted water treated or not into the creek. Lehigh will have to find another way to dispose of their polluted water I suggested that they hook up to the Cupertino Sanitation lines right next at the Lehigh site and the Cupertino Sanitation Board would not allow this to happen. The Santa Clara/San Jose Treatment plant Director said they could manage the flow and were very willing to handle it. The Treatment Plant is in the process of being built and soon will try and process the polluted water from the Lehigh Site I must mention again that it will not be treated down to Zero pollution levels.

29. The Site and surrounding foothills – more

Comment: San Francisco Bay estuary and the Permanente Creek are listed as impaired due to selenium, and it also looks as if the Stevens Creek is also polluted. I am very sure there are more contaminants that need to be mentioned here.

30. The Regional Climate – more

Comment: The precipitation is being attacked by the Lehigh Southwest Cement and Quarry who uses Sulfur Dioxide, Nitrogen Dioxide and other contaminants which are drying agents. The drought will continue and there still is not enough water in our aquifers. The chemicals – pollutants are drying up the soil to the point that it has become necessary to water plants every day because the ground and dirt dry up so quickly. The sun is terribly hot due to these pollutants and global climate change is real Lehigh is a strong contributor to the changing climate in Cupertino, Silicon Valley and the SF Bay Area. It is time to close them down right now to save all of us from this contamination that threatens our very lives.

CURRENT HYDROGEOLOGICAL CONCEPTUAL SITE MODEL AND MONITORING PROGRAM

31. Backfilling the Quarry pit with WMSA waste is a big mistake especially because of the hazardous waste material in the overburden. The waste overburden needs to be removed from the site all together in order to clean up the Lehigh site and the Reclamation needs to address this change. It is not enough to put soil brought in from outside on to the top level of the Quarry pit after the WMSA has been emptied there. The fact that the rainwater can seep down through the soil that is contaminated and then end up in our groundwater is serious. I think it is time to make everyone understand that the soil needs to be trucked out of the Lehigh site and disposed of safely someplace else reserved for contaminated soil. The Super Fund Site proposal is the best way to do the job and I think it should start right away.

32 Evaluations to date do not indicate drinking water impacts from the site. - more

Comment: What evaluations who if you are referring to the Santa Clara Valley Water District think again. They have told the State Regional Water Quality Control that due to their monitoring of the wells that it has confirmed that drinking water has not been impacted by selenium, which is the primary COC from the Site. There is more to this than meets the eye Lehigh has been contaminating the Permanente Creek and Steven Creek with its pollution this water along with water that comes down from the Steven Creek Reservoir that is polluted ends up in our aquifer. The San Jose Water Company and the California Water Service Company sell this water to the public and I have mentioned before it is coming out of our taps. There needs to be a complete investigation by the EPA Region 9 that need to do testing and monitoring. There is pollution in the wells and it is not only selenium we should not trust this matter to the Santa Clara Valley Water District or the 2 water companies I mentioned.

The Evaluation Monitoring Program – To include: Detection Monitoring, Evaluation Monitoring and Corrective Action Monitoring which will be under carried out with the Self- Monitoring Program by Lehigh Southwest Cement and Quarry will not be enough. The EPA must do whatever is necessary to protect the public from any further harm from this dangerous polluter and a Super Fund cleanup will be necessary to clean up the terrible situation. The violations with Lehigh are many and the implementing of fines will not sufficiently make sure that Lehigh will not continue to break the law. The serious possibility that Lehigh will apply for a permit with Santa Clara County to mine a new pit is evident especially because Lehigh is running out of Limestone to mine and make cement. They must not be allowed to pollute our community with their contamination and destruction to the Air, Water and Soil this must end by shutting down the site.

33. Potential COCs from solid or liquid wastes – more

Comment: I will mention here that a Self-Monitoring (SMP) program will not be enough due to the seriousness of the matter and the long list of pollutant from the Lehigh Cement Plant, Quarry and grounds locations it is necessary to have the EPA Region 9, State Regional Water Quality Control Board, Bay Area Air Quality Management Division, Santa Clara County need to do their own testing and monitoring. There is mention that the contaminants maybe present in subsurface but I believe that there is pollution in the groundwater and aquifer which is passed on to our drinking water. The historical document and investigations show the many pollutants my question is why has no one ever done anything about this situation until now? Self-Monitoring so far if Lehigh even attempted some kind of monitoring in the past I think not did not correct any problems.

34. The wastes Characterized –more

Comments: Lehigh knew about this waste going into the WMSA and EMSA and told the public there was only overburden and it was not a hazard this was not true. The State Regional Water Quality Control Board needs to do more to regulate these pollutants at the site and if necessary close the site down. Lehigh never operated the Cement Plant or the Quarry without polluting and this problem must be dealt with seriously so far that has not been the case. There is an Act stating no mining waste pollution or other waste shall be allowed to flow into any US Stream and Rivers under the Clean Water Act it is time that this Act is enforced at the Lehigh site. The Lehigh Southwest Cement and Quarry had no right to

pollute the Permanente Creek or the Steven Creek with their pollution with or without a permit. It is time that any agency giving out such a permit be responsible for the damage that a site does to the waters of the United States. Lehigh should not be permitted to have such a permit and even if there is a Lehigh Wastewater Treatment Plant this water should not be allowed to flow into the Permanente Creek or the Stevens Creek. The water piped to the Lehigh Waste Water Treatment Plant from the Quarry and Ponds should be cleaned and piped out through the Cupertino Sanitation Lines that are right next to the Lehigh property. The water then would flow down to the Santa Clara/San Jose Water Treatment Plant who would then be able to clean the water even more with their extended purification systems. If that is not a possibility because of a political block then the water at after being treated by Lehigh should be trucked out and disposed of accordingly. The EPA Region 9, State Regional Water Quality Division, Santa Clara County, Cupertino Sanitation Board, Santa Clara/San Jose Water Treatment Plant Department and the City of Cupertino should all join together to make this happen. The public needs to be protected from the ongoing pollution at Lehigh and this should take place immediately.

Waste Management Units (WMUs)

35. Current WMUs: - more

Comments: I ask that the State Regional Water Control Division monitor the work of registered professionals and further I would like to see the EPA Region 9 also get involved. The reclamation program and its Preliminary Closure Plans that include what is in the waste material that is subject to backfill the Quarry Pit either WMSA or EMSA must be completely tested and then removed from the site. The Site if used for housing, State or Federal Park land must be completely free from any pollution or contamination. There needs to be clean land fill and it must be determined prior to filling the quarry pit what will the land be used for in the future and how will the site be caricaturized and how will it include zoning issues. The mention of informed modelling/predictions with respect to waste or contaminant mobility associated with closure plans and activities may not be enough I am not so sure these methods are sufficient.

35. a. West Materials Storage Area (WMSA) – more

Comment: WMSA has shown to be a pollution nightmare for everyone and it is a wonder nothing has ever been done about this pollution problem. The approved reclamation plan for closure will not be enough this overburden needs to be removed from the site and it should never be allowed to be backfilled into the quarry.

The Dischargers plan (Lehigh) to use wastes to the WMSA as Backfill for the Quarry Pit to reclaim the site the impact to groundwater and surface water is a serious matter and all concerned needs to be reevaluate expanding the groundwater monitoring will be a help. I am very concerned about the overall period of time this will all take because the public is continually at risk here so I want to request that methods to control the pollution be implemented immediately and that the Lehigh Southwest Cement and Quarry be closed down.

35. b. East Material Storage Area (EMSA) – more

Comment: The EMSA has been a constant problem and a source of major pollution the list of problems are listed Dry Canyon Storage Area, Former Surface Impoundment, Upper level land fill, the Former Brine Pond and the Aluminum Plant Area have all contributed to the contamination to the water. The public has been subjected to not only water pollution but Air and Soil pollution issues and problems. Selenium stands out the most and this problem is still a problem but what about the other pollution that still remains the polluted overburden continually sits there and they talk about final covers and funneling the water to a lined pond. The water from the ponds would go eventually to the Lehigh Wastewater Treatment Plant and it would not be treated down to Zero pollution. I can only mention again that the WMSA and EMSA overburden be taken to a regulated site for waste material and disposed of in order to protect the public.

36. Future WMUs: - more – no comment

37. Findings – more – no comment

BASIN PLAN

38. - no comment

ANTIDEGRADATION POLICY

39. - no comment

BENEFICAL USES - more

40. Comment: The Permanente Creek and Stevens Creek, tributaries to the San Francisco Estuary and a. through j. are noted but one has been left out the beneficial value to our groundwater, drinking water, aquifers and wells.

Comment: The information is the latest I suspect and Lehigh's Wastewater Treatment Plant is included in the write up. Note: Item 5 pg. 39 Upon the issuing of a Water Quality Certification pursuant to section 401 of the federal Clean Water Act for reclamation and creek restoration activities the Lehigh Southwest Cement Plant and Quarry would have to prove that they no longer pollute and that would be impossible. The permits and certifications allowed to polluters of this kind are only a formality to allow them the right to pollute as they please. The Waters of the United States are highly threatened and these processes that are created to justify their release of wastewater into our rivers, streams and aquifers is a crime against humanity and it should be investigated and stopped. The public cries out for justice and the closure of the Lehigh Southwest Cement and Quarry and we should not leave out the Steven Creek Quarry. I have mentioned many issues and I hope that the State Regional Water Quality Board and Enforcement Staff will start to change how things are regulated in order to save lives.

41. The Order protects – more

Comment: They have left out the Silicon Valley Aquifer joining with the Santa Clara Valley Groundwater Basin this water coming from the Santa Clara Valley Water District passing through the recharge pond and entering the Aquifer below needs to be included and protected by the State Regional Water Quality Enforcement Division.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Page 18 item 34 - Adoption of this Order – more

Comment: This site the Lehigh Southwest Cement and Quarry definitely has the potential for causing a significant effect on the environment. It seems that the State Regional Water Quality Control Department has decided that CEQA does not apply and that is in error. The site does cause and has caused a major disturbance to environmental resources for over 90 years and counting. There should be no exemption from the application of CEQA pursuant to CEQA Guidelines section 15301.

35. It is the policy of the State of California that every human being has the right to safe, clean affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. The EPA Region 9 and Federal EPA, State Regional Water Quality Control Board establish what they call acceptable contaminant levels that they state are designed to protect human health and ensure that water is safe for domestic use these levels to not consider the cumulative levels. The problem is that we the public are not sure how these levels are even reached and what science is behind them. The public is affected by this pollution with serious illnesses and even death these so called acceptable contaminant levels are not acceptable and there needs to be stronger enforcement proposed against the polluters.

NOTICE AND MEETING

Page 18 item 36 - The Water Board has notified the Dischargers – more

Comment: The Discharger is the Hanson Permanente Cement, Inc. Permanente Quarry and Cement Plant WDRs – Waste Discharge Requirements that will be set eventually will not keep them from polluting our valley. I am appalled by what has been taking place and also how limited the State Regional Water Quality Control Enforcement Department and the EPA – Environmental Protection Agency have in enforcing the Clean Air Act and the Clean Water Act it is time we the people stand up demanding more protection.

Page 18 item 37. The Water Board, at a public meeting – more

Comment: The State Regional Water Quality Control Board needs to do more than issue a Tentative Order with Waste Discharge Requirements. The continued disregard for the Rules by Lehigh over so many years warrant the closure of the Lehigh Southwest Cement and Quarry an there needs to be a major Super Fund Site Declared. Lehigh along with the EPA's Superfund Site Department need to start work and clean up the site and all the cities in the Silicon Valley and the SF Bay Area need to demand they do.

Page 19 IT IS HEREBY ORDERED - more

A. PROHIBITIONS

1. The treatment, discharge, or storage of waste or other materials that my impact beneficial uses of groundwater or surface water shall not be allowed to create a condition of pollution, contamination or nuisance as defined in CWC section 13050, nor degrade the quality of waters of the State or of the United States.

Comment: This whole statement above is a contradiction the State Regional Water Control Division cannot have it both ways it is more than evident that Lehigh continues to pollute at high levels with pollution and is breaking the law when will all the agencies start to abide by the law?

2. Migration of pollutants through subsurface transport to waters of the State prohibited.

Comment: Excuse me is everyone missing this it has been happening and continues to happen they are contaminating the rivers, streams, wells, reservoir and aquifer. Lehigh and all the water at Lehigh ponds and wells are polluting and all of it is coming from the Cement Plant and Quarry. The Lehigh Wastewater Treatment Plant will not bring pollution levels down to Zero no polluted water should be allowed to pollute the Permanente Creek, Stevens Creek, Reservoir and aquifer. The State Regional Water Quality Control Board issuing a general permit to emit or even a sand and gravel permit is just allowing the polluter to emit with a permit this is not acceptable.

3. There shall be no discharge of wastes to surface waters except as permitted under the NPDES permits.

Comment: No discharge of waste again what in the world give them a NPDES permit and they can pollute this makes things legal right? I am terribly appalled why even bother with a NPDES permit I guess it is to smooth over things so that the company can operate. I am sorry this all has to do with revenue from companies tax money is more important than human lives.

4. The discharge of pollutants from mining wastes or surface impoundments onto land, or into groundwater or surface water, is prohibited.

Comment: Here we go again contradiction seems it is prohibited remember unless you have a NPDES permit this needs to stop. How much more deception can the public take we need to change how things are run and really put laws in place that protect the public from pollution and contamination from the polluter such as Lehigh.

5. Excavation – more – no comment

6. There shall be no discharges – more – no comment

7. If it is determined that a WMU is leaking – more

Comment: What about a fine imposed by the State Regional Water Quality Control instead of just a notice from the polluter. The damage is done probably by a polluter's negligence and the public suffers and so if the polluter knows he will not be charged with a crime or will have to pay a stiff penalty he just goes about his business. How can we be safe with this kind foolish disregard for the laws that govern our safety please tell me that? The process of removal of pollution can take days what does expeditiously mean to them? If they don't take care of the problem what is the penalty?

8. The Creation – more – no comment

9. The relocation of wastes – more

Comment: Question where is Lehigh disposing its waste from the Cement Plant and the continued mining of the existing quarry? How is the overburden from the continued mine operation being disposed of especially after they have been told they cannot use the WMSA and the EMSA for any more waste dumping?

10. The discharge of hazardous waste – more

Comment: Lehigh has discharged hazardous waste so now what will the State Regional Water Quality Control Enforcement Division do their job and set a strong penalty against them with a very strong fine?

Page 20 – Item 11 –

Comment: Again the NPDES permit is mentioned how is a permit issued if the site discharges of leachate or wastewater that is polluted, it is a contradiction? Then unless permitted please this leaves the public in a terrible situation and this should never happen. Items a. through d. Lehigh has contaminated the site over and over again and continues to do so it seems that restrictions have never stopped them.

12. Activities – more

Comment: Lehigh has already violated this and more and continues to do so.

13. Wastes – more

Comment: Lehigh must remove all of the waste from the site and not be allowed to backfill the quarry because serious problems will arise if the quarry is not filled with clean uncontaminated soil.

14. The Dischargers – more - no comment

Page 21 B. SPECIFICATIONS through pages 21 through 39 & drawings - no comment

Note: I believe I have made myself very clear on how I feel about the Lehigh Southwest Cement and Quarry and their continued ongoing pollution and how the site should be closed down in order to protect the public from life threatening pollution.

Thank you,

Fwd: Lehigh Water Quality Analysis

Cathy Helgerson <cathyhelger@gmail.com>

Wed 5/9/2018 7:19 AM

To: Hoem, Christopher <christopher.hoem@pln.sccgov.org>; McCann, Lisa@Waterboards <Lisa.McCann@waterboards.ca.gov>; Boschen, Christine@Waterboards <Christine.Boschen@waterboards.ca.gov>; Whalin, Lindsay@Waterboards <Lindsay.Whalin@waterboards.ca.gov>;

Cc: FRYHOUSE@EARTHLINK.NET <FRYHOUSE@earthlink.net>; Paula Wallis <wallis.notoxicair@gmail.com>; Darcy Paul <dpaul@cupertino.org>; rob.eastwood@pin.sccgov.org <rob.eastwood@pin.sccgov.org>; Jones, Joel E. <jones.Joel@epa.gov>;

Hello,

I received this information from Christopher so I decided to pass it on to all of you at the State Regional Water Quality Control Enforcement Division for review and ask that you and others read this information regarding what was in the Lehigh Company Reclamation Plan.

It has come to my attention that there is a problem with what Santa Clara County has in their Lehigh Southwest Cement and Quarry Reclamation plan and what the State Regional Water Quality Control Enforcement Division has put in their Tentative Order to Adopt Waste Discharge Requirements for Lehigh Southwest Cement Company, and Hansen Permanente Cement Inc. and my question is how can this possibly happen? I see after reviewing the information that it seems that the two parties are not working together and have decided to act separately in this matter and so I wonder what the consequences will be can anyone tell me?

The Tentative Order was distributed to a list of concerned parties and there is a Comment Period deadline of May 17, 2018, by 5 PM contact person Lindsay Whalin 510-622-2363, this may have to be extended out due to the very serious problems that have not been resolved.

I am very concerned about Lehigh and understand from Christopher Hoem that Lehigh has started to backfill of the Lehigh quarry and have used the West Material Storage Area Waste Material in accordance with the Reclamation Plan after reading the State Regional Water Quality Control Enforcement Division's Tentative Order and handing in my comments I feel that there is a division among the two parties and that it is hard for me to understand how this has happened. This is a very serious problem because according to the State Regional Water Quality Control Enforcement Division Tentative Order there is a great problem with the WMSA overburden and the pollution that it contains which could cause very serious health problems and that this mining waste has the real potential to harm groundwater. The Water Board representative Lindsay Whalin has mentioned to me in a phone conversation that there should be no backfilling of the quarry by Lehigh I guess due to this Tentative Order because it has not been totally determined what is in the WMSA overburden waste. I asked her who will stop Lehigh from dumping and moving waste material and she stated that this was what the Tentative Order was for. I feel this to be very confusing due to the fact that this is not a cease and desist order from the State Regional Water Quality Control Board so how can Santa Clara County or Lehigh move on this action without one? Leaving this matter up in the air for anyone to interpret on their own or not interpret correctly can be a very serious problem and wonder about the fines that Lehigh will have to pay because of it. Lehigh should pay strong fines for dumping at the WMSA with contaminated overburden all along but no one seemed to stop this contamination.

The EMSA is a perfect example of another contamination with overburden the public asked Santa Clara County to look into the dumping at the very beginning and our voices were not heard. The pile of overburden got higher and higher and finally, Santa Clara County told Lehigh to file for a permit that they approved against the public's outcries Santa Clara County refused to test the soil and the pollution that could be in the overburden and said it was just dirt which could not harm the public. The EMSA contaminated dirt/overburden was dumped over an old contaminated aluminum plant and that area had never been cleaned and to even this day it has not been cleaned. There are all kinds of pollution contaminants at the EMSA and it seems the main focus is on selenium this problem has not been resolved. Lehigh is building a Lehigh Wastewater Treatment Plant to clean up the pollution at the massive site every single part of the Lehigh Southwest Cement and quarry and the grounds, ponds and areas are full of contamination and pollution and this pollution has polluted the Air, Water and Soil when will it ever end?

I ask that both Santa Clara County and the State Regional Water Quality Control Enforcement Division sit down and work out this problem and that until they can that all work on backfilling the Lehigh quarry discontinue until this matter can be worked out and that a specific order be in place that represents both the Water Board and Santa Clara County.

I am very concerned with the Lehigh's Waste overburden of the WMSA the certainty not the possibility of contamination to the groundwater, wells, hydro-geologically connected surface water, and aquifer below is serious and lives are at stake there should not be any pollution in the WMSA and the EMSA. I have mentioned that I believe this overburden should be taken off the properties and disposed of at a legal waste

disposal site out of the area and if necessary out of California. Lehigh should have never been able to dump this pollution into the WMSA site the runoff has polluted the Permanente Creek, ponds, aquifer and the water in the quarry. The public was told that neither the WMSA and the EMSA overburden contained any pollution it was just dirt, the public was totally misinformed to by Santa Clara County and the Lehigh Southwest Cement and Quarry Company. I believe that there should have been and should be strong fines to pay because of this criminal act and so far no one has taken the responsibility to act as a true Enforcement Division why is that?

The tentative order states that they will not regulate discharges of ponds because these are addressed under the National Pollution Discharge Elimination System program and permit. I am confused who is the enforcement agency here Santa Clara County who I believe gives out the permits is allowing Lehigh to use the WMSA overburden polluted dirt to fill the Lehigh quarry and according to the Reclamation Plan, they are aware of what the EMSA contains and still allow this, why? The State Regional Water Quality Control Enforcement Division wants to leave this matter of ponds to NPDES Program and permit system which has not enforced stopping the pollution and so now the SRWQCED decided to use a Tentative Order is it a wonder that I am confused.

The Tentative Order hearing by the Water Board at a regular meeting on June 12, 2018, will be heard this date needs to be pushed out in order to give more people a chance to comment and also so that the State Regional Water Quality Control Enforcement Division and Santa Clara County can work out this problem which is very serious changes need to be made. I ask that the parties reading this e-mail message also write an e-mail so they can ask questions that they may wish to ask in order to get some clarity in this matter and resolve the problems at hand.

I have included the EPA Region 9 Joel Jones and hope that maybe they can also get involved and try and help resolve this ongoing pollution problem and that the EPA needs to inform the public that what is taking place will soon be resolved.

I would like to hear from the State Regional Water Quality Control Enforcement Division and Santa Clara County on this matter and please include interested parties.

Thank you,

Cathy Helgerson
408-253-0490

---------- Forwarded message ----------
From: **Hoem, Christopher** <christopher.hoem@pln.sccgov.org>
Date: Mon, May 7, 2018 at 1:34 PM
Subject: Lehigh Water Quality Analysis
To: "cathyhelger@gmail.com" <cathyhelger@gmail.com>

Cathy,

In response to your question over the phone, you can learn more about the water quality testing done for the 2010 Lehigh Reclamation Plan Amendment here: https://www.sccgov.org/sites/dpd/DocsForms/Documents/Lehigh_RPA_20111213_AttG_WaterQuality.pdf

Christopher Hoem, AICP
Santa Clara County Senior Planner
408-299-5784

Please visit our website at www.sccplanning.org

To look up unincorporated property zoning information: www.SCCpropertyinfo.org

Questions on Plan Check Status?, please e-mail: PLN-PermitCenter@pln.sccgov.org

Comments from

Rhoda Fry

From: Rhoda Fry, fryhouse@earthlink.net, May 15, 2018
To: Lindsay Whalin, MS, PG, lwhalin@waterboards.ca.gov, cc Water Boards
RE: The California Regional Water Quality Control Board, San Francisco Bay Region TENTATIVE ORDER No. R2-2018-XXXX LEHIGH SOUTHWEST CEMENT COMPANY and HANSON PERMANENTE CEMENT, INC. PERMANENTE QUARRY AND CEMENT PLANT, 24001 STEVENS CREEK BOULEVARD, CUPERTINO, SANTA CLARA COUNTY
https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2018/June/Hanson/WDR_Lehigh_TOpackage_041718.pdf

Dear Ms. Whalin and Board Members,
Thank you for providing the opportunity to comment on the Tentative Order listed above. I reside 2.5 miles from this facility and over the years have become informed about the egregious record of violations relating to water, land use, air, and labor safety.

Company Ownership and Bankruptcy: Page 1, #1
Please note that both the property owner, Hanson Permanente Cement Inc., and operator, Lehigh Southwest Cement Company, are owned by the same parent company, Heidelberg Cement, Germany. Please note that Hanson Permanente Cement, Inc. declared bankruptcy in October 2016. I am concerned that the FACE funds might be insufficient and that the parent company will elect to evade its fiduciary duty to adequately address the environmental issues. Strangely, in 2016 as Hanson Permanente approached bankruptcy, its lease income from Lehigh Southwest Cement Company dropped precipitously by 30% from $16M to $11M. *Source: page 12, STATEMENT OF FINANCIAL AFFAIRS FOR HANSON PERMANENTE CEMENT, INC.CASE NO. 16-31614 (JCW) https://cases.primeclerk.com/kaisergypsum/Home-DocketInfo?DockSearchValue=257*

A Toxic Legacy – Making Bombs in WWII: Page 1, #3 b
It is troubling that the Water Board has had water quality concerns pertaining to this site since at least 1987. That's 30 years. Isn't it about time that the Water Board does something about our water quality? In fact, there have been events that have made things worse such as the unpermitted construction of a mountain of mining waste named EMSA around 2006.

Correction: In 1995, Kaiser Cement purchased the remainder of the Kaiser Aluminum property; some had already been purchased in 1980. The Kaiser Aluminum company also had several names. The first was The Permanente Metals Corporation (TPMC).

It is important to note that the site has a toxic history. In addition to magnesium and aluminum production, during WWII, the company was involved in military research. The Permanente Metals Corporation went on to manufacture incendiary bombs (similar to napalm) during WWII and later produced fused phosphate fertilizer from New Almaden serpentine and Idaho phosphate rock. *Source: Wilson, Mark. (2011). Making "Goop" Out of Lemons: The Permanente Metals Corporation, Magnesium Incendiary Bombs, and the Struggle for Profits during World War II. Enterprise and Society. 12. 10-45. 10.1017/S1467222700009721.*
Source: Geology and quicksilver deposits of the New Almaden district, Santa Clara County, California https://pubs.er.usgs.gov/publication/pp360

The EPA Kaiser Aluminum (0903175) report from 1989 provides some of the company's toxic history providing documentation dating back to 1982. According to the person I received it from, it is the only document that is approved for release to the public due to litigation. It is appended to this document. I have also sent in a separate email, communications from the Midpeninsula Regional Open Space District to Santa Clara County which includes another informative report from the EPA dated 2012.

There are a number of reports from the Santa Clara County of Environmental Health that are not available online. These reports show a history of problems with underground tanks. One report listed 20 underground tanks with capacities from 1,000 to 10,000 gallons containing hydraulic oil, engine oil, waste oil, diesel fuel, solvent, and unleaded gas. Some of the tanks and their connecting lines resulted in the site becoming impacted. This is based on reports from the Santa Clara County Department of Environmental Health dating from 1984 through 2000; other data is available by appointment only.

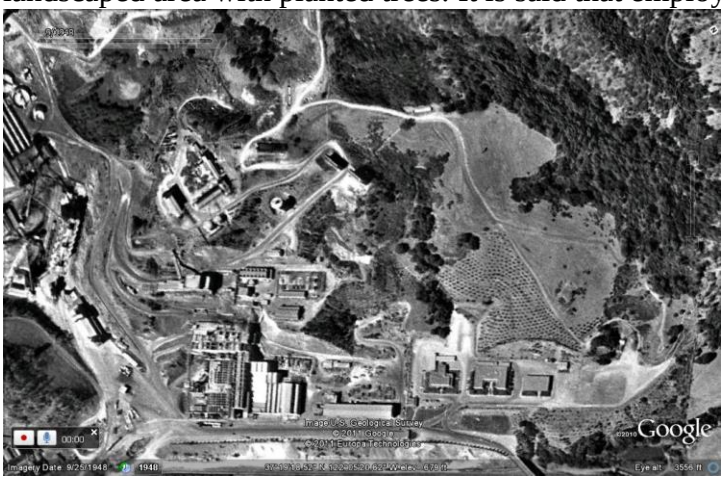
More than Mining Waste: page 5, #13
The contents of the waste piles WMSA and EMSA must not be understated. Please keep in mind that the EMSA pile is a newly-constructed pile that would have had to adhere to modern standards. Consequently, the statement "However, the site was in operation before regulation and before waste records were kept," is likely incorrect. Please consider these two areas differently. Please also state explicitly when Title 27 WDRs went into effect. This is mentioned in several places such as bottom of **page 12**. In addition, **page 3, #6**, mentions that these waste piles "might" contain wastes from cement manufacturing, whereas other documents from regulators confirm that they do. While there was a suspicious fire at the site in 1993 which destroyed company records, there is historic data in the hands regulatory agencies as demonstrated above and Google Earth provides a visual record. For example, a number of buildings mysteriously disappeared, evidently without permits from Santa Clara County. Even buildings with demolition permits, were never inspected so where are the remains of these buildings with a toxic history? *Source: it is appended to this document*

Santa Clara County Intends to Allow the Facility to Re-Mine and Move Waste Pile(s)
Santa Clara County Intends to Allow the Facility to Re-Mine and Move Waste Pile(s). What will the Water Board do, if needed, to override the County?

The EMSA waste mountain started around 2006, not 2012, page 15
EMSA, the unpermitted mountain of mining waste, started around 2006. Where was the Water Board then, when the water problems could have been easily resolved? Following threats from the California Department of Conservation (OMR, SMGB), EMSA was retroactively legitimized by Santa Clara County. The quarry's neighbor, our parkland, decried the County's assertions. The area under the mining waste was tested as early as the 1980s. It appears that the problems here were never fully addressed because a 2012 EPA investigation also found pollutants. *Source: https://www.sccgov.org/sites/dpd/DocsForms/Documents/Lehigh_RPA_20090414_EMSA_Agreement.pdf*

Sample of Photographic Record from Google Earth

Here is "EMSA" area in 1948 with three prominent buildings on the bottom right and a large landscaped area with planted trees. It is said that employees would picnic there on weekends.



2011 image:

2018 image:

EXHIBIT A

County of Santa Clara

Department of Planning and Development
County Government Center, East Wing
70 West Hedding Street, 7th Floor
San Jose, California 95110

	Administration	Development Services	Fire Marshal	Planning
Phone:	(408) 299-6740	(408) 299-5700	(408) 299-5760	(408) 299-5770
Fax:	(408) 299-6757	(408) 279-8537	(408) 287-9308	(408) 288-9198

February 10, 2011

RE: **Public records request for demolition permit for:**

Site Address: 0 Stevens Creek Blvd./24001 Stevens Creek Blvd., Cupertino

Assessor Parcel No.: 351-10-005

Present Jurisdiction: County

Bldg. Permit #	Date	Description	Status
19658	06/25/74	Demolish	Incomplete
76991	02/27/98	Demolish Storage Bldg.	Incomplete
76992	02/27/98	Demolish Office Bldg.	Incomplete
76993	02/27/98	Demolish Office Bldg.	Incomplete
76994	02/27/98	Demolish Office Bldg.	Incomplete
76995	02/27/98	Demolish Storage Bldg.	Incomplete
76996	02/27/98	Demolish Storage Bldg.	Incomplete
76997	02/27/98	Demolish Office Bldg.	Incomplete
76998	02/27/98	Demolish Office Bldg.	Incomplete
76999	02/27/98	Demolish Office Bldg.	Incomplete

Respectfully,

Michael L. Harrison

Michael L. Harrison,
Acting Building Official

Attachment

*Please see other side

EXHIBIT A

COMPLETED:	The project has received a final inspection by office.
INCOMPLETE:	The project has not received a final inspection by this office. If the last inspection was made more than six months, ago, the building permit will have to be renewed by the owner or agent.
JURISDICTION:	If the parcel was annexed to a city, information regarding construction will have to be obtained from the noted city.
NO PERMIT:	A building permit has not been issued by this office, for work at this address. In order to legalize construction, the owner or his agent has to apply for a building permit. For more information, please ask for a building permit information handout.
PRIOR TO: 1947	Buildings constructed prior to 1947 were not required to have a permit.

PRELIMINARY ASSESSMENT

DATE: April 19, 1989

PREPARED BY: Annina O. Antonio
California State Department of Health Services
Toxic Substances Control Division
Region 2

SITE: Kaiser Aluminum
23333 Stevens Creek Boulevard (Permanente Road)
Cupertino, CA 95014

ASPIS NO.: 43-01-0002

EPA ID NO.: CAD 982358087
CAD 009155284

1. Site Description:

Kaiser Aluminum is an aluminum manufacturing company located at 23333 Stevens Creek Boulevard in the City of Cupertino, Santa Clara County, California (Figure 1, Site Location Map). During World War II, the site was occupied by a plant which manufactured magnesium incendiary bombs (1). Kaiser Corporation has occupied the site since 1946. Kaiser used the plant for the electrochemical reduction of magnesium from 1946 until 1969 (1). Kaiser Aluminum, a division of Kaiser Corporation, has occupied the site since 1969. It is currently used primarily for producing aluminum foil (2). The manufacturing process involves running heavy gauge aluminum foil through mills which produce thinner foil stock for various uses, ranging from household foil to aircraft wing foil (2).

Kaiser Aluminum is a large quantity waste generator (6). Its wastes include: municipal wastes, waste rolling oil from the foil mills, filter powder, and methyl ethyl ketone (MEK) (2). Waste oils are hauled away and recycled by Romic Chemical and Alviso Independent Oil Company (2). Filter powder wastes are transported on a quarterly basis to a class I facility in Idaho (2). MEK are hauled off-site and incinerated (2).

A liquid waste disposal pond on-site was originally used by the Kaiser magnesium plant and was used by Kaiser Aluminum for the disposal of SO_2 scrubber wastes until 1980 (1).

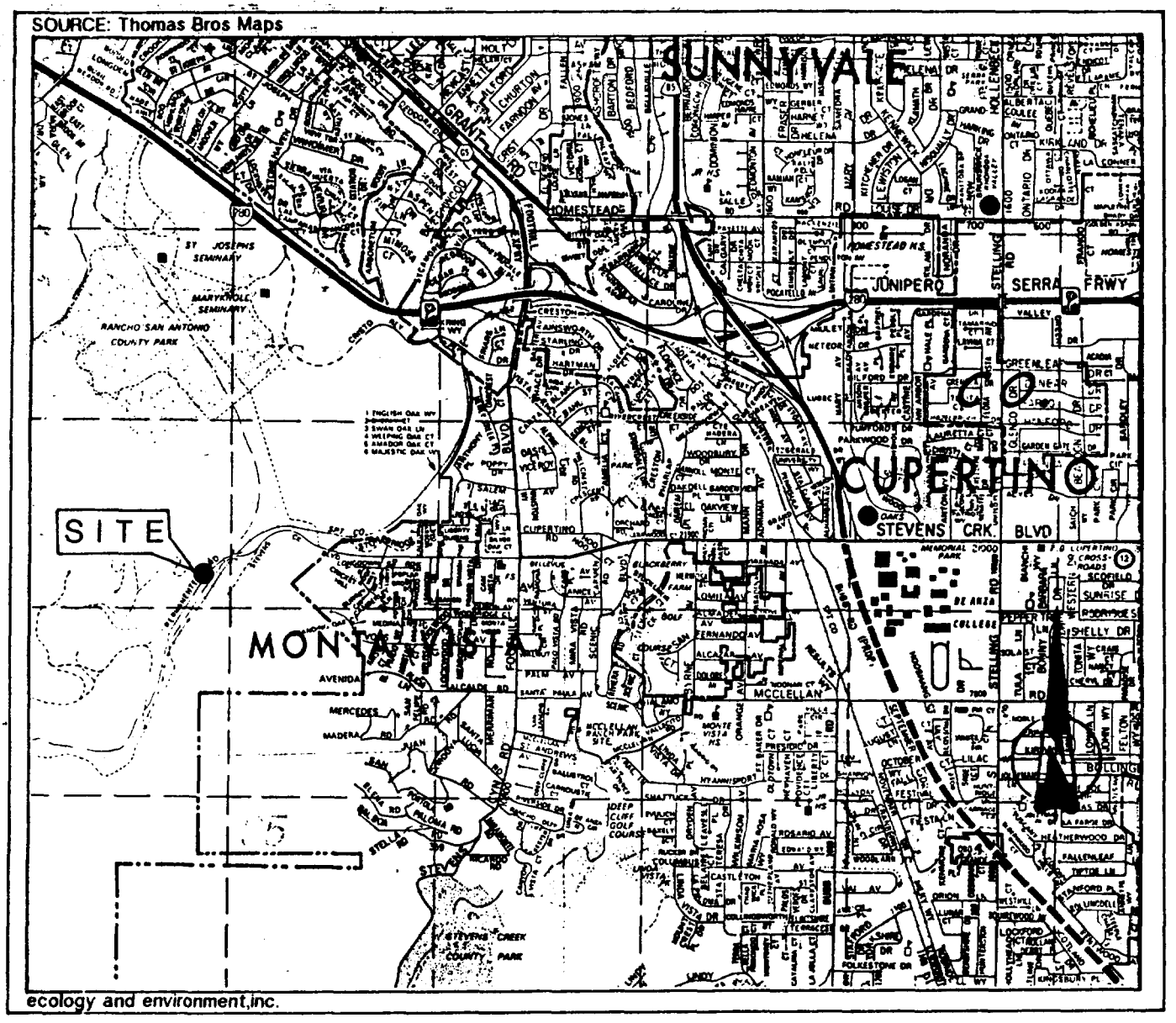


FIGURE 1
SITE LOCATION MAP

KAISER ALUMINUM FOIL PLANT
23333 STEVENS CREEK BLVD
CUPERTINO, CA 95014

2. Apparent Problem:

In January 1982, the California Department of Health Services (DHS) Abandoned Site Project (ASP) inspected the Kaiser Aluminum facility located on Permanente Road (1). According to the ASP report, the abandoned portion of the old magnesium plant contained approximately eight electrical transformers, several hundred drums (unlabeled/contents unknown), and cathode and anode waste blocks scattered throughout the plant (1). In addition, there was a system of subsurface cement-lined utility trenches which may have collected run-off and trapped sediment from the site (1).

The liquid waste disposal pond on-site was originally used for the disposal of liquid wastes by the Kaiser magnesium reduction plant and was subsequently used by Kaiser Aluminum for the disposal of SO_2 scrubber wastes. These wastes included sodium carbonate-neutralized sludge and coal tar fractions. The contents of the pond was reported to have overflowed several times (1). At the time of the ASP inspection, a small portion of the original pond surface was still exposed. The site was then referred to the Hazardous Waste Management Branch Enforcement of DHS for further action.

On April 5, 1983, DHS inspected the facility (8). Of the eight transformers mentioned in the 1982 ASP report, two were observed during the April 1983 enforcement inspection (9). Kaiser Aluminum had the two tested for PCB levels and both were found to be PCB-free (9). No information was available on the other six, nor the drums or trenches.

In October 1987, a Preliminary Assessment for the Kaiser Aluminum Foil Plant, located at 23333 Stevens Creek Boulevard in Cupertino, was conducted by Ecology and Environment Field Investigation Team (FIT) under contract to the U.S. EPA (2). According to FIT's report, the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) sent out a questionnaire to Kaiser Aluminum in 1982 seeking information for their Santa Clara groundwater basin leak detection program. Kaiser Aluminum indicated that they had three 12,000-gallon underground storage tanks which were installed in 1956. One contained paint sludge (80% kerosene, 19% waste oil, and 1% paint) and the other two contained kerosene. The SFRWQCB requested that Kaiser Aluminum conduct a subsurface soil investigation to determine if any of the three underground tanks had leaked. According to the Kaiser Aluminum consultant report dated February 1984, toluene and an unknown constituent were identified. Toluene was present beneath the kerosene tank while the unknown constituent, similar in structure to diesel fuel, was present in soils adjacent to the paint sludge tank.

In June 1988, DHS identified two Kaiser Aluminum facilities in Cupertino (3). One was located at 23333 Stevens Creek Boulevard (CAD 009155284) and the other on Permanente Road (CAD 982358087) (3). According to the Santa Clara County Health Department, and the City of Cupertino Planning Department, the correct address is 23333 Stevens Creek Boulevard (4,11). Additional inquiry from the City of Cupertino Post Office indicated that mail addressed to both locations are delivered to 23333 Stevens Creek Boulevard (10).

3. HRS Factors:

Hazard Ranking System Factors were not researched because they were discussed in the Preliminary Assessment completed October 28, 1987 by Ecology and Environment FIT under under contract to the U.S. EPA. Preliminary investigation indicates that the site does not have the potential to score high enough to be included in the National Priorities List (NPL) based on currently available information.*

4. Other Regulatory Involvement:

The Kaiser Aluminum Foil Plant is listed under the December 8, 1988 U.S. EPA RCRA database as a large quantity generator (6). Recent communication with the SFRWQCB indicated that Kaiser Aluminum is an inactive RWQCB site (7). According to the Santa Clara County Toxics Division, the site is currently involved in litigation and its files confidential (4).

5. Conclusions and Recommendations:

The Kaiser Aluminum site is located at 23333 Stevens Creek Boulevard in Cupertino, California. Although the CERCLIS database lists two Kaiser Aluminum facilities in Cupertino, there is one actual Kaiser Aluminum facility. The correct location is Stevens Creek. The site was the former location of a magnesium incendiary bomb plant during World War II. Kaiser Corporation has occupied the site since 1946, and used it from 1946 to 1969 for the electrochemical reduction of magnesium. Kaiser Aluminum has occupied the site since 1969 for use in aluminum foil manufacturing. There are three underground storage tanks on-site which are believed to be the source of contamination observed on underlying soils at the site. According to the E&E investigation, there is potential for observed release to groundwater. However, it does not appear to be a threat to local groundwater resources. The site has a low target population, and thus, is unlikely to qualify for inclusion on the National Priorities List (NPL).

* E&E did PA on 23333 Stevens Creek Boulevard on 11/1/87 and recommended NFA. DHS PA on kaiser facility at Permanente Road identified that the two sites are the same. Since 23333 has already been evaluated, no further work was done.

5.1 **EPA Recommendation**:

Based on a preliminary screening of Hazard Ranking System (HRS) factors, the site appears ineligible for inclusion on the National Priorities List (NPL). Therefore, no further action is recommended under CERCLA.

5.2 **DHS Recommendation**:

A pending status is recommended. Although the SFRWQCB considers it an inactive site, they are still providing Kaiser Aluminum with general guidance due to impacted groundwater on-site.

EPA CONCURRENCE	Initial	Date
No Further Action Under CERCLA	_____	_____
High Priority SSI	_____	_____
Medium Priority SSI	_____	_____

References

1. California Department of Health Services, 1982, Hazardous Materials Management Section, Abandoned Site Project, Final Disposition Report, February 10, 1982.

2. Thys, Beatrice, E&E FIT, 1987, Preliminary Assessment, Kaiser Aluminum Foil Plant, 23333 Stevens Creek Blvd., Cupertino, California, October 28, 1987.

3. U.S. Environmental Protection Agency, 1988, CERCLIS Database, June 15, 1988.

4. Blamey, James, 1989, Personal Communication, Santa Clara County Toxics Division, March 29, 1989.

5. McGee, G.A., 1983, Letter to Vera Brady, U.S. EPA; Subject: Change of Address Notification, September 15, 1983.

6. U.S. Environmental Protection Agency, 1988, RCRA Database, December , 1988.

7. White, Diane, 1989, Personal Communication, SF Regional Water Quality Control Board, April 5, 1989.

8. White, C.A., 1983, Letter to G.A. McGee, Kaiser Aluminum; Subject: Violations Observed on April 5, 1983 Inspection, June 21, 1983.

9. McGee, George, 1983, Letter to C. Knoblock, California Department of Health Services, August 25, 1983.

10. Murr, J., 1989, Personal Communication, City of Cupertino Main Post Office, April 11, 1989.

11. McCann, D., 1989, Personal Communication, City of Cupertino Planning Department, April 11, 1989.

FIELD PHOTOGRAPHY LOG SHEET

DATE [illegible]

TIME ________ A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER [illegible]

SITE [illegible]

PHOTOGRAPHED BY:

[illegible]

SAMPLE ID# (if applicable)

DESCRIPTION: [illegible]

DATE ________

TIME ________ A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER ________

SITE ________

PHOTOGRAPHED BY:

____

SAMPLE ID# (if applicable)

____

DESCRIPTION: ________

REFERENCE 1

ANDONED SITE PROJECT

FINAL DISPOSITION

Name David Belk

Date February 10, 1982

Site Name Kaiser Aluminum

Site Address Permanente Road

City Cupertino Zip Code 95014 County Santa Clara

RCRA # _____ Superfund # _____ SWIS # 43-33-0001

REFERRAL: Date(s) referred: January 18, 1982

Referral Agency Name(s): HWMB-Enforcement

Reason referred: _____

INCLUDE IN ASP SITE SUMMARIES: (date and initial)

	Yes	No (explain below)
Lead Person	2/10/82 DFB	
Regional Administrator	7/8/82 D	
Project Manager	7/9/82 RJ	
Other	7/16/2 R.	

Reason for not including in the site summaries: _____

Abandoned Site Project

Kaiser Aluminum
Permanente Road
Cupertino, CA 95014

HISTORY

During World War II the site was occupied by a plant which manufactured magnesium incendiary bombs. In 1946 it was occupied by Kaiser. Kaiser used the plant for the electrochemical reduction of magnesium until 1969. The site is currently occupied by Kaiser Aluminum, and is used for research and development in primary aluminum manufacturing.

A liquid waste disposal pond on the site was originally used by the Kaiser magnesium plant. Kaiser Aluminum used the pond for the disposal of SO_2 scrubber waste until 1980. In the summer of 1980 the contents of the pond was pumped out and about 20 feet of fill was placed over the pond. The fill originated from the adjoining Kaiser cement plant.

DESCRIPTION OF PROBLEM

The site was inspected by Abandoned Site Project staff on January 12, 1982. The abandoned portion of the old magnesium plant contains approximately eight electrical transformers, some of which may contain transformer oil. Scattered throughout the plant site are several hundred unlabeled drums, the contents of which have not been identified. In addition, there is a system of subsurface cement-lined utility trenches which may have collected runoff and trapped sediment from the site.

The pond was originally used for the disposal of liquid wastes by the Kaiser magnesium reduction plant. It was subsequently used by Kaiser Aluminum for the disposal of SO_2 scrubber wastes, which included sodium carbonate-neutralized sludge and coal tar fractions. The contents of the pond reportedly overflowed several times. A small portion of the original pond surface is still exposed.

SAMPLING AND RESULTS

The site was referred to the Hazardous Waste Management Branch Enforcement on January 18, 1982 for further action.

hd SCER-2/mt

FINAL DISPOSITION

Name _____

Date 10/03/82

Site Name Kaiser Aluminum

Site Address Permanente Rd

City Cupertino Zip Code 95014 County Santa Clara

RCRA # _____ Superfund # _____ SWIS # 43-33-0001

REFERRAL: Date(s) referred: 01/18/82

Referral Agency Name(s): HWMB Enforcement

Reason referred: A.S.P. Inspection revealed an abandoned waste disposal pond numerous drums and several Transformers on-site

INCLUDE IN ASP SITE SUMMARIES: (date and initial)

	Yes	No (explain below)
Lead Person	3-11-82 DJB	
Regional Administrator		
Project Manager		
Other		

Reason for not including in the site summaries: (Included in summaries)

REFERENCE 2

ecology and environment, inc.
160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811
International Specialists in the Environment

PRELIMINARY ASSESSMENT

DATE: October 28, 1987

PREPARED BY: Beatrice Thys
Ecology and Environment, Inc.

SITE: Kaiser Aluminum Foil Plant
23333 Stevens Creek Blvd.
Cupertino, CA 95014
Santa Clara County

TDD #: F9-8706-059

EPA ID #: CAD009155284

1. Initial FIT Conclusions and Recommendations for Further Action:

a) Site Description:

The Kaiser Aluminum Foil Plant (KA) has operated at 23333 Stevens Creek Boulevard, Cupertino, California, since 1946 (see Figure 1, Site Location Map). The Kaiser Cement Plant, a separate company, is located adjacent to KA at the west end of Stevens Creek Boulevard (1). The site was first occupied (from 1943 to 1945) by a magnesium processing facility which was built by Henry Kaiser. During this time, magnesium oxides were refined on-site. Details regarding the steps of this refining process are unknown. This pure magnesium was for use in the manufacture of incendiary bombs. Since 1946, aluminum foil has been produced on-site. The process involves running heavy-gauge aluminum foil through mills which produce thinner foil stock for a variety of uses, from household foil to aircraft wing foil.

The facility is a multi-level building; levels are designated according to their elevations above sea level (545 ft, 560 ft, 570 ft).

There are three underground tanks, an unidentified number of above-ground tanks, and approximately 12 transformers containing polychlorinated biphenyl (PCB) oils on-site. Stored in the above-ground tanks (some of which are below grade) are: flammable/non-flammable gases, corrosives, combustible oils, isopropyl alcohol, combustible liquids, and flammable liquids (2).

REFERENCE 3

EPA ID NO.	SITE NAME / STREET / CITY / COUNTY CODE AND NAME	STATE ZIP / CONG DIST.	NFA. FLAG	OPRBLE UNIT	EVENT TYPE	ACTUAL START DATE	ACTUAL COMPL DATE	CURRENT EVENT LEAD
CAD981409352	K & H FINISHING 2302 TRADE ZONE BLVD SAN JOSE 085 SANTA CLARA	CA 95131	NFA	00	DS1 PA1		05/01/86 12/01/87	EPA (FUND) EPA (FUND)
CAD980637557	KAISER ALUM & CHEM CO SHIPYARD #2 CUTTING AND WRIGHT TO THE BAY RICHMOND 013 CONTRA COSTA	CA 94804		00	DS1 PA1	 05/01/86	02/01/80 06/01/86	EPA (FUND) STATE(FUND)
CAD982358087	KAISER ALUMINUM PERMANENTE RD CUPERTINO 085 SANTA CLARA	CA 95014		00	DS1		12/01/87	STATE(FUND)
CAD009155284	KAISER ALUMINUM FOIL PLANT 23333 STEVENS CREEK BLVD CUPERTINO 085 SANTA CLARA	CA 95014	NFA	00	DS1 PA1		05/01/86 11/01/87	EPA (FUND) EPA (FUND)
CAD008262982	KAISER CEMENT CORP CUSHENBURY PLT OFF ROUTE 18 LUCERNE VALLEY 071 SAN BERNARDINO	CA 92356		00	DS1 PA1 SI1	 01/01/85	06/01/81 02/01/85 02/01/87	EPA (FUND) STATE(FUND)
CAD009109539	KAISER CEMENT CORP PERMANENTE PLT W TERMINUS OF STEVENS CR BLVD PERMANENTE 085 SANTA CLARA	CA 95014		00	DS1 PA1	 09/01/86	06/01/81 06/01/87	EPA (FUND) STATE(FUND)
CAD981677164	KAISER DEV CO - BLOSSOM HILL ROAD SITE BLOSSOM HILL RD&BLOSSOM RVR DR SAN JOSE 085 SANTA CLARA	CA 95118		00	DS1 PA1		10/01/86 02/01/87	EPA (FUND)
CAD980893416	KAISER PIT MT HERMAN RD SCOTTS VALLEY 087 SANTA CRUZ	CA 95066		00	DS1 PA1 SI1		07/01/85 09/01/85 09/01/85	EPA (FUND) EPA (FUND) EPA (FUND)

REFERENCE 4

CONTACT REPORT

Agency/Affiliation:	Santa Clara County Toxics
Address:	2220 Moorpark Avenue San Jose, CA 95128
Contact:	James Blamey
Phone Number:	(408) 299-6930
From:	Annina O. Antonio
Date:	March 29, 1989
Subject:	Kaiser Aluminum Site Correct Address, Current Status

J. Blamey inspected the site approximately four-five months ago. The Permanente Road and 23333 Stevens Creek Boulevard addresses definitely refer to the same site. Their files on Kaiser are confidential and are currently with the District Attorney's office.

REFERENCE 5

KAISER
ALUMINUM

KAISER ALUMINUM & CHEMICAL CORPORATION

September 15, 1983

Ms. Vera Brady
Environmental Protection Agency
Mail T-2-2
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Brady:

This is your notification that our address has changed from:

RCRA 1. Kaiser Aluminum, Stevens Creek Road, Permanente, California } CAD009155246

to: Kaiser Aluminum, Foil Plant, 23333 Stevens Creek Boulevard, Cupertino, CA 95014.

2. Kaiser Cement is still located at the west terminus of Stevens Creek Boulevard, Permanente, California. CAD009109539

Super-Fund CDS Docket

We are two separate companies who are located next to each other.

Very truly yours,

George McGee

G. A. McGee
Plant Engineer

itk

REFERENCE 6

FACILITY ID	FACILITY NAME	FACILITY STREET	FACILITY CITY	ZIP	COUNTY	ACTIVITY TYPE GEN	TRANS	TSDF	PERM STAT	NON REG	NOT DAT
CAD982320111	KAB MOTORS INC	6636 MANCHESTER BLVD	BUENA PARK	90621	ORANGE	2					02/18/88
CAD112932108	KABIVITRUM INC	1311 HARBOR BAY PARKWAY,	ALAMEDA	94501	ALAMEDA	1					12/19/85
CAD066113796	KABUKI THEATER	1881 POST	SAN FRANCISCO	94101	SAN FRANCISCO	1					05/20/86
CAD982314916	KAEDING PERFORMANCE INC	813 KRISTICH LANE	CAMPBELL	95008	SANTA CLARA	3					10/28/87
CAD982061202	KAESS TIRE & BRAKE	1261 18TH & T ST	MERCED	95340	MERCED	1					10/08/87
CAD981391808	KAGA INC	11215 YOUNG RIVER AVE	FOUNTAIN VALLEY	92708	ORANGE	2					02/25/86
CAD981972045	KAHL SCIENTIFIC INSTRUMENT CORP	737 W MAIN ST	EL CAJON	92020	SAN DIEGO	3					05/11/87
CAD 326068	KAINOS WORK ACTIVITY CENTER	520 SECOND AVE	REDWOOD CITY	94063	SAN MATEO	3					11/24/87
CAD009460767	KAISER AEROTECH	880 DOOLITTLE DR	SAN LEANDRO	94577	ALAMEDA	1					08/14/80
CAD072286123	KAISER ALUM & CHEMICAL CORP	1345 SOUTH HERBERT AVE	LOS ANGELES	90023	LOS ANGELES	1				9	08/14/80
CAD055505333	KAISER ALUMINUM & CHEM CO	1937 DAVIS ST	SAN LEANDRO	94577	ALAMEDA	1					01/12/84
CAD981391584	KAISER ALUMINUM & CHEM CORP	6250 E BANDINI	CITY OF COMMERCE	90040	LOS ANGELES	1					02/21/86
CAD073934176	KAISER ALUMINUM & CHEMICAL CAN LAB	1465 FACTOR AVE	SAN LEANDRO	94577	ALAMEDA	1				9	08/14/80
CAD071683940	KAISER ALUMINUM & CHEMICAL CORP	6177 SUNOL BLVD	PLEASANTON	94566	ALAMEDA	1					08/14/80
CAD052266822	KAISER ALUMINUM & CHEMICAL#	1001 MC WANE BLVD	OXNARD	93030	VENTURA	1					08/14/80
CAD981454887	KAISER ALUMINUM & SHEMICAL CORP	6250 EAST BANDINI	CITY OF COMMERCE	90040	LOS ANGELES	3					03/24/86
CAD981399488	KAISER ALUMINUM AND CHEMICAL CORP	6250 EAST BANDINI	CITY OF COMMERCE	90040	LOS ANGELES	3					04/25/86
CAD009155284	KAISER ALUMINUM FOIL PLT	23333 STEVENS CR BLVD	CUPERTINO	95014	SANTA CLARA	1					08/14/80
CAD982041691	KAISER ASBESTOS INC	7008 34TH ST	NORTH HIGHLANDS	95660	SACRAMENTO			X			09/21/87
CAD 999923	KAISER BROTHERS OLDSMOBILE	1540 S FIGUEROA ST	LOS ANGELES	90015	LOS ANGELES	2					05/27/87
CAD981384357	KAISER CEMENT CO PERMANENTE	KAISER	CUPERTINO	95014	SANTA CLARA	2					02/05/86
CAD981385909	KAISER CEMENT CORP CUSHENBURY	STATE HWY 18 7 MI SO OF LV	LUCERNE VALLEY	92356	SAN BERNARDINO	2					02/07/86
CAD981630114	KAISER CENTER INC	300 LAKESIDE DR	OAKLAND	94643	ALAMEDA	3					12/10/86
CAD982005019	KAISER CONSTRUCTION SERVICES	1780 SECOND ST	BERKELEY	94710	ALAMEDA	2					06/19/87
CAD982013724	KAISER ECKEL VALVE	20700 PLUMMER ST	CHATSWORTH	91311	LOS ANGELES	2					07/13/87
CAD016845414	KAISER ELECTRO OPTICS INC	6070 AVENIDA ENCINAS	CARLSBAD	92008	SAN DIEGO	2					07/22/86

REFERENCE 7

CONTACT REPORT

Agency/Affiliation:	San Francisco Regional Water Quality Control Board
Address:	1111 Jackson Street Oakland, CA 94607
Contact:	Diane White
Phone Number:	(415) 464-0914
From:	Annina O. Antonio
Date:	April 4, 1989
Subject:	Kaiser Aluminum Site Status

As far as case handling is concerned, Kaiser Aluminum is not an active site. The SFRWQCB is currently providing general guidance on Kaiser, as they have encountered impacted groundwater on-site.

REFERENCE 8

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY George Deukmejian, Governor

DEPARTMENT OF HEALTH SERVICES
2151 BERKELEY WAY
BERKELEY, CA 94704
(415) 540-2043

Kaiser Aluminum

June 21, 1983

Mr. George Mc Gee
Kaiser Aluminum
2333 Stevens Creek Boulevard
Cupertino, CA 95014

Dear Mr. Mc Gee:

On April 5, 1983 an inpsection of your facility was conducted by Chris Knoblock of the Hazardous Waste Management Branch.

Pursuant to Section 66328(c), California Administrative Code, you are hereby notified of the following conditions observed during the inspection which are alleged to be violations of the California Hazardous Waste Control Act (California Health and Safety Code, Division 20, Chapter 6.5) and CAlifornia Hazardous Waste Control Regulations (California Administrative Code, Title 22, Division 4, Chapter 30).

1. Two large transformers are sitting in the abandoned building of the old magnesium plant on unstable ground. These transformers may contain PCBs. The transformer oil must be tested for PCBs. If the transofrmers contain PCBs, they must be handled as a hazardous waste and must comply with appropriate State and Federal PCB storage/ disposal requirements.

2. Many drums were observed west of the abandoned building at the old magnesium plant. Some drums contents could not be identified. Some drums contained bauxite samples and some contained hardened coal tar pitch. The unidentified drums contents must be identified. The coal tar and bauxite contained in drums is still a usuable product and is not considered a waste. It is our understanding that the coal tar will be used by another Kaiser facility and the bauxite will be used by your facility. Any remaining material that meets the definition of hazardous waste must be removed to an approved hazardous waste disposal site.

3. There are three (3) abandoned underground waste tanks near the active portion of the facility. The oil-solvent abandoned waste tank is of specific concern due to it's accessibility as a possible disposal point. A determination must be made if all of these tanks contain any materials and if leakage has occurred. Soil borings should be taken surrounding and below the tanks and tested for the chemicals known to have been stored in them.

Kaiser Aluminum

4. Hazardous waste was being stored on-site for over 90 days which is in violation of Section 25123.3 of the Health & Safety Code. Please submit a plan to ensure that wastes are not stored for over 90 days or apply for a hazardous waste storage permit.

Section 66328(d) C.A.C. states: "If corrections are needed the operator shall provide to the Department a written plan of correction which states the actions to be taken and the expected dates of completion."

You are hereby directed to submit a Plan of Correction to this office, pursuant to Section 66328(d) C.A.C., which describes the steps you will take to correct these deficiencies. Your Plan of Correction must be received at this office within 30 days from the date of this letter.

We have received results of the samples that were taken on April 5, 1983. These results indicate that the samples are not considered hazardous on the basis of total metals analyses and pH. Copies of these results are attached.

If you have any questions, please call Chris Knoblock at (415) 540-3080.

Sincerely,

Charles A. White, P.E.
Regional Administrator
North Coast Region
Hazardous Waste Management Branch

Attachments
Certified No. P 368 413 164
cc: Paul Blais, EPA
Harold Singer, RWQCB
Steve Brooks, Santa Clara Co. Health
William Marlin, OLS, Sacramento

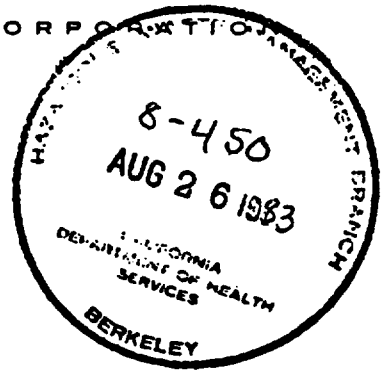
REFERENCE 9

Kaiser Aluminum

KAISER ALUMINUM

KAISER ALUMINUM & CHEMICAL CORPORATION

August 25, 1983



Ms. Chris Knoblock
Department of Health Services
2151 Berkeley Way
Berkeley, CA 94704

Dear Ms. Knoblock:

In response to your letter dated June 21, 1983, the following is the plan of correction for the Kaiser Aluminum Foil Plant and Research Facility:

1. The two transformers have been tested for PCB levels. Both are non-contaminated.

2. All drums will be analyzed by September 15 to determine whether or not their contents are hazardous. Any hazardous materials will be disposed per State and Federal regulations. Disposal will take three weeks.

3. Two of the three abandoned tanks are scheduled to be removed by November. The third tank will be emptied and cleaned. Soil borings will be taken around all three tanks. If the soil analysis shows hazardous levels of contamination, the appropriate action will be taken.

4. A pick up of hazardous materials will be scheduled every 90 days. All waste drums are dated.

Sincerely,

George McGee

George McGee
Plant Engineer

GM:jw

cc: S. T. Hightower
W. H. Goodnow - Research
C. B. Harrison - Research
T. R. Pritchett - Research

23333 STEVENS CREEK BLVD CUPERTINO CALIFORNIA (408) 252-3780

REFERENCE 10

CONTACT REPORT

Agency/Affiliation:	City of Cupertino, Main Post Office
Address:	20850 Stevens Creek Blvd. Cupertino, CA 95014
Contact:	Joe Murr
Phone Number:	(408) 252-6798
From:	Annina O. Antonio
Date:	April 11, 1989
Subject:	Kaiser Aluminum Correct Address

Mr. Murr is a supervisor at the City's Main Post Office. Both addresses refer to the 23333 Stevens Creek Blvd. location. They even mail addressed Stevens Creek Road, Permanente, California to this location.

REFERENCE 11

CONTACT REPORT

Agency/Affiliation:	City of Cupertino Public Works City Planning
Address:	10300 Torre Avenue Cupertino, CA 95014
Contact:	Diane McCann
Phone Number:	(408) 252-4645
From:	Annina O. Antonio
Date:	April 11, 1989
Subject:	Kaiser Aluminum Correct Address

23333 Stevens Creek Blvd. is the correct address, per their records. The Permanente Road address might refer to a private property address, i.e., inside the Kaiser compound.

SANTA CLARA COUNTY PLANNING DEVELOPMENT APPLICATION

PROPERTY OWNER'S NAME	Phone	Email	Prefer correspondence: Email ☐ Mail ☐
Lehigh Hanson Permanente Cement Inc.			
Mailing Address	**City**		**Zip**
N/A	N/A		
APPLICANT OR APPELLANT NAME	**Phone**	**Email**	**Prefer correspondence: Email ☐ Mail ☐**
Matt Baldzikowski, Midpeninsula Regional Open Space Dist.	(650) 691-1200		
Mailing Address	**City**		**Zip**
330 Distel Circle	Los Altos, CA		94022

ADDRESS OF SUBJECT PROPERTY: 24001 Stevens Creek Blvd. **APN:** 351-09-001 and related

EXISTING USE OF PROPERTY: quarry, cement plant, metals plant **ACCESS RESTRICTIONS** (gate, dog, etc.): gaurded gate

The **ACKNOWLEDGEMENTS AND AGREEMENTS FORM** on the reverse side of this application must be completed and signed by the property owner(s).

FOR DEPARTMENT USE ONLY

FILE NUMBER: 2250 – 10P(M1) – 10EIR – A1L

PROJECT DESCRIPTION: Appeal to the Board of Supervisors of the decision by the Planning Commission to approve the Permanente Reclamation Plan Amend. and EIR

APPLICATION TYPES	FEE(S)	COMMENTS / SUBMITTAL MATERIALS
Architecture and Site Approval / ASX		
Building Site Approval / BA (Urban / Rural)		
Certificate of Compliance		
Design Review / DRX		
CEQA (EA / Cat Ex / Prior CEQA / EIR)		RECEIVED JUN 22 2012 PLANNING OFFICE
Compatible Use Determination (WA / OSE)		
Geologic Report / Letter		
Grading Approval / Abatement		
Lot Line Adjustment / Lot Merger		
Pre-Screening		
Special Permit		
Subdivision		
Use Permit		
Variance		
4 Other Appeal	1,318.00	
TOTAL FEES	1,318.00	

Application fees are not refundable.

Submittal reviewed and received by: JR

Date: 6-22-12

Map Coordinates: X _____ Y _____

Zoning: _____

General Plan: _____

Parcel Size: _____

USA / SOI _____

WA / OSE

Supervisorial Dist: _____

Previous Files: _____

Regional OpenSpace | Midpeninsula Regional Open Space District

GENERAL MANAGER
Stephen E. Abbors

BOARD OF DIRECTORS
Pete Siemens
Yoriko Kishimoto
Jed Cyr
Curt Riffle
Nonette Hanko
Larry Hassett
Cecily Harris

June 22, 2012

Mr. George Shirakawa, President of the Board and
Members of the Board of Supervisors for Santa Clara County
70 West Hedding Street
San Jose, CA 95110

RE: Appeal of Permanente Quarry Reclamation Plan Amendment and of Environmental Impact Report Certification

President Shirakawa and Members of the Board,

The Midpeninsula Regional Open Space District (District) hereby appeals the Santa Clara County Planning Commission's June 7, 2012 approval of the Lehigh Permanente Quarry Reclamation Plan Amendment (Project) and related Environmental Impact Report certification. This is a bit awkward, as we are not accustomed to challenging the administrative decisions of sister agencies, we have great respect for the County, its leadership and staff, and the challenging nature of this matter. We do not take this step lightly.

We do, however, have serious concerns about the Project's impacts on the environment in this region, and specifically of course, the impacts on Rancho San Antonio[i] -- the most heavily used unit in our system -- the roughly a half-million visitors received there per year, and the 30 District employees regularly assigned there. We are concerned mostly about water and air quality, visual impacts and related recreational value diminution, as well as the underlying issues of hazardous materials, vested rights, related EIR baseline identification, and the very stunted and one-sided economic views provided by Lehigh as a rationale for the findings of overriding considerations. As laid out below, and in our previous comments submitted in the prior proceedings on this matter,[ii] these impacts have not been adequately analyzed or mitigated. We ask your assistance in correcting those errors.

File 2250-10P(M1)-10EIR-APL

330 Distel Circle Los Altos, CA 94022 | p 650.691.1200 | f 650.691.0485 | www.openspace.org

Our goal in this appeal is to be sure these effects on the public, our employees, and the environment are dealt with to the greatest extent possible. We recognize the economic importance of any business in these difficult times, and this is not an attempt to curtail the quarry or its related cement plant operations. But the environmental issues must be dealt with, and Lehigh must be held to account for the effects of its business decisions.

The District actively participated in the Reclamation Plan Amendment (Amendment)/ Environmental Impact Report (EIR) review process. Therefore, none of the issues summarized below are new, but some reflect recently expanded understanding and data for your consideration.

One necessarily new matter, though, is the appeal also filed by Lehigh. The District requests that the Board of Supervisors decline retreating from any of the conditions and provisions objected to by Lehigh in their appeal, for all of the reasons laid out in the previous record supporting the inclusion or exclusion of those conditions and provisions, as approved by the Planning Commission.

Finally, before getting into the detailed summary of the District's issues on appeal, we also respectfully request that the hearing on this matter be rescheduled from the present date, June 26, 2012 -- presently just one working day after the closure of the appeal period and the date of this appeal -- to allow time for all the interested parties, including the District, to prepare for the hearing.

<u>Visual Resource Degradation, Recreational Use and Value Diminution, related Scenic Easement</u>

> The EIR does not adequately address alternatives that would avoid the impacts associated with the dumping of quarry waste at the area known as the East Materials Storage Area (EMSA), and the permanent storage immediately adjacent to Rancho San Antonio County Park and the District's Open Space Preserve. The EIR also did not adequately consider or analyze the Permanente Ridge Scenic Easement (Scenic Easement), which has already been impacted by quarry-related landslides. This Scenic Easement was mitigation for significant impacts in the original 1986 Reclamation Plan and the County Mitigated Negative Declaration to support the 1986 Reclamation Plan. This problem was carved out as a legal matter and not addressed as part of the Project approval or CEQA mitigations. Left unaddressed, this adds to the unanalyzed cumulative and significant visual impacts.

Water Quality

The conclusions in the EIR and Statement of Overriding Considerations regarding the infeasibility of water treatment measures are not adequately supported. The EIR documents ongoing selenium pollution impacts from quarry operations to Permanente Creek. The EIR also provides that the Project will add additional substantial sources of selenium (via the EMSA), and volume of selenium (via quarry pit deepening and additional groundwater interception and storage within the quarry pit). Additionally, the Project does not meet the water quality protection mandates of Surface Mining and Reclamation Act of 1975 (SMARA) per the San Francisco Bay Regional Water Quality Control Board nor the applicable requirements of the Clean Water Act. Yet the EIR and Statement of Overriding Considerations conclude that water treatment is infeasible, based on wildly overstated and one-sided cost estimates provided by Lehigh. Given the Project's significant impacts to water quality, incorporation of water treatment measures and the Financial Assurance required under SMARA must be incorporated to mitigate such impacts.

Hazardous Materials

The EIR does not adequately address the potential for hazardous materials in soils, building remnants, and groundwater associated with the former metals manufacturing facilities, operated from the late 1930's through 1993, within the Project footprint (the EMSA), and adjacent areas.

The Project proposes to excavate/disturb substantial areas of soil associated within the former metals facilities area that is located within the Project footprint[iii]. However, the EIR does not contain any investigation or characterization of these soils within this portion of the Project area. This appears to have arisen from a mischaracterization of many of the chemical processing outbuildings associated with the former metals facilities area as not being under the magnesium or aluminum plant buildings. What is not addressed is the fact that all the other buildings, which ARE under the Project footprint, had historic uses that are highly indicative of the presence of hazardous materials such mercury, PCBs, cadmium and selenium.

A Preliminary Assessment Report (PAR) for the Kaiser Cement Corp. Permanente Plant Cupertino, California, prepared for the U.S. EPA, Region 9, was just completed in May 2012, between Planning Commission hearings on the EIR. (Copy attached hereto.) The PAR documents mercury, PCB's, cadmium, and selenium detections at elevated

concentrations in Project site soils. The PAR maps locations of interest within the footprint of the EMSA portion of the Project (Figures 2 and 3). These locations include an unlined dump associated with the former aluminum factory, known as the Upper Level Landfill, where toxic kiln bricks and cement kiln dust were disposed. Additionally, the Dry Canyon Storage Area is located within the EMSA footprint. PCB's were detected in the Dry Canyon Storage Area at a maximum concentration of 400 mg/kg, where the Regional Screening Level for industrial soil is 0.74 mg/kg. Figure 3 notes "Former Research Building Complex" within the proposed footprint of the EMSA. Here, mercury levels in soil ranged from 27-346 mg/kg. For a comparison, of 37 sites tested for soil contamination within Almaden Quicksilver County Park, the median mercury levels was found to be 84 mg/kg, associated with the New Almaden Mercury Mines.

The PAR documents the presence of hazardous materials within the Project area. Yet, the presence of hazardous materials and potential, substantial disturbance within the EMSA was not presented or analyzed in the EIR. Moreover, the Project's related massive grading disturbance (proposed and ongoing) within this area of known hazardous materials is not discussed or analyzed in the PAR.

The EIR states that hazardous site databases were consulted in its preparation and that no database listed the quarry as a known potentially hazardous site. However, the PAR states that between 1984 and 1992 soils and soil and groundwater samples were collected from the Kaiser Aluminum facility, including the PCB sample mentioned above. The Kaiser Cement Plant was identified as a potential hazardous waste site and was entered into the EPA's CERCLIS database on June 1, 1981. In January 1986, the Department of Toxic Substances Control (DTSC) completed a Preliminary Assessment of the Kaiser Cement site per the direction of the EPA, and noted the disposal of toxic waste kiln bricks on the former Kaiser Aluminum facility.

The potential toxic legacy associated with the former metals facilities within the Project footprint existed in the record prior to the preparation of the EIR. Yet, it was not included or analyzed in the EIR. These areas, which are adjacent to County and District recreation facilities, are already being disturbed and would be subject to further, substantial disturbance upon implementation of the Project.

Economic Analysis

The economic analysis utilized to support the Statement of Overriding Consideration is inadequate and substantially flawed. The EIR does not include an appropriate economic analysis. The Project's potential economic benefit is the only information presented and

relied upon by the Planning Commission in the Statement of Overriding Consideration. The Project's environmental costs associated with: substantial scenic degradation, impacts to the Permanente Ridge Scenic Easement, ongoing and future water pollution, recreational impacts and air/health impacts are not quantified or analyzed. The EIR's economic analysis does not factor in the economic impact attributable to the Project's environmental costs.

Although the economic benefit study relied upon by the Planning Commission includes the economic benefit of the cement plant operation, that benefit is already realized by the cement plant's current operations, and not a part of this approval. Per Lehigh, the cement plant is capable of producing cement at the plant regardless of having the Permanente Quarry. This has recently been substantiated by Lehigh's stated recent use of imported limestone from Canada in their cement production. Thus, the economic benefits of the cement plant can be realized independent of the quarry. Moreover, the EIR repeatedly states that the cement plant is not a part of the Project. An appropriate economic analysis must only include the economic benefit of the Project (quarry operation), and quantify and factor in the environmental impacts noted above.

Air Quality

The air quality assessments included in the EIR are inadequate and remain a significant concern for the District. Specifically, the District questions whether the models and data input into these models used to reach the conclusions presented were adequate. The District will defer to the questions and comments raised by others related to the specifics of the models and model inputs, specifically including those raised in the appeal by "Quarry No." Additionally, the southeast portion of the District's Rancho San Antonio Open Space Preserve (adjacent to the north quarry boundary) has been identified as a "point of maximum impact" in a number of studies presented in the AMEC Geomatrix Health Risk Assessment referenced in the EIR, and an area exceeding the "Regulatory Notification Level." As noted in Figure 6 in that document, a Regulatory Notification Level is triggered where the predicted cancer risk exceeds the trigger level (1 x 10(-6)), prompting a public notification requirement for predicted risks, arising on District lands from Project operations in 2013.

For all of these reasons, and those previously noted in our comment letters, the District remains very concerned with the Project's impact on air quality at our shared property boundary and at our nearby Foothills Field Office. A continuous air quality monitoring station must be established and operated adjacent to the shared property boundary to

monitor existing and future air quality. The cumulative impact of quarry operations and the cement plant must be adequately analyzed in the EIR.

EIR Baseline

The EIR established baseline of 2007 is inadequate for the EIR's environmental impact analysis. The 2007 date immediately follows the initiation of unpermitted dumping at the EMSA by Lehigh/ Hanson, so the cumulative impacts, alternatives analysis, and the analysis of visual impacts, water quality, air quality and recreation are all skewed with the grandfathered presence of the recently initiated EMSA. Rather than using the arbitrary 2007 date as a baseline, the more appropriate baseline should be 1986 – when the original Reclamation Plan (that is now the subject of the proposed Amendment) was approved, including quarry and waste storage area dimensions of record.

Cement Plant

The EIR is also substantially flawed because it does not include the cement plant as part of the Project. Lehigh initiated dumping in the EMSA. The former metals manufacturing facility, and cement plant have been investigated jointly as related units by other agencies (EPA, RWQCB, DTSC), and shared in the dumping of manufacturing facilities waste within the former manufacturing "plant" facilities' footprint. Lehigh's recent dumping of quarry waste at these former plant facilities has blurred the lines of separation between the manufacturing plant facilities and the quarry operations. Additionally, the economic justification for the Statement of Overriding Considerations as the basis for approval of the Project despite significant and unavoidable environmental impacts relied heavily on the economic benefit derived from the cement plant. Accordingly, the District contends that the EIR is substantially flawed for not including the cement plant as a part of the Project.

Diminution of Recreational Values

The recreational values of the Rancho San Antonio Open Space Preserve have been substantially diminished by Lehigh's ongoing operations and will be increasingly diminished with the Project's implementation. The EIR does not adequately address these impacts, nor does it contain any assessment or quantification of the economic value of those lost public benefits. Per our former comments, recreational impacts and visual impacts are inseparable in this setting. The EIR is inadequate because it does not adequately address this cohesive recreational value, finding it insignificant, giving it short shrift and subsuming it as a part of the general dust, noise and aesthetics discussions. Further, and glaring by omission, the EIR does not quantify these impacts

to recreation and does not mitigate for it, though it is mitigable with project design changes. In plain English, unlike more generalized visual, noise, and air quality impacts, those relating to adjacent recreational uses are heightened and focused. The affected outdoor uses are heavily in demand for public use, and people are less likely to take enjoyment and related benefits from trails where the views are dominated by barren mountains of tailings and dust. These impacts warrant proper analysis and mitigation. (*See Ocean Harbor House Homeowners Assoc. v. Calif. Coastal Comm'n* (2008) 163 Cal.App.4th 215.)

Alternatives Analysis

The Alternatives Analysis in the EIR is inadequate and contains flawed assumptions. Assumptions are made in a manner to force the selection the preferred alternative and dismiss other alternatives. This approach is most egregious for the no-project alternative, wherein reclamation of the EMSA is delayed to support a conclusion of greater water quality impact (by prolonging the reclamation timeline) under that alternative. This is a straw man, because a legitimate lesser impact alternative would include an acceptable timeline for reclamation. The analysis is also inadequate because it fails to address the fact that the EMSA, which is the source of the selenium, is permitted to grow extraordinarily larger under the preferred alternative presented. The Alternatives Analysis is also flawed in that it excludes the a lesser impact alternative that would utilize the existing rail line as a feasible alternative to haul away quarry waste, which would have reduced various of the impacts, and avoided the "significant and unavoidable" impacts to water quality, and scenic resources

Vested Rights

We are concerned that the vested rights issue may be improperly driving the County into mistakenly concluding that it is compelled to approve the Project as proposed, making findings of overriding considerations and giving approvals that it might not prefer to give without further analysis and mitigation. We firmly believe that the Board of Supervisors should not be unduly constrained by its erroneous previous decision to grant Lehigh a legal non-conforming use (vested right) to the area known as the East Materials Storage Area (EMSA). EMSA is now being utilized by Lehigh to dump a significant volume of quarry waste. However, this area is well-documented in the record as a metals manufacturing facility, adjacent to the cement plant facility. The Board may have been misled by submittals from Lehigh, including grading volumes associated with metals plant facilities grading, and cement plant and metals plant waste

disposal, which appear to have been misrepresented as quarry-related waste. Although Lehigh currently possesses a vested right to the EMSA, this right appears to have been granted by the Board based on false pretenses. Moreover, Lehigh's vested rights to the EMSA were a critical factor cited by the Planning Commissioners in approving the EIR. Lehigh's acquisition of vested rights based on what appear to have been false pretenses undermines the entire CEQA analysis. The vested rights issue should be resolved prior to the County making a final decision on the Project, to ensure that it is based on an accurate understanding of the regulatory and environmental setting.

Summary

The District respectfully requests that the Santa Clara County Board of Supervisors overturn the Planning Commission approval of the EIR, mitigation monitoring program, statement of overriding considerations, and conditions of approval. The EIR should be revised to adequately address its many deficiencies, and recirculated for review and comment. Additionally, ongoing quarry disturbance and dumping within the polluted EMSA must be suspended until properly analyzed given the potential impacts to quarry workers, nearby County and District recreation facilities and the neighboring communities.

The District also respectfully requests that the Board deny the Lehigh appeal. If allowed the necessary time for a full and fair hearing on this matter, we could submit a more detailed rationale for that opposition.

Sincerely,

Sheryl Schaffner
General Counsel
Midpeninsula Regional Open Space District

Exhibits:

MROSD letters, and references therein.

May 31, 2011 from Matt Baldzikowski,

May 23, 2012 from Matt Baldzikowski,

May 17, 2011 from Matt Baldzikowski

February 17, 2011 from Matt Baldzikowski

February 3, 2011 from Stephen E. Abbors

May 21, 2010 from Ana Ruiz

June 20, 2007 from Matt Baldzikowski.

Preliminary Assessment Report Kaiser Cement Corp. Permanente Plant Cupertino, California. EPA ID No: CAD009109539. May 2012. Prepared for U.S. Environmental Protection Agency, Region 9.

Remedial Site Assessment Decision- EPA Region IX. 5/31/2012

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[i] Rancho San Antonio County Park and Open Space Preserve. As the Board is aware, the District manages these two properties for public use as one unit, under and an agreement with the County.

[ii] The previous comments on this Project are attached for your convenience as exhibits.

[iii] As the District previously commented, prior mapped metals facilities buildings within the Project footprint include: main laboratory, foundry/ research machine shop, compressor building-transformers, electrical building, switch house-substation, hydrogen building, nitrogen building, batter building, briquette building, electrical storage building, and an undefined storage building.

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GENERAL MANAGER
Stephen E. Abbors

BOARD OF DIRECTORS
Pete Siemens
Yoriko Kishimoto
Jed Cyr
Curt Riffle
Nonette Hanko
Larry Hassett
Cecily Harris

County Planning Commission
c/o Ms. Marina Rush
Santa Clara County Planning Office
County Government Center
70 W. Hedding Street, 7th Floor, East Wing
San Jose, CA 95110

May 31, 2012

RE: Comments/ Clarifications related to the May 24, 2012 Planning Commission Hearing Concerning Lehigh Permanente Quarry Reclamation Plan Amendment Final Environmental Impact Report (SCH No. 201004 2063, Project File # 2250-13-66-10P)

On behalf of the Midpeninsula Regional Open Space District (District) I would like to provide the following comments to issues raised and discussed at the Planning Commission hearing related to the Final Environmental Impact Report for the Lehigh Permanente Quarry Reclamation Plan Amendment, held on May 24, 2012.

Selenium

A selenium concentration of 7.2 micrograms per liter was noted near the upper portion of Permanente Creek near the WMSA. It must be noted that this measurement does not represent background, as may be inferred from looking at the graphic presented. This sampling site receives drainage from the WMSA, and likely documents quarry related pollution in excess of the Regional Water Quality Control Boards Basin Plan water quality objective.

A Planning Commissioner had requested information be included to quantify selenium impacts to human health, following a prior conversation with Lehigh officials. This information was presented showing human health impacts at or above 300 micrograms per liter. While, this information is interesting for discussion, it does not negate that selenium pollution well above the Regional Water Quality Control Board Basin Plan objective to protect all beneficial uses of water is occurring.

Regarding selenium treatment, the County concluded that the quarry will meet water quality standards at the completion of reclamation. As the District and the SFRWQCB have previously stated, this conclusion remains speculative at best. The CH2M Hill study presented regarding treatment also concludes that there is an uncertainty regarding treatment, and further studies are needed because today too much is unknown. We recognize that two differing types of treatment are being discussed, but believe the CH2M Hill conclusion referenced above applies to both scenarios.

Planning staff also stated that the selenium issue is an existing historic condition since mining began. There is no evidence presented to substantiate this statement. This statement also seems to imply that the existing high levels of selenium pollution documented should be viewed as a baseline condition for the purposes of the EIR. The possibility exists that the high levels of selenium documented is instead a relatively recent phenomena, related to the recent deepening of the quarry floor and interception of groundwater, and the substantial new areas of quarry disturbance.

The quarry is presented as a "bedrock bowl" with no contact with the primary recharge and municipal groundwater aquifer on the Santa Clara Valley floor. The quarry geology is heavily faulted and folded. Groundwater has been identified as flowing within faults, fractures, and geologic contacts. There appear to be some substantial cracks in the bowl. Groundwater geology, hydrology, and chemistry have not been presented to adequately demonstrate that the Project will not degrade groundwater resources. Per the SFRWQCB comment letter of February 21, 2012, "The DEIR suggests that groundwater quality will not be impacted by reclamation; however there is inadequate analysis to make such a conclusion. Furthermore, given the Water Board staff's experience and knowledge of the geology of the area, we are concerned that groundwater is currently contaminated with selenium, and possibly metals."

What is known is that a whole lot of water has already been intercepted by quarrying activities, prompting Lehigh and/or Hanson to dewater without the appropriate permit, and that the flow rate intercepted has not diminished. In fact, per the DEIR groundwater flow intercepted will increase substantially with the additional lowering of the quarry floor, as proposed by the Project. The large and continuous volume of groundwater intercepted by quarry activities implies that this groundwater was previously flowing to somewhere. Where has not been established in the EIR.

References to samples from existing groundwater wells were presented to show that selenium has not historically impacted the vast majority of these wells. While this information is encouraging, it is possible, given recent extensive quarry disturbance, deepening of the quarry pit, and unauthorized discharges, that the selenium pollution documented is a more recent phenomenon, which has not yet been detected at the wells sampled.

Permanente Ridge Scenic Easement/ Visual Impacts

Planning staff stated that an analysis to restore the landslides that have impacted the Permanente Ridge Scenic Easement dedicated to the County (public) would cost too much to rebuild/restore, could potentially cause greater instabilities, and potentially greater visual impact, and have therefore not been undertaken. This analysis was not presented in the DEIR, so we cannot offer an opinion. The more pressing issue for us is that future impacts to this public easement must not be allowed to occur.

The geotechnical analysis presented in the DEIR appears to show the existing quarry slopes are problematic in their current configuration. Geological/ Geotechnical experts Cotton, Shires and Associates also question the technical basis for the DEIR finding (February 20, 2012). It is possible that slope conditions could be even worse than presented in the DEIR.

We do not feel that it is appropriate for the County and Quarry to allow this condition to persist well into the future, until final reclamation, as proposed. The EIR should include an analysis on how best to immediately protect this public resource.

Regarding the high cost estimate to fully rebuild and restore the "protected" ridge, we suggest that the County use the cost estimate, referred to by staff, to help establish a fair value for the impacts to the easement that have occurred, and that the County and public who hold the easement be adequately compensated.

EMSA

Planning staff stated that the County allowed quarry waste disposal at the EMSA because Lehigh was unable to continue mining without more storage, and because it was the only option. There were in fact other options. A rail line serves the facility; the waste material could be hauled away. Placement within the existing quarry pit is also an option.

The quarry waste dumped appears to have been dumped in a hurried fashion. Cotton, Shires and Associates note in their February 20, 2012 peer review letter, that typically, quarry waste is keyed and compacted as the waste pile is built, contrary to how the quarry waste pile appears constructed, i.e. simply dumped, with final shaping and perimeter keyways to be completed later. Plant production was at 50% production, yet the EMSA per Lehigh, is nearly completed. It appears that Lehigh hauled 6,500,000 tons of waste to the unpermitted EMSA in violation of their Reclamation Plan, and without penalty.

Economic Impacts

Lehigh submitted to the Planning Commission (Exhibit 5, supplemental packet) that beneficial impacts of the **Quarry** in the County and region can be reasonably projected to equal tens of millions of dollars or more on an annualized basis to support a Statement of Override determination that the County must make to accept the "significant unavoidable" project impacts identified in the EIR. We do not verify or dispute the values presented.

The point that we must make is that per Lehigh's past submittals (Diepenbrock Harrison, August 10, 2006) "the cement plant is a stand-alone facility that is operationally distinct from the quarry. The cement plant processes limestone not only from the quarry, but also from other sites. Indeed, when the Permanente limestone is exhausted, the cement plant will continue to operate by processing material from other sources." Per this statement, the positive economic impacts noted are a combined result of the quarry and the cement plant operation. The cement plant is not a part of the Project per the EIR. These beneficial economic impacts from the cement plant would continue well into the future, regardless of quarrying on site, and shouldn't be misconstrued or used to support a statement of override.

Similarly, Lehigh in their submittal to the Planning Commission for a Statement of Overriding Considerations (Exhibit 5, supplemental packet) that the **Quarry** currently generates approximately $2,465,259 in annual property taxes to the County and approximately $135,441 in total sales tax collections in the County. These figures appear to also blend the economic benefit of the quarry with the cement plant, which as stated repeatedly in the EIR, is not a part of the reclamation plan. As stated above, the beneficial economic impacts from the cement plant, per Lehigh, would continue well into the future, regardless of quarrying on site, and shouldn't be misconstrued or used to support a statement of override.

Costs for scenic degradation to the region, and air and water pollution impacts to humans and wildlife should all be analyzed, calculated, and presented in a thorough economic impact analysis, to balance the skewed analysis presented by Lehigh. The economic returns of the Project bring significant environmental impacts that have not been economically analyzed or calculated.

The cost benefits to Lehigh from violations should also be calculated. For example: nearly 6.5 million tons of quarry waste has been dumped at the EMSA per Lehigh. The WMSA also appears to have more quarry waste dumped than approved. The amount of additional quarry waste on top of the WMSA should be quantified. The DEIR estimates a waste to product ratio so the volume of quarry waste to usable product can be estimated. Another possible way to calculate is to use the 1.6 million ton average of cement grade limestone produced and multiply it by the years the EMSA and excess WMSA volumes took to accumulate. Useable product is assumed to have been processed into cement for sale. The economic value of these violations should be calculated and presented in the economic analysis to characterize the substantial financial benefit already realized by Lehigh.

Financial Assurance

We concur with the comments of the SFRWQCB that the financial assurance posted by Lehigh must include the cost of water treatment to assure that water quality objectives will be met upon reclamation.

In closing, the District believes that the FEIR is deficient in many critical areas as noted in these comments and our prior comments that we have submitted throughout the process. Additionally, inappropriate, incomplete, and misleading information continues to be interjected into the process. We respectfully request that the County Planning Commission deny the Permanente Quarry Reclamation Plan Amendment FEIR.

Sincerely,

Matt Baldzikowski
Resource Planner III

Cc: District Board of Directors
Stephen E. Abbors, District General Manager
Erin Garner, Chair, State Mining and Geology Board
Jim Pompy, Director, Office of Mine Reclamation
George Shirakawa, President, County of Santa Clara Board of Supervisors

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GENERAL MANAGER
Stephen E. Abbors

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Curt Riffle
Nonette Hanko
Larry Hassett
Cecily Harris

County Planning Commission
c/o Ms. Marina Rush
Santa Clara County Planning Office
County Government Center
70 W. Hedding Street, 7th Floor, East Wing
San Jose, CA 95110

May 23, 2012

RE: Planning Commission Hearing Concerning Lehigh Permanente Quarry Reclamation Plan Amendment Final Environmental Impact Report (SCH No. 2010042063, Project File # 2250-13-66-10P)

On behalf of the Midpeninsula Regional Open Space District (District) I would like to provide the following comments on the Final Environmental Impact Report for the Lehigh Permanente Quarry Reclamation Plan Amendment. This letter is intended to address County responses to comments raised in our Draft EIR comment letter dated February 17, 2011. We have also previously submitted numerous comment letters regarding recent Reclamation Plan Amendments and the Legal Non-Conforming Use determination for the Permanente Quarry. These comment letters are on file at the Planning Office, are referenced in the FEIR, and are referenced as exhibits to this letter.

We are concerned with the short time frame afforded concerned agencies and members of the public to comment on the Final EIR, but will attempt to comment within this hurried schedule.

A6-1 The District remains opposed to the use of the East Materials Storage Area (EMSA) for quarry waste disposal. We disagree with the conclusion of the Board of Supervisor's that the EMSA parcel is an existing non-conforming quarry use. Instead, we came to a shared independent conclusion with the County Geologist (January 26, 2011 Memorandum), and the analysis by Shute, Mihaly, & Weinberger (February 4, 2011) that the subject parcel did not show evidence of quarry related activities prior to 1948, the vesting date as determined by the County. The FEIR incorrectly concludes that the parcel now being utilized as the EMSA quarry waste dump was in 1948 an existing parcel used for quarry operations. The record clearly shows that the substantial grading evident in exhibits from the time were related to the construction of the manufacturing plant facilities, not quarry related grading as purported by the project proponent. Therefore, the EMSA is in fact a new quarry use of the parcel.

The County response comment states that the former aluminum plant and incendiary materials manufacturing facility site are not within the project area. This is misleading. The main aluminum foil plant and magnesium plant buildings are located just outside of the EMSA footprint. However, the DEIR and County fails to recognize numerous other related facilities buildings which formerly existed within the project footprint. These other buildings are shown on County Exhibit 21 (1944 Record of Survey) and

Exhibit 48 (Metals Facility Site Plan) to the Non-conforming Use Analysis presented to the Board of Supervisor's. The DEIR project area (EMSA) is located within the "Lands of the Permanente Metals Corporation" on the 1944 Record of Survey, and depicts numerous plant-related structures that are also within the project area. The Metals Facility Site Plan shows a conveyer connecting facility structures located both inside and outside of the FEIR project area.

A6-2, A6-3. The County response states that the EIR does not analyze issues related to conformity of existing conditions or proposed reclamation with the Permanente Ridge Scenic Easement because the easement is an existing legal agreement between the applicant and the County. This response is somewhat baffling. The 1985 County Staff Report to the Planning Commission and 1985 Mitigated Negative Declaration in support of the original Reclamation Plan for the quarry, addresses the Permanente Ridge Scenic Easement. This easement was an important scenic "protection" dedicated to the public, related to the quarry development and visual impacts/ protection important at the time for the County and surrounding cities. In fact, the 1985 Environmental Assessment (Mitigated Negative Declaration) discusses the scenic easement as mitigation for an otherwise significant impact under Section 2 (Resources and Parks), and Section 5 (Aesthetic).

Mapping by Cotton, Shires and Associates (March 2003) show four landslides which have impacted the scenic easement. The current FEIR Reclamation Plan Amendment appears to defer implementing substantial beneficial stability measures to protect the scenic easement until late Phase 2 (2021-2025), but primarily during Phase 3 (2026-2030). The proposed quarry pit infill still does not appear to buttress the upper portion of the excavated quarry slope, which may still be subject to slope failure into the scenic easement, even after the proposed reclamation.

The geologic analysis by Golder and Associates characterizes the existing quarry slopes abutting the scenic easement as marginally stable, at best, in their current configuration. This conclusion has also been challenged by Cotton, Shires and Associates in their Preliminary Geotechnical Peer Review of the current Reclamation Plan Amendment, dated February 20, 2012, and quarry slope/ landslides could actually be less stable than presented in the FEIR.

An Emergency Grading Authorization was requested by the quarry in 2002 for a repair of a landslide that had failed removing a substantial portion of District land. In a letter to then owner Hanson Permanente Cement, the County responded that *"one major concern is how this work and the continuing slope instability problems at the quarry are affecting the County's ridgeline easement. In order for this office to give further consideration to the emergency grading authorization proposal, additional information must be submitted to more specifically define the proposed emergency grading project. This office is cognizant that the rainy season is imminent, but also takes note that it has been 10 months since the slope stability problems were identified, and that any areas that are identified as unsafe due to slope instability should be cordoned off and closed to workers for a safe distance. Hanson Permanente can and should suspend work in the area of the hazard until the area is made safe."*

To date this "emergency" work has not been enacted to our knowledge, but clearly the County recognized the scenic easement issue needed to be addressed for this permit request at the time.
Not only does the proposed reclamation plan amendment prolong instability issues within the County scenic easement that have already been deferred for 10-25 years prior, but the existing quarry slope conditions also pose potential safety concerns as well.

In 2006, The Executive Officer's Report to the State Mining and Geology Board (Meeting of July 13, 2006) states that "The landslides along the rim of the mine pit were caused in part, if not in whole, by the mining operation, and thus the County had a responsibility and obligation to request that the operator amend its reclamation plan. The report also states that the County claims that the repair process (as of 2006) "has taken longer than anticipated due to potential adverse impacts to a ridgeline easement and slope stability issues."

The District disagrees with the omission of an analysis regarding the County scenic easement within the FEIR. Further prolonging action to protect the easement, granted to the County (public) in 1972 in recognition of the important scenic resource protected, will likely result in additional impacts to the scenic easement, and immitigable visual impacts incurred by the public.

A6-4 We note the correction regarding the baseline condition of 2007 related to the EMSA. It is difficult to maintain perspective related to the EMSA given the mountain of quarry waste that continues to grow, under County agreement with Lehigh in response to a County Notice of Violation, yet we are reviewing it as a "proposed" part of the reclamation plan amendment. The EIR assumes that the EMSA is constructed. The level of construction just varies from the 2007 baseline (no project alternative) which has not been fully characterized or quantified, to the assumption of all the other "alternatives" that 6,500,000 tons of quarry waste have been dumped. We strongly agree with the EIR conclusion that the visual impact associated with the EMSA is significant, and unfortunately at present, unavoidable. We refer back to our DEIR comment letter regarding our characterization of the EMSA and the extent of visual impact "proposed."

We also disagree with response A6-3 that the "completion of the proposed reclamation of the EMSA, including revegetation, would improve views of the EMSA relative to baseline conditions" since the quarry waste dumped by 2007 was substantially less than what exists now, or what is envisioned under the preferred alternative.

A6-5 The County response to our prior comment states "the historic manufacturing plant uses of the site are located near, but not within the project Area. These historic facilities would not be 'buried' by the EMSA as suggested in the comment." As with comment A6-1 above, the response comment is misleading. The main aluminum foil plant and magnesium plant buildings are located just outside of the EMSA footprint. However, the EIR fails to recognize numerous other related facilities buildings which formerly existed within the project footprint. These other buildings are shown on County Exhibit 21 (1944 Record of Survey) and Exhibit 48 (Metals Facility Site Plan) to the Non-conforming Use Analysis presented to the Board of Supervisor's. The DEIR project area (EMSA) is located within the "Lands of the Permanente Metals Corporation" on the 1944 Record of Survey, and depicts numerous plant-related structures that are also within the project area. Historic facilities shown on The Metals Facility Site Plan and on the 1944 record of survey will in fact be buried by the project. A review of recent aerial imagery appears to show that some of these locations have already been heavily disturbed, and portions buried.

A6-6,7,8,9 We remain vehemently opposed to the extensive new visual impact associated with the "proposed" EMSA. Not only do we believe that the EMSA is a new use located on a parcel without evidence of quarry activity prior to the 1948 date established by the County, but the EMSA is also incompatible with County scenic policies C-CR 57, 58, 59, 60, 61, Land Use Compatibility and Minimizing Environmental Impacts sections of the Mineral Resources section of the Resource Conservation policies, and policy C-RC 47, and the Permanente Ridge Scenic Easement.

A6-10 The EIR has not adequately address cumulative air quality impacts of the quarry operation and the cement plant facility. There has been no collection (and related analysis) of air quality parameters at the District's shared property line with the quarry. We again request that a continuous air monitoring station be established near the District property line, adjacent to the EMSA.

A6-11,12 The County response provided does not address the concerns that we raised. Please refer to our prior comments for the DEIR. We agree with the comment that "Removal of mining overburden from the EMSA would abate the notice of violation related to mining related use of this area, remove an existing source of selenium and thereby preclude its mobilization into downstream waterways, and return views from the valley floor and beyond to a pre-mining condition. " We however believe that the EMSA is a new source as opposed to an existing one, grandfathered by the 2007 baseline date established in the EIR.

The County response offers a comment that "CEQA does not give lead agencies the discretion to require alternatives to or mitigation of existing significant environmental effects for which the Project now under consideration is not the source of the existing problem." The Reclamation Plan Amendment evaluated in the EIR is the first Project under consideration by the County to propose the EMSA waste dump, and thus should not be characterized as an existing problem.

A6-13 We stated the concern that reclamation activities associated with the EMSA may be constructed in soils that may have been contaminated from past activities related to the metals manufacturing that occurred on the site. As with comment A6-1 and A6-5 above, the response comment is misleading, and dismisses this significant concern. The main aluminum foil plant and magnesium plant buildings are located just outside of the EMSA footprint. However, the EIR fails to recognize numerous other related facilities buildings which formerly existed within the project footprint. These other buildings are shown on County Exhibit 21 (1944 Record of Survey) and Exhibit 48 (Metals Facility Site Plan) to the Non-conforming Use Analysis presented to the Board of Supervisor's. The DEIR project area (EMSA) is located within the "Lands of the Permanente Metals Corporation" as shown on the 1944 Record of Survey, and depicts numerous plant-related structures that are also within the project area. Historic facilities locations shown on The Metals Facility Site Plan and on the 1944 record of survey will in fact be disturbed and buried by the project. A review of recent aerial imagery appears to show that some of these locations have already been heavily disturbed, and portions buried.

Building facilities that existed within the "proposed" EMSA project area are identified on the Metals Facility Site Plan and include: the Main Laboratory, Foundry-converted to the research machine shop in 1955, compressor building-transformers, electrical building, switch house-substation, hydrogen building, nitrogen building, batter building, briquette building, electrical storage building, and an undefined storage building.

The EMSA quarry waste dump portion of the project area has not been evaluated for potential hazardous materials. As stated in our prior comments, the grading keyways, proposed per the geotechnical fill placement details in the DEIR, will excavate into these areas to buttress the EMSA waste fill. Given the long industrial history on the site and within the project area, we believe that a thorough investigation should be completed.

Relying on other regulatory agency records alone to identify hazardous sites, particularly when there is no record of this site ever being tested, and given the site history, is clearly problematic. Attempting to dismiss this concern because the main aluminum and magnesium plant buildings are located just outside of the project area is also problematic. The geologic map of the east materials storage are (Figure 4, Golder Associates) shows the EMSA footprint as close as 50 feet from the edge of these main plant buildings. Regardless of the presence of the other Metals Facility buildings noted, 50 to even hundreds of feet distance from the main plant buildings is still plenty close for potential toxic hazards to exist. This is particularly true with the level of grading that has occurred within the immediate area which could spread toxic material, not to mention the potential for groundwater contamination which is well known to have the potential to spread for miles.

With regard to potential hazardous materials within the project site (EMSA), the EIR has failed to investigate this potentially significant environmental impact.

A6-14 Please refer to our original comment for the DEIR. We respectfully disagree with the baseline date established in the DEIR.

A6-15,16,17 Regarding disagreement with the baseline date noted above, we believe that a baseline that uses the approved original reclamation plan is a more appropriate place to establish what the reclamation plan amendment is actually amending. This should include a comparison of the former reclamation plan and the proposed amendment, including area and cross-sections of the two. Simply showing the footprint, while impressive in the area that the quarry has disturbed in excess of the original reclamation plan, does not provide for the appropriate level of analysis.

The County response states that this detail and analysis was not provided in the DEIR because the "DEIR evaluates the significance of Project-related changes relative to actual physical conditions in the environment, not to physical limits established by prior approvals." The quarry clearly has an excess of overburden that was not envisioned at the time of the original reclamation plan. This is evidenced by the WMSA which is out of compliance, and the EMSA which was initiated by the quarry, and received a notice of violation from the County. The waste generated is a result of quarrying methods and conditions. These are clearly changes to the physical environment appropriate for analysis.

A6-18 The District remains extremely concerned with existing water quality impacts and biological resource impacts and the project potential to increase and or prolong these impacts. Please refer to our DEIR comment letter for discussion.

A point of clarification to the County response. We acknowledge that the quarry has obtained a permit from the Regional Water Quality Control Board- San Francisco Bay Region (RWQCB), following their order from the RWQCB. The RWQCB has noted that this is essentially a stop-gap until the required individual permit is completed and approved. Clearly, the limestone quarry is not an aggregate mining, sand washing, and sand offloading facility, as referenced in the FEIR.

A6-19 The District stands by our DEIR comments related to water quality impacts.

A6-20 We support the inclusion of vegetated buffer areas with the conditions discussed in our DEIR comment letter.

A6-21 We appreciate the response and clarifying discussion, but defer to our DEIR comment .

In closing, the District believes that the FEIR is deficient in many critical areas as noted in these comments and our prior comments that we have submitted throughout the process. We respectfully request that the County Planning Commission deny the Permanente Quarry Reclamation Plan Amendment FEIR.

Sincerely,

Matt Baldzikowski
Resource Planner III

Cc: District Board of Directors
Stephen E. Abbors, District General Manager
Erin Garner, Chair, State Mining and Geology Board
Jim Pompy, Director, Office of Mine Reclamation
George Shirakawa, President, County of Santa Clara Board of Supervisors

5/24/2012
Supplemental Packet
Item # 3

Regional OpenSpace | Midpeninsula Regional Open Space District

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February 17, 2011

RE: The Lehigh Permanente Quarry Reclamation Plan Amendment Draft Environmental Impact Report (SCH#2010042063)

On behalf of Midpeninsula Regional Open Space District (District), I would like to provide the following comments on the Draft Environmental Impact Report (DEIR) for the Lehigh Permanente Quarry Reclamation Plan Amendment. The District has previously submitted numerous comment letters on various recent proposals related to the Permanente Quarry, as referenced in our May 17th, 2011 letter regarding the scoping of the subject DEIR.

East Materials Storage Area (EMSA)

The proposed EMSA remains extremely problematic. The District does not believe that Lehigh or the County have shown that this area is in fact a pre-existing use area associated with the quarry. We concur with the County Geologist's conclusion, as presented to the Board of Supervisor's for the public hearing related to existing non-conforming use (vested right), that the area proposed for mine waste at the EMSA was never a part of the quarry operations. It instead was developed and used for industrial manufacturing related to Kaiser's magnesium and aluminum plant operations. Many maps identify this location with the name "Permanente Metals" given to the magnesium and aluminum plant operations. In fact one natural gas source was shared by the metals manufacturing plants and the cement plant, as noted in the historic resources section of the DEIR, again testament to this location being a manufacturing plant facility, subject to a use permit, as opposed to an existing non-conforming quarry operation.

Quarry related overburden and waste dumped at the EMSA are in fact a very recent phenomenon, beginning in 2006, that correctly resulted in the County's 2008 Notice of Violation that this was not an allowed use. We believe that the record shows that the EMSA, until very recently, was never a part of quarry operations, and therefore cannot be "vested". Instead, development of the proposed EMSA area is clearly subject to a County use permit.

The addition of the EMSA as a "quarry operation" and inclusion in the Reclamation Plan Amendment is characterized in the DEIR as a "significant and unavoidable" visual impact. The proposed visual impacts related to the EMSA are simply staggering. The huge stepped waste pile proposed is vastly out of character with the surrounding topography, the hillside protection zone district, the County scenic ridge easement, valley view shed protection policies, and park protection policies. Within the historic context, the value of the visual resources at stake is well documented and recognized. This new unnatural waste pile will form the new background to the County scenic easement granted by Kaiser long ago in recognition of the visual importance of Permanente Ridge, and the strong community and County support behind its protection.

The 1985 Reclamation Plan stressed the importance of reclaiming a small pile of quarry waste at the time known as the east materials area (Area C). The scale of this pile is dwarfed by the proposed EMSA, but at the time was recognized as a visual impact to be immediately remedied. This allowed for quarrying to the west of this old waste pile, "while maintaining a knoll as a visual buffer between the quarried area and the Santa Clara Valley area". The 1985 Mitigated Negative Declaration (MND) for the 1985 Reclamation Plan states that "The existing ridgeline will be maintained by means of the (scenic) easement agreement and conditions of this reclamation plan to insure neither the quarry pit nor materials storage area will be visible towards the north and east." It further states that "The Permanente ridgeline and its easement dedication will insure no exposure of the quarry or its material area towards the north and northeast." One has to ask why the existing visual impact of the quarry is so much greater than the County initially envisioned. One also has to question the construction of the proposed EMSA which dwarfs this prior area of concern and also moves the huge pile of proposed quarry waste up to 5000' closer to the valley floor!

The DEIR project baseline is established as 2007, the year following Lehigh's initiation of dumping in the EMSA and one year prior to the County's Notice of Violation to Lehigh for unauthorized use of this area. Since Lehigh had initiated quarry waste disposal by 2007, the DEIR assumes the entire 6,500,000 tons of waste have been already piled in the proposed EMSA. This is clearly problematic, and inappropriate. The EMSA is in fact a new project, initiated in a new area, subject to a County Use Permit.

The DEIR concludes that alternatives which would not construct the EMSA (no project alternative) , or the removal of the EMSA at final reclamation (Alternative 1) are "least preferred" , since the lack of or lower height of the reclaimed EMSA would not provide visual screening for the existing Cement Plant site. This assumes the EMSA is built, it is not. The cement plant operates under a use permit issued and regulated by the County. This issue illuminates the overlap of the historic manufacturing plant facilities area (part of which is proposed to be buried by the EMSA waste) and the "quarry operations" proposed.

If the construction of a quarry waste dump is being done to screen the cement plant operations, isn't that more appropriately completed under a use permit amendment for the existing cement plant? It is also clear from a review of the cement plant site and the DEIR's supporting documents that substantial waste material is also being placed outside of the footprint of the proposed EMSA, in other areas around the cement plant. While also highly visible from the surrounding area, we assume that this ongoing operation is also intended to visually screen existing cement plant structures and features. Are these new fills a part of a use permit amendment for the plant? It is appropriate that all new fills proposed to visually screen the permitted cement plant, be reviewed and regulated under the cement plant use permit.

It is absurd for the DEIR to conclude that not building the new unprecedented visual impact associated with the proposed EMSA would result in a greater visual impact because the public will be able to then see the cement plant facility which already exists, and has been highly visible for decades. The County has had a history of failures with regard to scenic protection associated with the quarry and cement plant. This is an opportunity to finally get it right. The County should not be misled to use this Reclamation Plan Amendment process to mitigate past visual protection failures with a new much larger impact, the EMSA.

The visual analysis that is included in the DEIR also clearly shows that the proposed EMSA is far larger in extent and much higher than that necessary to visually screen a portion of the existing cement plant operations from the surrounding communities. The EMSA is proposed as a quarry waste dump to accommodate the substantial deepening of the existing quarry proposed under the Reclamation Plan Amendment. Any other characterization is simply disingenuous. The incredibly significant visual impact associated with the proposed EMSA cannot be understated.

Regarding the visual impacts associated with the proposed project, the no project alternative is clearly preferred since the EMSA would not be constructed. The DEIR is incorrect in the assumption that reclamation of the EMSA would have to wait 25 years to occur. The County could order this immediately to resolve the existing violation.

The visual simulation presented in the DEIR also appears to be overly optimistic, and paints a prettier, greener picture than what would actually likely exist. The proposed EMSA is a waste rock dump. Waste rock is a very difficult material to revegetate, the time involved in revegetation will likely be much longer than presented. The greening of the site as depicted is also misleading. Much of the initial growth will be grass. As is evident from the top of the WMSA visible from the valley floor, the grass is brown for over half of the year, a significant contrast to the surrounding evergreen hillsides and ridges. It would also likely have erosion rills and surficial slippage, exposing bare patches of ground. The look will be more like the look of any nearby garbage landfill, unnaturally stepped and brown for most of the year, with sparse woody vegetation, not exactly compatible with scenic hillside protection.

In addition to the visual impacts discussed above, the proposed EMSA is also a source of significant impact, related to air quality, requiring mitigation. As an immediate neighboring property, in public trust, we are opposed to the ongoing and proposed dust impacts associated with the EMSA construction. The air quality assessment presented in the DEIR attempts to characterize dust and associated known toxic substances related to the quarry waste disposal by assessing the existing operations in the EMSA. The existing operation is occurring further away from the park/open space properties, and at a smaller scale than the proposed full EMSA. This is not a fair representation or analysis. A detailed analysis for air quality impacts should be conducted at the shared property line to characterize potential impact to the recreating public and our nearby Foothill Field Office facility. Additionally, a long-term continuous air quality monitoring station should be established at this location. The PG&E Trail located within the Rancho San Antonio Open Space Preserve is often heavily impacted by dust generated by the quarry and cement plant operations, that leaves a layer of dust on vegetation. The quantification and analysis of air quality impact to the Open Space Preserve, including the Field Office located within is not well studied or characterized in the DEIR.

The EMSA is identified in the DEIR as a new source area for selenium, adding to the existing quarry related water quality impacts to Permanente Creek. Water quality and biological resources per the DEIR would incur significant and unavoidable environmental impacts associated with the proposed project. The DEIR discusses project alternatives and concludes the extended time frame to reclamation of the EMSA would increase water quality impacts.

An additional alternative should be analyzed in the DEIR, an alternative that allows no further placement of waste within the EMSA and the immediate removal of all material that has been recently placed there, and immediate site restoration. Further, the alternative overburden disposal should have been included in the DEIR. These alternatives would avoid the significant and "unavoidable" impacts identified in the DEIR related to the EMSA. The alternatives presented in the DEIR, including the Preferred Project, attempt to address the Project's significant impacts when Lehigh is finished making them, as opposed to avoidance of impacts or immediate mitigation of existing impacts. Per CEQA and the stated DEIR objectives, alternatives considered must be capable of eliminating or reducing significant environmental effects. The removal of the EMSA would eliminate and/or reduce the significant and unavoidable impacts identified in the DEIR. Per CEQA this alternative is also feasible, capable of being accomplished in a successful manner.

In fact, the County agreement with Lehigh to continue dumping in the EMSA, following the County's notice of violation states that there is no assurance that the quarry waste will remain if the quarry continues to place it under the agreement. In other words, Lehigh can continue dumping quarry waste at their own risk, knowing they may need to remove it. The alternatives noted above appear superior to the alternative presented in the DEIR since they would remove/ stop an additional source of water quality impact from an operation that is already out of compliance for water quality impacts, would not create additional dust impacts, and would not further substantially degrade visual resources.

Toxics/ Hazardous Materials

Section 4.9 of the DEIR states that "in some cases, past industrial or commercial activities on a site could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination." It further states that "at sites where contamination is suspected or known to have occurred, the site owner is required to perform a site investigation and perform site remediation, if necessary."

The proposed EMSA is a significant concern regarding potential toxic substances associated with the old magnesium and aluminum plant locations. These obvious potential toxic concerns do not appear to have been investigated or evaluated in the DEIR. The quarry waste dumping proposed, particularly around the old graded metals manufacturing building pads and the down-slope edge of proposed EMSA waste is of most concern. Geotechnical fill placement details show that the former metals manufacturing area is proposed to have keyways excavated for the foundation support of the proposed EMSA waste pile. Given the magnesium and aluminum plants that existed in this location from 1941 through the 1990, it is necessary to investigate potential toxics within the existing soil. The potential health risk to mine workers, the surrounding community (including adjacent parkland), surface water, groundwater, and wildlife must be evaluated if toxics are encountered. We are surprised that quarry related disturbance has been allowed to take place, and continues to take place in this location, given the history of the site, without such an investigation. This issue was also raised by others during the DEIR scoping process.

EIR scope/ Baseline

We propose that the DEIR not use the artificial date (2007) to begin its analysis, but instead utilize the prior Reclamation Plan and associated maps and plans as the benchmark starting point. This may help explain why Lehigh at this late date has taken the exceptionally desperate and aggressive approach of beginning to place waste material right out in front of the surrounding communities and adjacent park/ open space preserve land. It's possible that Lehigh and their predecessors may have excavated a larger area than previously identified on the mining plans associated with the prior reclamation plan. Another possible indicator of this is that the WMSA, the only dumpsite identified in 1985, has also grown larger and taller that initially envisioned/proposed. The proposed EMSA appears to be the only convenient spot left to dump without filling the existing quarry pit, or hauling the waste material generated offsite. This bold desperate move by the Quarry has unfortunately been aided by past poor County oversight, as documented by the State Division of Mines and Geology, and the recent unsupported Board of Supervisor's "vested" determination.

The baseline utilized in the DEIR certainly should not grandfather the new use of the EMSA just because Lehigh chose to initiate dumping there, knowing full well that the Reclamation Plan Amendment was required. This simply doesn't pass the straight face test.

We have submitted numerous letters on the various iterations of reclamation plan amendments that have spun out of Lehigh and the County recently in an attempt to address quarry non-compliance issues. These issues are not uncommon for a quarry which has been operated intensively for 80 years. There are limitations on available resources and accessible product, and places to dump the waste generated. In fact, the DEIR states that "continued mining in the quarry is becoming infeasible from a geotechnical standpoint" and that regarding the status of the mineral designation, given 100 years of mining, "the reserves of limestone that feasibly can be extracted are approaching their limits." The recent proposal for a new south quarry pit also seems to substantiate this concern.

We have previously asked for an analysis of where quarry operations actually are in comparison with where the quarry operation was envisioned to be under the prior reclamation plan. This is essential at the quarry pit location, as well as for the proposed EMSA, and is necessary to understand existing conditions, cumulative, and future likely conditions/ impacts. It is particularly important with regard to the depth and area of the existing quarry pit versus the dimensions of record from the 1985 Reclamation Plan. This should clearly be shown.

The EMSA is also very confusing. The DEIR assumes its built, and even states in section 4.7 that "much of the stockpiling activity has already occurred," yet the visual analysis regarding the visual impact from the PG&E trail at Rancho San Antonio OSP states that that "although the existing overburden deposits are not a dominant feature in the landscape, the substantial increase in the height of the overburden deposit during construction could block views of the scenic mountains behind the EMSA." It appears through on-site review using the visual analysis presented in the DEIR that much more quarry waste is proposed to be dumped at the EMSA than currently exists. This needs to be rectified for an adequate environmental assessment of potential impacts. The DEIR should clearly detail what is on the ground now at the EMSA to give reviewers a better understanding of the levels of potential impacts being discussed.

This should include all contours and cross-sections at the quarry pit and EMSA as they currently exist, the 1985 reclamation plan final topography and cross-sections, and any proposed new changes in topography. While some contours and cross sections are presented in the DEIR they are often of differing, past dates (2007, 2009 etc.) and the original Reclamation Plan contours and cross-sections are not presented at all. It also appears that the quarry has undergone some substantial changes in the intervening years. The DIER should have an analysis of actual existing conditions compared with the conditions proposed under the former Reclamation Plan and proposed future conditions.

Water quality/ Biological Resource Impacts

The existing selenium-related impacts to Permanente Creek water quality are of serious concern. Permanente Creek exits the Lehigh property and flows through Rancho San Antonio County Park/ Open Space Preserve. The existing selenium related water quality impacts are thus transferred from their

origin on the Lehigh property, to these public recreation facilities, then downstream through residential areas, and finally to the San Francisco Bay. Selenium levels that exceed water quality standards have been noted at both the Lehigh property and also in samples taken from downstream park/open space land.

Lehigh's proposal contained in the Reclamation Plan Amendment is to substantially deepen the existing quarry pit. There are significant problems associated with this related to water quality, particularly selenium. The main source of selenium identified in the Reclamation Water Quality assessment by SES is through groundwater inflow. The deepening of the quarry will substantially increase the volume of groundwater inflow into the quarry pit per the DEIR. To deepen the quarry groundwater will need to be pumped out, as currently occurs. The quarry currently does not have permits or regulatory approval to discharge the groundwater that is currently being intercepted, pumped, and discharged into Permanente Creek, with pollutants in excess of water quality standards. The DEIR proposes not only to allow the existing pollution to continue for another 20-plus years, but proposes to add additional volume, stating that water treatment costs would be too high, and treatment is therefore infeasible.

The quarry pit is a vested part of quarry operations and the operator has the right to quarry there. Fortunately, there is no vested right to pollute water, particularly when that water flows downstream to public resources. The quarry simply needs to stop polluting water as the cost of doing business. We question and strongly disagree with the DEIR assertion that water treatment is infeasible and that the significant and unavoidable water quality pollution impacts would instead simply be allowed to continue, and likely worsen, well into the future.

The two other main sources of selenium pollution identified in the DEIR are runoff from the quarry walls, and runoff from the WMSA. As proposed, the deepening of the quarry pit would extend and increase the quarry wall source, again increasing the source area for selenium. The WMSA is also identified as a significant source of selenium. One has to question the rationale of not only waiting to address the WMSA source of selenium pollution until phase III of the project, while at the same time proposing to build a new substantial source, the EMSA, during phase I. There is a significant ongoing impact that these proposed new changes will add to. This must be addressed within the cumulative impacts analysis in the DEIR.

While the long-term water quality mitigation proposed appears promising, as stated in the DEIR, it must be viewed as speculative until actual implementation and monitoring determine success or not. Avoiding new or expanded sources seems prudent, particularly when water quality standards are already being exceeded. There is no clear understanding of the existing level of impact since the water pollution findings have only recently been discovered. The trend of the selenium pollution is unclear (rising, stable, decreasing). Given the substantial area of recent disturbance, and assumed increase in groundwater pumping due to the quarry floor lowering, it is perhaps best to assume that it could get worse, even if everything were to stop today. There is no need to wait and see while pollution is occurring. Immediate water treatment, avoidance of new practices that could add to the ongoing pollution, and immediate reclamation/ mitigation of existing sources appears necessary. The Project as proposed in the DEIR does not meet the stated project objective of protecting water quality, and does not avoid or eliminate residual hazards to the environment.

Vegetated Buffer

We are in favor of the concept of maintaining a vegetated buffer as proposed within the DEIR. We are however, nervous with including this in the reclamation plan amendment. Our concern is that this reclamation plan amendment is necessary to account for disturbance areas that Lehigh and their predecessors have routinely disturbed well outside of the area approved. We want to be sure that this buffer area is somehow formally dedicated for no disturbance. Inclusion of the buffer into a reclamation plan could also be viewed as an approval to disturb (and then reclaim) consistent with the rest of the quarry operations. The County should be certain that this is not the case. Given the quarry history of disturbance out of bounds, there needs to be some formal assurance that this buffer area is actually an area where no disturbance will occur.

Recreation

We believe that impacts to recreation are substantially greater than identified in the DEIR, in particular the impact of the EMSA. The visual impact of the proposed project is determined to be significant and unavoidable, since it assumes the presence of the EMSA. The 2006 dawning of the EMSA began a significant period of recreational impact. Quarry operations that had until then been separated by a ridgeline from the main public recreation areas of the Rancho San Antonio County Park and adjacent Open Space Preserve, were compromised by new noise, dust, and visual impact. Ranch San Antonio is our most heavily utilized Preserve, with an annual visitation of approximately 500,000 recreationalists. The District has fielded many complaints from our visitors regarding the new quarry operations that have been undertaken immediately adjacent to the Park/Preserve. The EMSA quarry waste pile is immediately evident to visitors, as a new backdrop, upon entry into the Park/Preserve. The view from the PG&E Trail has been compromised by dumped quarry waste, and is projected to grow in height obscuring the scenic ridgeline views beyond. The current view from the scenic Anza Knoll within the County Park is simply staggering given the new quarry waste dump that has leapt up over the past few years. It is not possible to separate the recreational impact from the visual impact. The recreational impact of the Project has to also be characterized as significant and unavoidable. Again, as with many comments before, the EMSA is the reason for the significant impact. The Project rationale that since the EMSA was begun the year before the DEIR established baseline, it is assumed built, attempting to grandfather the impacts as "existing" and are therefore determined to be unavoidable. In reality the EMSA is not constructed, and the impacts or possible alternatives associated with its construction have never been reviewed or addressed under CEQA, by the County, or by the public. The potential impacts are in fact avoidable, if not built.

Flooding/ Hydrology

This section is simply unacceptable as presented in the DEIR. The Santa Clara Valley Water District has estimated that a 100-year flood on Permanente Creek would potentially inundate 3,170 parcels including homes, businesses, schools, public institutions, and road/ highway infrastructure, with an

estimated $48,000,000 in damages for a single event. This is a huge potential impact if adequate detention through the Project is not feasible. The Lehigh property is quite large when compared to the detention facilities currently being investigated by the Water District. The Project must identify adequate flood water detention built into the reclamation plan.

Thank you for the opportunity to provide comments on the subject DEIR. Please feel free to contact me by email at mbaldzikowski@openspace.org or by phone at 650 691-1200 if you have any questions regarding this or any prior comment letters.

Sincerely,

Matt Baldzikowski

Matt Baldzikowski
Resource Planner III

Cc: District Board of Directors
Stephen E Abbors, District General Manager
Erin Garner, Chair, State Mining and Geology Board
Jim Pompy, Director, Office of Mine Reclamation
George Shirakawa, President, County of Santa Clara Board of Supervisors

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

MEMORANDUM

DATE: September 1, 2011

TO: Marina Rush, Planner
County Planning Office

FROM: Kimberly Brosseau, Park Planner
County Parks Department

SUBJECT: Notice of Preparation of an Environmental Impact Report for the Mining Reclamation Plan Amendment for Permanente Quarry (File No. 2250-13-66-10P (M1) and 10EIR (M1))

The County Parks Department has reviewed the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Permanente Quarry (modification to the existing May 2010 application) for a Mining Reclamation Plan Amendment for issues related to park use, trails, and implementation of the Countywide Trails Master Plan and submits the following comments.

The Trails Element of the Park and Recreation Chapter of the 1995-2010 County General Plan indicates a trail alignment nearby the subject parcel. Per the General Plan, Countywide Trail Route R1-A (*Juan Bautista de Anza NHT*) is located northeast of the project site. The *Santa Clara County Countywide Trails Master Plan Update*, which is an adopted element of the General Plan, designates the countywide trail as a "trail route within other public lands" for hiking, off-road cycling, and equestrian use. This trail route provides an important connection between the City of Cupertino and Rancho San Antonio County Park. The City of Cupertino's Final Stevens Creek Trail Feasibility Study also indicates this trail route as an important connection between Rancho San Antonio County Park and the City of Cupertino.

Visual Resources

The quarry is located adjacent to Rancho San Antonio County Park (Diocese Property). Since the County Parks Department is an adjacent property owner, modifications to the Reclamation Plan should take into account the potential aesthetic/visual impacts of the quarry and mitigation of views from these public parklands and trails.

The project is located in a Zoning District with a Design Review overlay for the Santa Clara Valley Viewshed (d1). It is expected that the applicant will construct as per the submitted plans and comply with design guidelines towards screening the project from public views.

An adequate vegetated buffer between the degraded hillsides and the adjacent County parkland and trails should be incorporated into the Reclamation Plan for the quarry.

Biological Resources
The EIR for the Reclamation Plan Amendment should discuss whether or not the project would have an impact on Permanente Creek and the California red-legged frog (CRLF) and California tiger salamander. The CRLF has mitigation sites on the adjacent Diocese property.

Surface Hydrology, Drainage and Water Quality
The EIR for the Reclamation Plan Amendment should evaluate potential hydrological impacts resulting from any grading, recontouring and seeding of the site. The EIR should also discuss if there are any proposed modifications to the riparian corridor or Permanente Creek. The Reclamation Plan Amendment should also take into account adequate erosion control measures and proposed grading and the potential impacts it may have to the adjacent County parkland and trails.

The Santa Clara Valley Water District (SCVWD) is currently preparing a Final EIR for the Permanente Creek Flood Protection Project, which includes a proposed flood detention basin facility to be constructed, operated and maintained at Rancho San Antonio County Park Diocese Property as the Project's Recommended Alternative. This Permanente Creek Quarry's Reclamation Plan should evaluate future hydrological modifications that may impact the District's Permanente Creek Flood Protection Project for portions of Permanente Creek through Rancho San Antonio County Park.

Noise Impacts
The EIR for the Reclamation Plan Amendment should evaluate any potential noise impacts to the adjacent Rancho San Antonio County Park and impacts that noise from the quarry may have on park users.

Air Quality
The EIR for the Reclamation Plan Amendment should evaluate any potential air quality impacts as a result of the quarry use and associated truck trips generated to and from the quarry on the adjacent Rancho San Antonio County Park and impacts that may have on park users.

The County Parks and Recreation Department appreciates the opportunity to provide comments on the NOP of an EIR for the Permanente Quarry Reclamation Plan Amendment. We look forward to reviewing the EIR once it becomes available. If you have any questions regarding this letter, please contact me at (408) 355-2230 or by email at: Kimberly.Brosseau@prk.sccgov.org.

Sincerely,

Kimberly Brosseau
Park Planner

cc: Jane Mark, Senior Planner
Don Rocha, Natural Resources Management Program Supervisor
Ana Ruiz, Midpeninsula Regional Open Space District

Regional OpenSpace | Midpeninsula Regional Open Space District

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May 17, 2011

Marina Rush, Planner III
County of Santa Clara Planning Office
70 West Hedding Street, East Wing, 7th Floor
San Jose, CA 95110

RE: Notice of Preparation of an EIR Comprehensive Reclamation Plan Amendment and Conditional Use Permit for Permanente Quarry (State Mine ID# 91-43-004)

On behalf of Midpeninsula Regional Open Space District (District), I would like to provide the following comments on the scoping of the Environmental Impact Report (EIR) for the Lehigh Permanente Quarry Comprehensive Reclamation Plan Amendment and Conditional Use Permit (State Mine ID # 91-43-004). The District has previously commented on prior notices of preparation for Permanente Quarry Reclamation Plan Amendments dated June 20, 2007, May 20, 2010, and February 3, 2011. These comments remain valid due in part to the fact that the most current Comprehensive Reclamation Plan Amendment encompasses the same geographic areas. Prior written comments are therefore included as attachments to this comment letter.

The District is deeply troubled that the intent of the 2007 Comprehensive Reclamation Plan Amendment has expanded from an attempt to bring into compliance a grossly out-of-compliance quarry operation, to an Amendment that includes a new 250-acre quarry pit with a new 20-30 year life span. Since the 2007 Amendment, the East Materials Storage Area, referenced as "the main overburden storage site for the mining operation" was activated. The waste pile continues to grow in size even without having completed an adequate visual impact or human health analysis to understand the magnitude of the environmental and cumulative impacts or the mitigation measures that can be put in place to address these issues. In fact, an environmentally superior alternative exists, as is discussed at the end of this letter. The District urges the County to consider this permit review as an opportunity to relocate the waste material into the existing North Quarry rather than increase the existing waste storage area to avoid compounding the visual impacts and scenic easement issues associated with this project.

The following environmental concerns should be addressed in the proposed EIR:

Visual Impacts

The East Materials Storage Area is proposed to transition into the Central Materials Storage Area and result in a new terraced, unnatural ridge composed of dumped quarry waste that would ultimately lie at a considerable height above the natural existing ground surface. If permitted, this proposed new landform would be grossly out of compliance with Santa Clara County's scenic hillside protection policies. The District requests that the visual impact analysis in the proposed EIR include views from Cristo Rey Drive, at the entrance to Rancho San Antonio County Park and Open Space Preserve, and from the PG&E Trail, which lies adjacent to the proposed storage areas. Additionally, the analysis should include vantage points from the nearby scenic Monte Bello Road.

Dust Impacts

Dust impacts to sensitive resources and the recreating public at the adjacent County Park and Open Space Preserve must be analyzed in the proposed EIR.= Given the past decades of ongoing quarry operations at this location, cumulative long-term impacts due to dust are of great concern. As such, the District strongly recommends including a continuous air quality monitoring and reporting program as mitigation and as a condition of approval for any future quarry expansion or permit revision. This monitoring and reporting

program should continue through the life of the operation and include monitoring stations within 100 feet of the adjacent PG&E Trail, which passes near the proposed and current materials storage areas. Monitoring parameters should include particulate matter and the suite of potentially toxic substances known to occur in the quarry waste.

Noise Impacts

Noise impacts associated with the proposed and ongoing waste materials storage areas should also be evaluated at the Quarry/Open Space boundary to assess compliance with County noise regulations. To note, according to the Santa Clara County General Plan, the maximum level of noise a new land use (in this case, it is an expanded land use) may impose on neighboring parks, open space reserves, and wildlife refuges, shall be the upper limit of the "Satisfactory Noise Level" (currently at 55 decibels).

Cumulative Impacts

The District is concerned that the currently full West Materials Storage Area has the potential to be re-mined for construction aggregate. This same concern exists for the new proposed storage areas. This concern, and real possibility, highlights the need to evaluate the extended length of use of these sites to then identify, analyze, and mitigate potential cumulative long-term impacts. For example, the cumulative visual impacts associated with the existing and proposed material storage areas need to be thoroughly evaluated against current County hillside protection policies, the existing scenic ridge easement language, and County General Plan goals for park and open space. This analysis should include a historic visual analysis since the visual impact has dramatically increased over time. The cumulative water resources impacts need to evaluate potential impacts to Permanente Creek given that Permanente Creek has been severely impacted by past quarry practices. It is reasonable to assume that an increase in quarry operations consisting of a new 250 acre South Quarry pit within the relatively pristine half of the watershed will result in a substantial cumulative impact.

Alternatives Analysis

Lastly, the EIR should identify and evaluate a range of reasonable alternatives. As previously stated in prior comment letters, feasible alternatives exist for the waste pile that would avoid creating an artificial, ridge-like mound adjacent to public recreation land and within full view of surrounding communities and the valley floor. An alternative that suspends fill placement in the East Materials Storage Area, eliminates the Central Materials Storage Area, and instead immediately begins backfilling the existing North Quarry Pit for reclamation should be evaluated as a potentially superior environmental alternative. This alternative may serve to balance long-standing quarry deficiencies, halt the unprecedented acceleration of visual impacts, and provide the quarry with future raw materials. The no project alternative, and alternatives that allow quarry expansion only on vested property, should also be evaluated as feasible alternatives.

The County's review of the proposed use permit amendment presents an opportunity for the County to reevaluate the current and proposed quarry practices and to identify any changes that would allow the County to more closely and effectively manage quarry operations. The District urges the County to consider this permit review as an opportunity to relocate the waste material into the existing North Quarry rather than increase the existing waste storage area to avoid compounding the visual impacts and scenic easement issues. The District also asks that any mitigation measure identified through the environmental process also be added as a condition of approval of the use permit.

Thank you for the opportunity to provide comments for the scoping of the subject EIR. Please feel free to contact me by email at mbaldzikowski@openspace.org or by phone at 650 691-1200 if you have any questions regarding this or any prior comment letters.

Sincerely,

Matt Baldzikoski, Resource Planner II

cc: District Board of Directors
Stephen E Abbors, District General Manager

Regional OpenSpace | Midpeninsula Regional Open Space District

February 3, 2011

County of Santa Clara
Board of Supervisors
County Government Center
70 West Hedding St.
10th Floor, East Wing
San Jose, CA 95110

Re: Public Hearing Regarding Permanente Quarry/ Lehigh Southwest Cement Company Legal Non-Conforming Use Determination

Members of the Board:

The Midpeninsula Regional Open Space District (District) manages over 59,000 acres of Open Space Preserves (OSP) within Santa Clara, San Mateo, and Santa Cruz Counties, including the Monte Bello and Rancho San Antonio OSPs which share common parcel boundaries with Lehigh's Permanente Quarry owned properties. The District supports and applauds the Board of Supervisors (Board) decision to deliberate the issue of vested rights on the Quarry properties. From the District's perspective, this review is long overdue given the 2010 sunset of the 1984 Reclamation Plan.

The District remains extremely concerned with the numerous Reclamation Plan Amendments and ongoing operations of Lehigh Southwest Cement Company's Permanente Quarry (Permanente Quarry). We have previously submitted comments related to the Reclamation Plan Amendments proposed for the Permanente Quarry dated June 20, 2007 and May 21, 2010. Copies of these letters are attached for your convenience.

The remainder of this letter summarizes our concerns related to the Permanente Quarry Legal Non-conforming Use Analysis completed by the County, as well as documents prepared by Diepenbrock- Harrison on behalf of the Permanente Quarry.

Proposed East Materials Storage Area

We concur with the County Analysis that the proposed East Materials Storage Area (EMSA) is not a vested portion of the Permanente Quarry. Documents

provided by the Quarry and County clearly show that the proposed EMSA parcel was a part of the manufacturing or 'Plant" operations that began in 1939 when former owner Kaiser applied for a use permit for the adjacent cement plant. The subsequent wartime construction of the magnesium plant, and conversion to an aluminum plant confirm the use as manufacturing or "plant" facilities that are not quarry related. Therefore the EMSA is not a vested portion of the quarry operations.

Viewshed impacts have always been prominent issues related to the Permanente Quarry. The 1979 dedication of the Permanente Ridge scenic easement to the County by Kaiser, 1985 Reclamation Plan visual impacts discussion, and the County General Plan designation of Hillside Resource Conservation Areas are examples of the importance of this issue. The EMSA proposal is particularly troubling with regard to visual resources and is inconsistent with viewshed protection values that have long been recognized. Santa Clara County Parks, together with the District, jointly manage Rancho San Antonio Park/OSP. We continue to field complaints on a regular basis from park users and District staff from our onsite Field Office related to ongoing visual impacts and dust impacts from quarry use of the EMSA. The massive and growing quarry tailings piles are clearly visible to a large portion of public who visit Rancho San Antonio Park/OSP. A survey, recently completed by the District, shows that Rancho San Antonio Park/OSP receives more than 500,000 visits by the public each year.

The Permanente Quarry does not have a vested right for quarry operations in the proposed EMSA location. The existing placement of quarry overburden has already been identified by the County as a violation and there are significant visual impacts ongoing as noted above. The District requests that the County enforce its Notice of Violation and prohibit any additional placement of material at this location and that the County require Lehigh Southwest Cement Company to implement all measures necessary to completely mitigate the visual impacts of the subject quarry overburden.

Original Quarry Parcel

Regarding the vesting of quarry operations, the 1971 analysis completed by County Counsel at the time noted that quarry operations could expand throughout the entire original parcel. The current analysis states that it is unclear which "original parcel" County Counsel was referring to. Parcel 351-09-013 is a very uniquely shaped parcel that appears to be shaped like a quarry pit. It is quite possible that this is the "original parcel" referenced. The July 14, 1977 Mineral Property and/or Mill and Processing Plant Report prepared by the California Division of Mines and Geology appears to map the Kaiser Permanente Quarry within the above mentioned parcel.

Regardless of how this original quarry parcel issue is resolved by the County, the expansion of quarry operations to new areas should not be allowed.

New Proposed South Quarry

In addition to correcting past and present violations, Permanente Quarry has added a new (South) quarry pit to their Reclamation Plan Amendment proposal. This addition is extremely troubling in light of Permanente Quarry's representatives attempt to make the case that they have vested rights on the former Morris parcel proposed as a portion of the new South Pit (Morris 351-11-001). The arguments made by Permanente Quarry representatives for vested rights on this parcel do not stand up to an analysis of the facts.

The quarry haul road identified in the far northeast corner of the Morris parcel appears to be Permanente Road, dedicated to the public in 1893, predating any quarry operations. It is entirely inappropriate to identify it as a quarry haul road to justify a vested rights determination. The road is also separated from the rest of the parcel by Permanente Creek and steep topography. Lehigh has not demonstrated unequivocal evidence of prior intent to mine this property.

Conclusion

While it is troubling that the County did not recognize that the Permanente Quarry had disturbed an area nearly three times the size allowed in the 1985 Reclamation Plan, all parties knew that the 1985 Reclamation Plan would sunset in 2010. We are now past that time and the existing quarry pit appears to be completely mined and the storage areas full. The County has required Permanente Quarry to submit Reclamation Plan Amendments to address existing violations, but the fact is that the Quarry needed a Reclamation Plan Amendment anyway to continue to operate. We are concerned that the County not be pressured by Lehigh to make hasty decisions or further compound the substantial existing deficiencies.

We ask that dumping in the EMSA be suspended immediately, and that the County take the steps needed to regain control of its quarry oversight responsibilities.

Sincerely,

Stephen E. Abbors
General Manager
Midpeninsula Regional Open Space District

cc: MROSD Board of Directors
Paul Fong, California State Assemblymember
Marina Rush, County Planning
Brian Schmidt, Committee For Green Foothills

Regional OpenSpace | Midpeninsula Regional Open Space District

GENERAL MANAGER
Stephen E. Abbors

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May 21, 2010

County of Santa Clara Planning Office
Attn: Marina Rush
County Government Center
70 West Hedding St., 7th floor, East Wing
San Jose, CA 95110

RE: Lehigh Hanson Permanente Quarry 2010 Reclamation Plan Amendment for the East Materials Storage Area, File # 2250-13-66-09EIR

Ms. Rush,

On behalf of Midpeninsula Regional Open Space District (MROSD), I would like to provide the following comments on the scoping for the Environmental Impact Report (EIR) that will assess the Lehigh Hanson Permanente Quarry 2010 Reclamation Plan Amendment proposed for the East Materials Storage Area.

Prior Comments and Review
MROSD staff commented on a previous Reclamation Plan Amendment proposed for the Permanente Quarry in a letter dated June 20, 2007. The original Reclamation Plan was approved in 1985. The 2007 Reclamation Plan Amendment included the proposed East Materials Storage Area (EMSA). It is our understanding that the County is now proposing to divide the Reclamation Plan Amendment area into a smaller area and evaluate the environmental impacts of this smaller area separately to address the quarry's active placement of waste material outside of the permitted area. The County issued a violation notice in 2008 and required that the quarry owner apply for a Reclamation Plan Amendment to rectify the violation.

Importance of Anticipating Future Issues
The EMSA was previously analyzed under a prior EIR process that was scoped in 2007, appropriately within the context of the entire quarry operation. MROSD understands that there are substantial new issues that need to be addressed and will take some time to evaluate, and that the 2007 Reclamation Plan Amendment had a sunset date of March 2010. Unfortunately, these issues were not previously anticipated years ago by the parties involved. The current EIR intends to address these unanticipated issues and expedite a resolution of the violation. In light of the current need to reevaluate the quarry's operations to address the violation, we urge the County to take an aggressive approach to consider and assess all potential issues that may emerge as a result of ongoing quarry activities and the proposed Reclamation Plan Amendment to ensure that these are reviewed in a timely manner to preempt a future violation.

Significant Adverse Visual Impacts

The quarry appears to have a waste material disposal problem. The West Materials Storage Area (WMSA) appears to be full. In fact based on the 1985 Reclamation Plan Staff Report and Environmental Assessment, the WMSA appears to also be in violation. Specifically, Condition of Approval #8 states that the maximum height of deposition in Area "A" (WMSA) shall not exceed the top of the ridgeline bordering to the north. The upper limit of the WMSA is clearly visible from the valley floor when viewed from the north and therefore, does not meet the requirement of this condition. This condition was deemed necessary to mitigate a significant potential adverse visual impact that was a prominent issue in the 1985 Reclamation Plan and County environmental review.

The proposed EMSA would dramatically expand the area of disturbance visible from surrounding communities and Public Open Space. It appears that the top elevation of the EMSA proposed in the 2010 Reclamation Plan Amendment is substantially higher in elevation than the ridgeline to the north (known as Kaiser or Permanente Ridge). This would create a new, prominent, unnaturally benched and stepped ridgeline behind the existing "protected" scenic ridgeline when viewed from Rancho San Antonio Open Space Preserve, County Park, and surrounding communities. This would be a significant visual impact that could be avoided if the waste material was instead disposed of within a portion of the quarry pit or other suitable location.

The County General Plan Scenic Resources policy includes the strategy to minimize development impacts on significant scenic resources, including prominent areas such as ridgelines. The Kaiser/ Permanente Ridge is unquestionably of scenic significance. Additionally, all of the ridge areas surrounding the proposed EMSA have the General Plan designation of Hillside Resource Conservation Area. While the EMSA itself appears outside of the designated Hillside Resource Conservation Area, building an artificial new ridgeline in the middle of and at a higher elevation than the protected ridgelines, would fail to minimize development impacts on these significant scenic resources.

The scenic importance of the Kaiser/Permanente Ridge has long been recognized by the nearby communities, County, and the Quarry, resulting in the dedication of a permanent scenic easement granted by then owner Kaiser Cement Company to the County years before the 1985 Reclamation Plan. All parties clearly recognized the visual significance of the ridgeline. The proposed EMSA as an unnatural, massive fill site that competes with the ridgeline is counter to the scenic protection benefit that was widely recognized years ago. The benefit of the County's scenic easement will either be lost or impaired unless the scenic value of the Kaiser/Permanent Ridge is protected.

Additional Waste Disposal Issues and Potential Solutions

It appears that both material storage areas may be in violation. The 2007 Reclamation Plan Amendment was previously required to address existing quarry disturbance areas of approximately 900 acres, exceeding the 330 acre area covered by the 1985 approved Reclamation Plan. It may not be appropriate to separate 89 acres to allow additional waste disposal given these conditions.

It also appears that the quarry waste disposal problem is somewhat self-inflicted. A possible solution to this dilemma is to dispose of waste material within the existing quarry pit. A thorough evaluation of the existing quarry pit area and depth should be undertaken to determine if opportunities exist within the pit for waste material disposal. The remaining areas to be quarried that would generate the waste material proposed for placement within the EMSA should also be identified and quantified. Waste material may be advantageous to buttress landslide areas or stabilize over-steepened quarry benches. A number of landslides have already encroached into the dedicated scenic ridge easement over the past decade unabated, and the 1987 "main landslide" has yet to be addressed. The material proposed for placement in the EMSA could be utilized to stabilize these landslides, and the 2007 Amendment includes this

possibility. This again illustrates the need for a comprehensive evaluation of the quarry operations to anticipate potential future issues and remedies.

Lack of Reclamation
The visible quarry area continues to grow. The Surface Mining and Reclamation Act (SMARA) requires that reclamation occur concurrently with quarry disturbance activity, yet very little final reclamation has occurred over the substantial period of mining. Waste disposal within the quarry pit together with concurrent reclamation would actually meet the reclamation requirements of SMARA.

Waste Disposal Timeline
The timeline for waste disposal within the EMSA is also of concern. At the recent April 28th public hearing it was stated that existing quarry sales are 50% of normal. This has the potential to double the projected 5-year timeframe, which already seemed overly optimistic. It is also unclear if the waste material could be re-mined for construction aggregate as is the case for the material placed in the WMSA. This again could dramatically lengthen the timeline of operation and disturbance.

Determination of Vested Rights
Lastly, we remain concerned with the issue of vested rights at the Permanente Quarry. The EIR proposes only to evaluate the environmental impacts associated with the reclamation of the quarry, based on the conclusion that the environmental baseline for the project is the post-mining site condition that includes ongoing mining and processing operations (vested quarry operation). The significant new acreage that has been disturbed by quarry activities, including the EMSA, is of concern. Our concern is whether this expansion really is vested, and if not, that the potential environmental impacts associated with the quarry expansion necessitate a thorough analysis. We urge the County to complete a determination of what is actually vested at the Permanente Quarry. This determination is necessary for any new proposal related to quarry operations at the site, and should include references, maps, deeds, and other exhibits that support the conclusion.

We appreciate the opportunity to comment on the EMSA proposal for the Lehigh Hanson Permanente Quarry. If you have any questions regarding this letter, please contact Matt Baldzikowski, Resource Planner II, at (650) 691-1200.

Sincerely,

Ana Ruiz, AICP
Planning Manager
Midpeninsula Regional Open Space District

cc: Stephen E. Abbors, MROSD General Manager
Matt Baldzikowski, MROSD Resource Planner II

Regional Open Space

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT

June 20, 2007

County of Santa Clara Planning Office
Attn: Mark J. Connolly
County Government Center
70 West Hedding St., 7th floor, East Wing
San Jose, CA 95110

RE: Hanson Permanente Quarry Reclamation Plan Amendment EIR

Mr. Connolly,

On behalf of the Midpeninsula Regional Open Space District's (District), I'd like to provide the following comments on the scoping of the Environmental Impact Report (EIR) for the Hanson Permanente Quarry Reclamation Plan Amendment (Hanson Quarry).

The EIR proposes only to evaluate the environmental impacts associated with the reclamation of the Hanson Quarry, based on the conclusion that the environmental baseline for the project is the post-mining site condition that includes ongoing mining and processing operations (vested quarry operation). The significant new acreage that has been disturbed by quarry activities, and is the subject of the proposed EIR is of concern. Our concern is whether this expansion really is vested, and if not, that the potential environmental impacts associated with the quarry expansion have never been analyzed. Please provide a discussion within the EIR on how the determination regarding the vested operation was made and include references to maps, deeds, or other exhibits that support this conclusion.

Visual resources are an obvious concern to the surrounding Monte Bello and Ranch San Antonio Open Space Preserves operated by the District. The visual appearance of the reclaimed quarry landform, and the reclamation revegetation are of particular interest. The reclaimed landform should blend with the surrounding un-mined landform as much as possible. The District remains concerned with the relatively recent appearance of a portion of the west materials storage area that is visible above Permanente Ridge when viewed from the north. An evaluation and discussion of this storage area should be included in the EIR. The short-term erosion control species and long-term reclamation species should be compatible with the surrounding landscape, and should utilize locally collected and propagated native species wherever possible. The control of invasive species is also a significant concern, and should be included in the EIR and Financial Assurance.

Geology and slope stability issues associated with the ongoing operations at the Hanson Permanente Quarry remain a serious concern to the District, particularly the slopes and landslide

in the northeast corner of the quarry pit. These have been identified along with a landslide on the northern wall of the quarry as "caused in part if not in whole, by the mining operation" in the Executive Officer's Report for July 13, 2006 meeting of the State Mining and Geology Board.

The landslide in the northeast corner of the quarry pit has the potential to continue to fail, and impact the significant scenic easement along Permanente Ridge. A failure at this location could daylight through the top existing ridge and into the scenic easement. This area was the subject of a Request for Emergency Grading Authorization (#2002-4) from the County of Santa Clara, and to our knowledge this work was never completed. The District is unclear on how and when remedial grading will occur to alleviate the slope stability and scenic easement concerns. This area was the subject of a land exchange between the District and Hanson, for the purpose of implementing remedial grading to stabilize the slopes. The property recently transferred to Hanson doesn't appear to qualify as a "vested" portion of the quarry. Therefore the remedial grading to rectify the slope instability caused at least in part by the quarry operation appears to require either a grading permit or a mining amendment. We are particularly concerned that the remedial grading for slope stability and scenic concerns be completed as soon as possible, and not be subject to delays associated with a potentially long EIR process. This issue may determine the condition of the post-mining site at this location, and therefore identify what the reclamation plan should address.

Drainage and quarry waste materials from the West Materials Storage Area have impacted District road infrastructure down slope to the north in the past. Future drainage from the active and reclaimed materials storage area should be designed to avoid future impacts.

We appreciate the opportunity to comment on the scope of the EIR for the Hanson Permanente Quarry, and request that the District be kept informed about the status of the EIR process, and that a copy of the DEIR is sent to the District for review upon completion.

Sincerely,

Matt Baldzikowski

Matt Baldzikowski
Resource Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos CA 94022-1404
Phone (650) 625-6537, Fax (650) 691-0485

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IX

EPA ID: CAD009109539 **Site Name:** KAISER CEMENT CORP PERMANENTE PLANT **State ID:**

Alias Site Names: LEHIGH SOUTHWEST CEMENT PERMANENTE PLANT
KAISER CEMENT CORP PERMANENTE PLT

City: PERMANENTE

Refer to Report Dated: 5/1/2012 **County or Parish:** SANTA CLARA **State:** CA

Report Developed By: Weston Solutions **Report Type:** PRELIMINARY ASSESSMENT 003

☐ **1. Further Remedial Site Assessment Under CERCLA (Superfund) is not required because:**

☒ **2. Further Assessment Needed Under CERCLA:**
Low priority for further assessment

Discussion/Rationale:

The Kaiser Cement Corp Permanente Plant site occupies approximately 3,500 acres in unincorporated Santa Clara County, just west of the City of Cupertino. The site currently operates under the name of Lehigh Southwest Company, Permanente Plant. The site consists of open land, a quarry, and the cement plant production facility. The facility has operated since 1939, with discharges to the air, surface water and soils. Discharges of up to 2.5million gallons of water daily can contain selenium, arsenic, mercury and other constituents of concern. Permanente Creek, which receives these water discharges, flows from headwaters in the Santa Cruz Mountains through the facility, the Rancho San Antonio Open Space Preserve and the communities of Los Altos and Mountain View before entering the San Francisco Bay. Permanente Creek supports habitats necessary for the preservation of rare, threatened, or endangered species. There are no drinking water intakes in Permanente Creek or the San Francisco Bay within the target distance limit from the site. The site is also a major air pollution source for the federal air permitting programs for nitrogen oxides, sulfur oxides, carbon monoxide, and air toxics.

Mercury, PCBs, cadmium, and selenium have been detected at elevated concentrations in site soils. Mercury, arsenic, beryllium, cadmium, chromium, and lead have been detected at elevated concentrations in cement kiln dust from the site. Cadmium, selenium, and arsenic have been detected in on-site monitoring wells. Antimony, arsenic, hexavalent chromium, barium, boron, cadmium, copper, manganese, nickel, selenium, thallium, vanadium, and zinc have been detected in surface water collected from the quarry bottom. Based on the results of the quarry water sampling, the facility concluded that water in the quarry may contain concentrations of selenium that exceed water quality standards and, when discharged through the quarry dewatering system pursuant to the Storm Water Pollution Prevention Plan, could be contributing to exceedances of the water quality standards for selenium in Permanente Creek.

Potential hazardous substance sources at the site include, but may not be limited to, quarry waters contaminated with arsenic, cadmium, hexavalent chromium, copper, nickel, selenium, and zinc; on-site soils contaminated with arsenic, barium, chromium, cadmium, mercury, selenium, and PCBs; and emissions to ambient air of chromium, lead, and mercury.

The Lehigh PA evaluated a release of contaminants to ambient air based on self-reported TRI information, and mobile atmospheric mercury trailer data. In 2008, the San Francisco Estuary Institute conducted monitoring using EPA R9's mobile atmospheric mercury trailer. Atmospheric mercury was monitored at three locations: at the fence-line of the site, at an urban site, and at a rural site. Although mercury was detected, the results at the Lehigh site were significantly below Regional Screening Levels for mercury.

The PA did not indicate any impact to drinking water supplies. The nearest drinking water well is located approximately 2 miles from the site and meets federal and state standards for drinking water quality.

The PA determined that there are potential impacts to Permanente Creek and the SF Bay from this facility's discharges, based on sampling data from the quarry bottom and from Permanente Creek downstream from the facility. The California Red-Legged Frog, Steelhead trout, and rainbow trout have been documented in Permanente Creek. Selenium is the main pollutant of concern discharging from the facility. New permits under the Clean Water Act may force the facility to better manage their selenium discharges.

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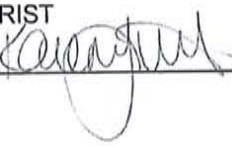
Ongoing discharges from the site are regulated by the Regional Water Quality Control Board (RWQCB) and EPA under the Clean Water Act, which is the most effective way to address potential impacts from the facility. The San Francisco RWQCB has issued multiple Notices of Violations to the site since 2010. In partnership with the RWQCB, the Water Division of EPA conducted sampling at the site in March 2012. The sampling results are expected in summer 2012 and will be made available to the public. On May 22nd, 2012 EPA issued the facility an information collection request for the purpose of gathering additional information to assess the facility's compliance with the requirements of the Clean Water Act.

The Bay Area Air Quality Management District (BAAQMD) is the lead permitting authority for controlling air pollution from facilities in the Bay Area, and EPA oversees implementation of BAAQMD's federally approved permitting programs. The title V permit regulates air emissions and incorporates all Clean Air Act requirements. The title V operating permit was renewed by BAAQMD in April 2012. In addition, this facility is part of the California Air Toxics Hot Spots (AB 2588) Program. As part of this state program, the facility prepared a comprehensive Health Risk Assessment. BAAQMD reviewed the Health Risk Assessment and can be contacted directly to obtain the results as well as the BAAQMD's conclusion regarding the assessment. Continued regulatory oversight by the BAAQMD and EPA's Clean Air Act will continue to ensure that current standards for controlling air toxics are effectively implemented and enforced. On May 23rd, EPA issued Lehigh an information collection request for the purpose of gathering additional information to assess the compliance of the three Lehigh facilities in California, including the Cupertino plant, with the requirements of the Clean Air Act.

The EPA's Toxics Release Inventory, commonly referred to as TRI provides communities valuable information on more than 650 toxic chemicals that are managed or released by various industries. The chemical information in the inventory is estimated by industrial facilities and reported to the EPA, as required by Emergency Planning and Community Right-to-Know Act (EPCRA), Section 313. The TRI's enforcement program inspects facilities to ensure they comply with EPCRA requirements. EPA may issue a civil administrative complaint to any person or company who violates EPCRA. The complaint may impose a civil penalty, including recovery of any economic benefit of non-compliance, and may also require correction of the violation. On May 10th, the program sent a letter to request information from the Lehigh Cupertino facility about its estimates of TRI chemicals manufactured, processed, or otherwise used and about its releases of those chemicals.

Because this facility is being actively regulated by the programs and agencies described above, further evaluation under Superfund is not warranted at this time. However, if air and water regulatory activities reveal new information that suggests that additional work under Superfund may be needed to protect public health or the environment, EPA will consider appropriate action at that time.

Site Decision Made by: K.JURIST

Signature:  **Date:** 05/31/2012

Preliminary Assessment Report
Kaiser Cement Corp. Permanente Plant
Cupertino, California

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May 2012

Prepared for:
U.S. Environmental Protection Agency
Region 9

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LIST OF ACRONYMS

AST	Above Ground Storage Tank
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
BMPs	Best Management Practices
CAO	Cleanup and Abatement Order
CCC	Criterion Continuous Concentration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CRLF	California Red Legged Frog
CWSC	California Water Service Company
DEH	County of Santa Clara, Department of Environmental Health
DTSC	Department of Toxic Substances Control
EPA	United States Environmental Protection Agency
GEM	Gaseous Elemental Mercury
HRA	Health Risk Assessment
HRS	Hazard Ranking System
HWTS	Hazardous Waste Tracking System
MCL	Maximum Contaminant Level
MEIR	Maximum Exposure Individual Resident

MEIW	Maximum Exposure Individual Worker
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFRAP	No Further Remedial Action Planned
ng/m^3	nanograms per meter cubed
NO_x	Nitrogen oxides
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
PA	Preliminary Assessment
PCB	Polychlorinated biphenyls
PMI	Point of Maximum Impact
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
RCRAInfo	Resource Conservation and Recovery Act Information
RSL	Regional Screening Levels
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SCVWD	Santa Clara Valley Water District
SO_2	Sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
SQG	Small Quantity Generator
SSI	Screening Site Inspection
TAC	Toxic Air Contaminants
TPH	Total Petroleum Hydrocarbons
TPH-d	Total Petroleum Hydrocarbons-diesel
TPH-g	Total Petroleum Hydrocarbons-gasoline
TRI	Toxic Release Inventory
UST	Underground Storage Tank
WDID	Waste Discharge Identification Number

1. INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), Weston Solutions, Inc. (WESTON®) has been tasked to conduct a Preliminary Assessment (PA) of the Kaiser Cement Corp. Permanente Plant (Kaiser Cement) site, located in Cupertino, Santa Clara County, California.

The purpose of the PA is to review existing information on the site and its environs, to assess the threat(s), if any, posed to public health, welfare, or the environment, and to determine if further investigation under CERCLA/SARA is warranted. The scope of the PA includes the review of information available from federal, state, and local agencies and performance of an on-site reconnaissance visit.

Using the sources of existing information, the site is then evaluated using the U.S. Environmental Protection Agency's (EPA's) Hazard Ranking System (HRS) criteria to assess the relative threat associated with actual or potential releases of hazardous substances at the site. The HRS has been adopted by the EPA to help set priorities for further evaluation and eventual remedial action at hazardous waste sites. The HRS is the primary method of determining a site's eligibility for placement on the National Priorities List (NPL). The NPL identifies sites at which the EPA may conduct remedial response actions. This report summarizes the findings of these preliminary investigative activities.

The Kaiser Cement site was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) on June 1, 1981 (EPA ID No.: CAD009109539). The site is currently owned by Heidelberg Cement but operates under the name of Lehigh Southwest Cement Company, Permanente Plant (EPA, 2011a; Lehigh, 2011a).

More information about the Superfund program is available on the EPA web site at http://www.epa.gov/superfund. The attached fact sheet describes EPA's site assessment process (Appendix E).

1.1 APPARENT PROBLEM

The apparent problems at the site, which contributed to EPA's determination that a PA was necessary, are as follows:

- The Kaiser Cement site has been used for excavating limestone from an on-site quarry for use in the manufacturing of cement since 1939. Water from the quarry bottom has routinely been pumped and discharged into Permanente Creek, which flows through the site and discharges into the San Francisco Bay. Permanente Creek is listed in the Clean Water Act's Section 303(d) Impaired Waters List for diazinon, selenium, toxicity, and trash (E&E, 1991; Google, 2010; Lehigh, 2011a; RWQCB, 2010a; RWQCB, 2011b; SWRCB, 2012).

- Releases of chromium, lead, mercury and hydrochloric acid into ambient air have been documented (EPA, 2012a).

- On-site soils are contaminated with cadmium, chromium, mercury, polychlorinated biphenyls (PCBs), and selenium. In addition, groundwater collected from on-site monitoring wells indicates the presence of cadmium, selenium, and arsenic (E&E, 1991; EMCON, 1993).

- The EPA received a citizen petition for this Site on February 28, 2011. CERCLA Section 105(d) provides the public with an opportunity to formally petition the Federal Government to conduct a PA, if the public is concerned about a potential release of hazardous substances from a site (Helgerson, 2011). On April 18, 2011, EPA notified the petitioner that EPA would conduct a PA at the Site (EPA, 2011b).

2. SITE DESCRIPTION

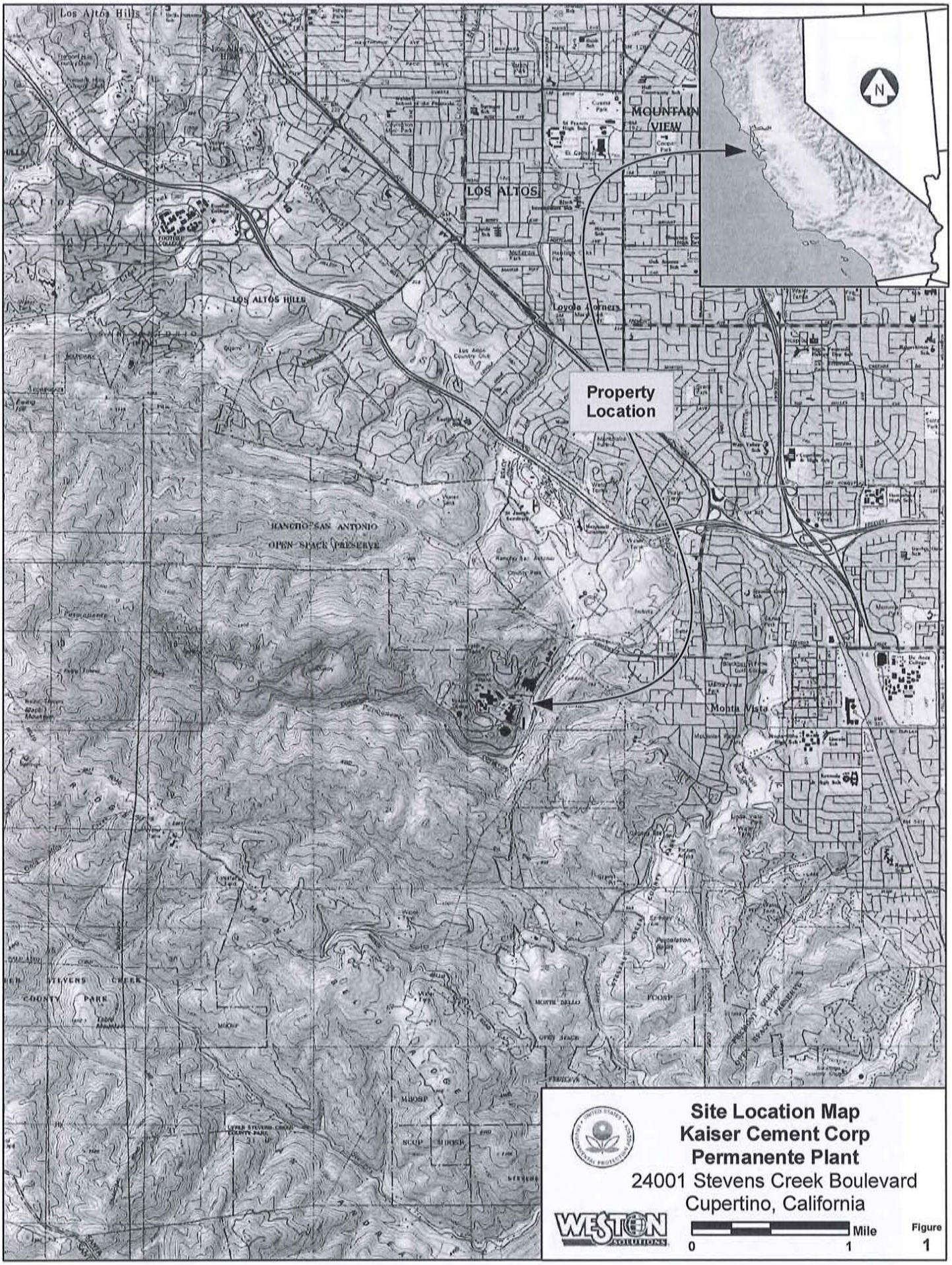
2.1 LOCATION

The Kaiser Cement site is located at 24001 Stevens Creek Boulevard, Cupertino, Santa Clara County, California. The geographic coordinates of the site are 37° 19' 03" North latitude and 122° 05' 35" West longitude (EPA, 2011a; Google, 2010; Appendix D). The location of the site is shown in Figure 1.

2.2 SITE DESCRIPTION

The Kaiser Cement site occupies approximately 3,600 acres in unincorporated Santa Clara County, just west of the City of Cupertino. A residential development is located less than 0.5 mile southeast of the site in the City of Cupertino. The Rancho San Antonio Open Space Preserve, a 3,988 acre public recreational facility consisting of hiking, biking, and equestrian trails, surrounds the site to the north and west. Permanente Creek flows eastward through the site then flows north until it reaches the San Francisco Bay, approximately 8 miles north of the site's entrance (Google, 2010; MROSD, 2012; URS, 2010; Appendix B).

The Kaiser Cement site consists of open land, a quarry, overburden and waste material storage areas, a sand and gravel processing plant (rock plant), a waste water treatment plant, a laboratory, a service station, underground storage tanks (USTs), above ground storage tanks (ASTs), a shipping area, an office and computer center, a former aluminum factory with an unlined dump, known as the Upper Level Landfill, and an impoundment. Cement production consists of, among other activities, crushers, a series of conveyor belts, a preblend dome, storage areas, mills, silos, a four-stage pre-heater tower, a 1.6 million ton capacity dry rotary kiln, clinker coolers, and a roll press. The site layout is shown in Figure 2 (E&E, 1991; EMCON, 1993; Hanson, 2000a; Hanson, 2000b; Radian, 1999).


Los Altos Hills
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LOS ALTOS
LOS ALTOS HILLS
Loyola Corners
Property Location
RANCHO SAN ANTONIO
OPEN SPACE PRESERVE
Monta Vista
STEVENS CREEK
COUNTY PARK
N
Site Location Map
Kaiser Cement Corp
Permanente Plant
24001 Stevens Creek Boulevard
Cupertino, California
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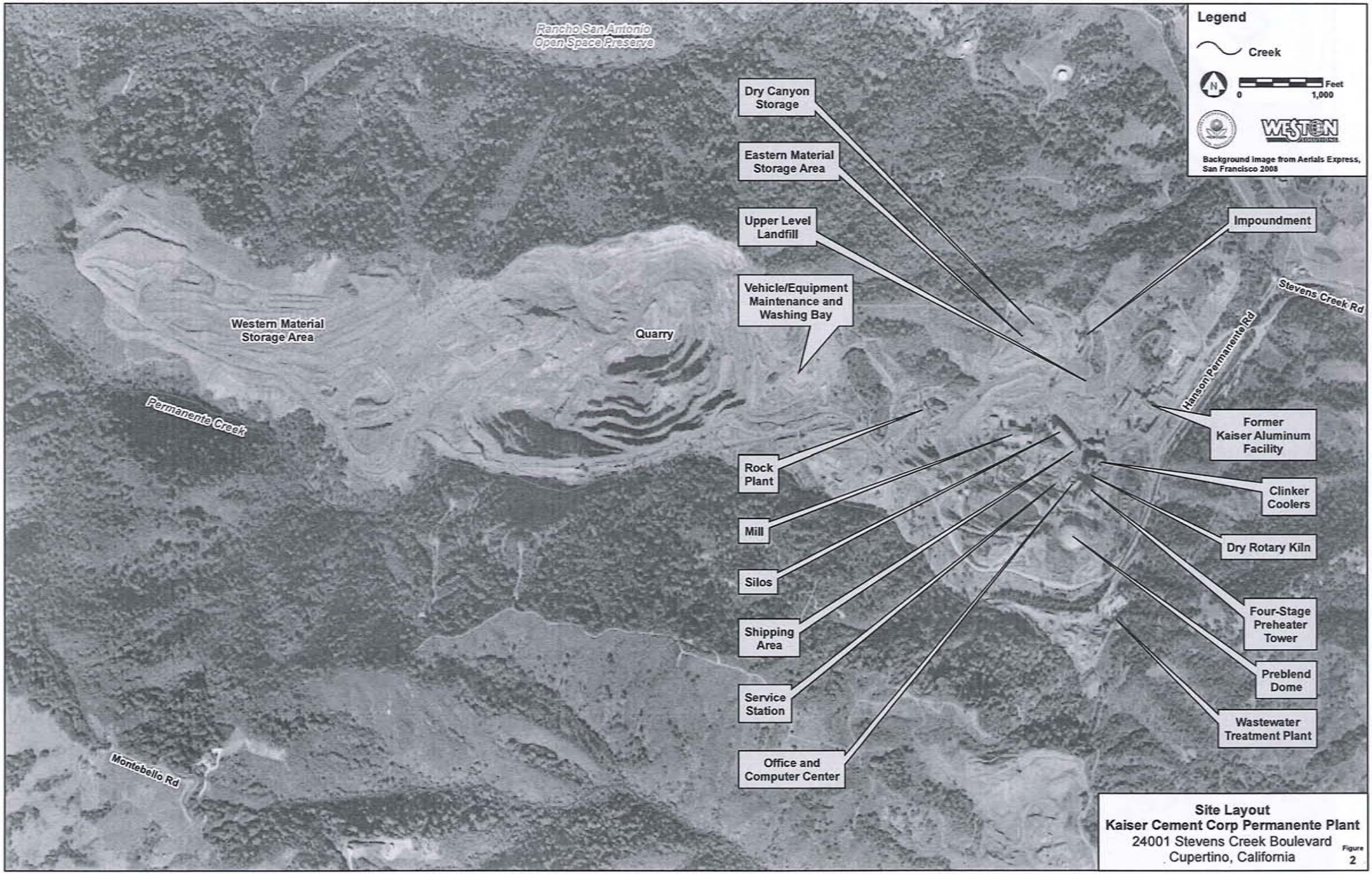
Rancho San Antonio
Open Space Preserve
Dry Canyon Storage
Eastern Material Storage Area
Upper Level Landfill
Vehicle/Equipment Maintenance and Washing Bay
Impoundment
Stevens Creek Rd
Hanson Permanente Rd
Western Material Storage Area
Quarry
Permanente Creek
Former Kaiser Aluminum Facility
Rock Plant
Clinker Coolers
Mill
Dry Rotary Kiln
Silos
Four-Stage Preheater Tower
Shipping Area
Preblend Dome
Service Station
Wastewater Treatment Plant
Office and Computer Center
Montebello Rd
Legend
Creek
N
Feet
0
1,000
WESTON
Background Image from Aerials Express, San Francisco 2008
Site Layout
Kaiser Cement Corp Permanente Plant
24001 Stevens Creek Boulevard
Cupertino, California
Figure
2

The cement manufacturing process begins at the quarry where limestone is mined. The raw limestone is then crushed, mixed with bauxite and iron, and ground to create the raw meal. The raw meal is heated in the kiln to create clinker. The clinker is pressed and mixed with gypsum and ground to make the final product (Lehigh, 2011a).

Generally, industrial process water and storm water are diverted to sedimentation ponds on site before being discharged into Permanente Creek, which flows into the San Francisco Bay (Appendix B).

There are 23 ASTs located at the site. The ASTs are used to contain oils, solvents, antifreeze, grinding aids, sodium hypochlorate, and fuels. All ASTs have secondary containment (Hanson, 2000a).

Between 1985 and 1993, approximately 10 USTs were removed from the site. A description of the removals can be found in the Regulatory Involvement section of this report (Radian, 1999).

2.3 OPERATIONAL HISTORY

Based on information currently available, it is known that since 1939 the Kaiser Cement site has been used for excavating limestone from an on-site quarry, then using the limestone in the on-site manufacturing of cement. The site initially operated under the name Permanente Cement Company. The site was originally built to help provide cement for the Shasta Dam. As the company diversified, the site became the Kaiser Cement and Gypsum Corporation in 1964. In 1986, the site was purchased by the British firm, Hanson PLC. On August 10, 1995, Kaiser Cement purchased the adjacent Kaiser Aluminum property. Although Kaiser Aluminum and Kaiser Cement share the Kaiser name, they were completely separate and unrelated corporate entities. However, the former Kaiser Aluminum facility is currently considered part of the Kaiser Cement site. In January 1999, the site operated under the name Hanson Permanente Cement, under the parent company Hanson Building Materials America. In 2007, Heidelberg Cement purchased Hanson PLC and merged the site with Heidelberg's Lehigh Cement Companies. Today the site operates under the name of Lehigh Southwest Cement Company, Permanente Plant (Lehigh) (E&E, 1991; EMCON, 1993; Lehigh, 2011a; Appendix B).

When the site began operating in 1939, it utilized a wet kiln process to produce clinker (cement). The wet kiln process consisted of six kilns and was expensive due to the large amounts of water and heat required for the process. One-half million gallons of water a day carried the raw materials in a slurry to the kilns, where the mixture was calcined. A portion of the wet kilns was lined with cement kiln bricks to help buffer the kilns' interior from the extreme temperatures. Between 1950 and 1993, Kaiser Cement disposed of these bricks in the unlined Upper Level Landfill on the Kaiser Aluminum facility. The bricks were reported to contain 20 percent chromic oxide. In addition, precalcinated material that spilled from the cement production process was also disposed of at the landfill (EMCON, 1993; E&E, 1991; Lehigh, 2011a).

In 1977, the Kaiser Cement site began construction of the new dry kiln process. In March 1981, the Kaiser Cement site finalized the conversion from a wet kiln process to the new single dry kiln

process. In September 1981, the wet kiln process was shut down. The new kiln was the largest single preheater in the United States with an annual capacity of 1.6 million tons (E&E, 1991; Lehigh, 2011a).

Currently, the cement manufacturing process begins with the mining of limestone from the on-site quarry. Limestone is processed through a two-stage crusher system and then stockpiled. Feeders below the stockpiles work in conjunction with a cross-belt quality analyzer to blend and create the preblended limestone. The material is then crushed for a third time and sent to a covered preblend storage dome. As the crushed limestone enters the preblend dome, a slewing stacker creates a circular pile that further homogenizes the material. The preblend limestone is mixed with bauxite and iron and then ground in ball mills to create the raw meal for the pyro process. The raw meal is stored in two large silos to allow for further blending as the material is sent to the next step of the process (Lehigh, 2011a).

Raw meal is then sent to the top of the dual four-stage preheater tower where it is heated to approximately 1,650°F before entering the kiln. The kiln then heats the material to approximately 2,400°F where it becomes clinker. The clinker enters the cooler where it is cooled before being stored in a set of two clinker silos. A baghouse is utilized in this phase to control the amount of pollutants emitted into the atmosphere (Lehigh, 2011a; Appendix B).

The cooled clinker is sent to the Roll Press, where it is crushed and pressed between two hydraulic rolls creating "clinker cake". The clinker cake is then mixed with gypsum and ground in one of the finish mills to make the final product of Portland cement for construction aggregate. Cement is transported off the site by bulk truck or bags (Lehigh, 2011a; Appendix B).

Between 1984 and 1992, soil and groundwater samples were collected from the Kaiser Aluminum facility on behalf of Kaiser Aluminum. Soil samples were collected at approximately 60 locations. Mercury was detected at concentrations ranging from 27.1 to 346 milligrams per kilogram (mg/kg) in the former Research Building. Mercury was also detected in the Impoundment area at a maximum concentration of 32.5 mg/kg. PCBs were detected in the Dry Canyon Storage Area at a maximum concentration of 400 mg/kg. Cadmium was detected in the Impoundment area at a maximum concentration of 104 mg/kg, and in the Upper Level Landfill at a maximum soluble concentration of 1.95 milligrams per liter (mg/l). Selenium was detected in soils in the Impoundment area at a maximum soluble concentration of 1.37 mg/l. To understand the relative risk of these contaminants, the results are compared to EPA's Regional Screening Levels (RSLs) in Table 1. No selenium data were provided in mg/kg; therefore, comparison to RSLs is not applicable (EMCON, 1993).

Table 1: Soil Results from the Kaiser Cement site (mg/kg)

Contaminant	Maximum Result	RSL*
Mercury	346	43
PCBs	400	0.74**
Cadmium	104	800

*Regional Screening Levels (RSL) for Industrial Soil, June 2011
**The specific PCB sampled was not indicated; Aroclor 1248 was used as it was the most conservative.

In 1990, the Kaiser Aluminum facility collected a sample of the cement kiln dust solids from the overburden pile near the quarry. The following metal concentrations were detected in this sample: mercury at 25 mg/kg, arsenic at 9.93 mg/kg, beryllium at 6.12 mg/kg, cadmium at 21.3 mg/kg, chromium at 35.9 mg/kg, and lead at 61.5 mg/kg. For comparison purposes, these results are compared to EPA's RSLs in Table 2 (EPA, 2011a; E&E, 1991).

Table 2: Cement Kiln Dust Solids from the Overburden Pile (mg/kg)

Contaminant	Result	RSL*
Arsenic	9.93	1.6
Beryllium	6.12	2,000
Cadmium	21.3	800
Chromium	35.9	--
Lead	61.5	800
Mercury	25	43

*Regional Screening Levels (RSL) for Industrial Soil, June 2011
-- Benchmark not available.

Kaiser also collected one soil sample from the portion of the unlined landfill that Kaiser Cement used to dispose of the cement kiln bricks. The soil analyses indicated barium at a concentration of 1,060 mg/kg, chromium at 152 mg/kg, mercury at 12.6 mg/kg, and total petroleum hydrocarbons (TPH) at 1,200 mg/kg. For comparison purposes these concentrations are compared to EPA's RSLs in Table 3 (EPA, 2011a; E&E, 1991).

Table 3: Soil Results from the Upper Level Landfill (mg/kg)

Contaminant	Result	RSL*
Barium	1,060	1.6
Chromium	152	--
Mercury	12.6	43
Total Petroleum Hydrocarbons	1,200	--

*Regional Screening Levels (RSL) for Industrial Soil, June 2011
-- Benchmark not available.

In July 1991, EMCON conducted groundwater sampling at the site to determine whether site activities had impacted groundwater. Cadmium, selenium, and arsenic were detected in on-site monitoring wells. Sampling results are presented in Figure 3. Cadmium was detected in monitoring well KC-1 at a concentration of 0.003 mg/l and in monitoring well KC-2 at a concentration of 0.004 mg/l. Selenium was detected in monitoring well KC-2 at a concentration of 0.004 mg/l, KC-12 at a concentration of 0.012 mg/l, and KC-14 at a concentration of 0.025 mg/l. Arsenic was detected in monitoring well KC-7 at a concentration of 0.008 mg/l and in KC-28 at a concentration of 0.02 mg/l. Background concentrations could not be determined from the information within the report; therefore, naturally-occurring levels could not be compared to the concentrations indicated in the sampling event. Depth to water in most of the wells ranged from 25 to 90 feet below ground surface (bgs). To understand the relative risk of these contaminants, the results are compared to Maximum Contaminant Levels (MCLs) in Table 4 (EMCON, 1993).

Table 4: Monitoring Well Results from Kaiser Cement site (mg/l)

Contaminant	Maximum Result	Maximum Contaminant Level (MCL)
Cadmium	0.004	0.005
Selenium	0.025	0.05
Arsenic	0.02	0.01

mg/l: milligrams analyte per kilogram groundwater
MCL: Maximum Contaminant Level

The same monitoring wells sampled in July 1991 were previously sampled in August 1989, and showed elevated levels of cadmium, chromium, lead, selenium, and mercury. However, these results are of questionable quality due either to inadequate time between well development and sampling, or to inadequate volumes of water extracted during well development or purging to assure representative sampling (EMCON, 1993).

In January 2010, Lehigh collected quarry water samples in anticipation of the Regional Water Quality Control Board (RWQCB) proposal to list the Permanente Creek as water quality impaired by selenium under the Clean Water Act (Geosyntec, 2010). Results from the sampling event indicated the following maximum concentrations: antimony at 8.2 micrograms per liter (µg/L), arsenic at 4.5 µg/L, hexavalent chromium at 2.0 µg/L, barium at 41 µg/L, boron at 69 µg/L, cadmium at 0.53 µg/L, copper at 1.5 µg/L, manganese at 21 µg/L, nickel at 160 µg/L, selenium at 82 µg/L, thallium at 0.39 µg/L, vanadium at 400 µg/L, and zinc at 120 µg/L (Geosyntec, 2010). To understand the relative risk of these contaminants, the quarry water samples are compared to EPA's compilation of national recommended water quality criteria, Criterion Continuous Concentrations (CCC) in Table 5. The CCCs are an estimate of the highest concentration of a hazardous substance in surface water to which an aquatic community can be exposed indefinitely without resulting in an unacceptable effect (Geosyntec, 2010; EPA, 2012b).

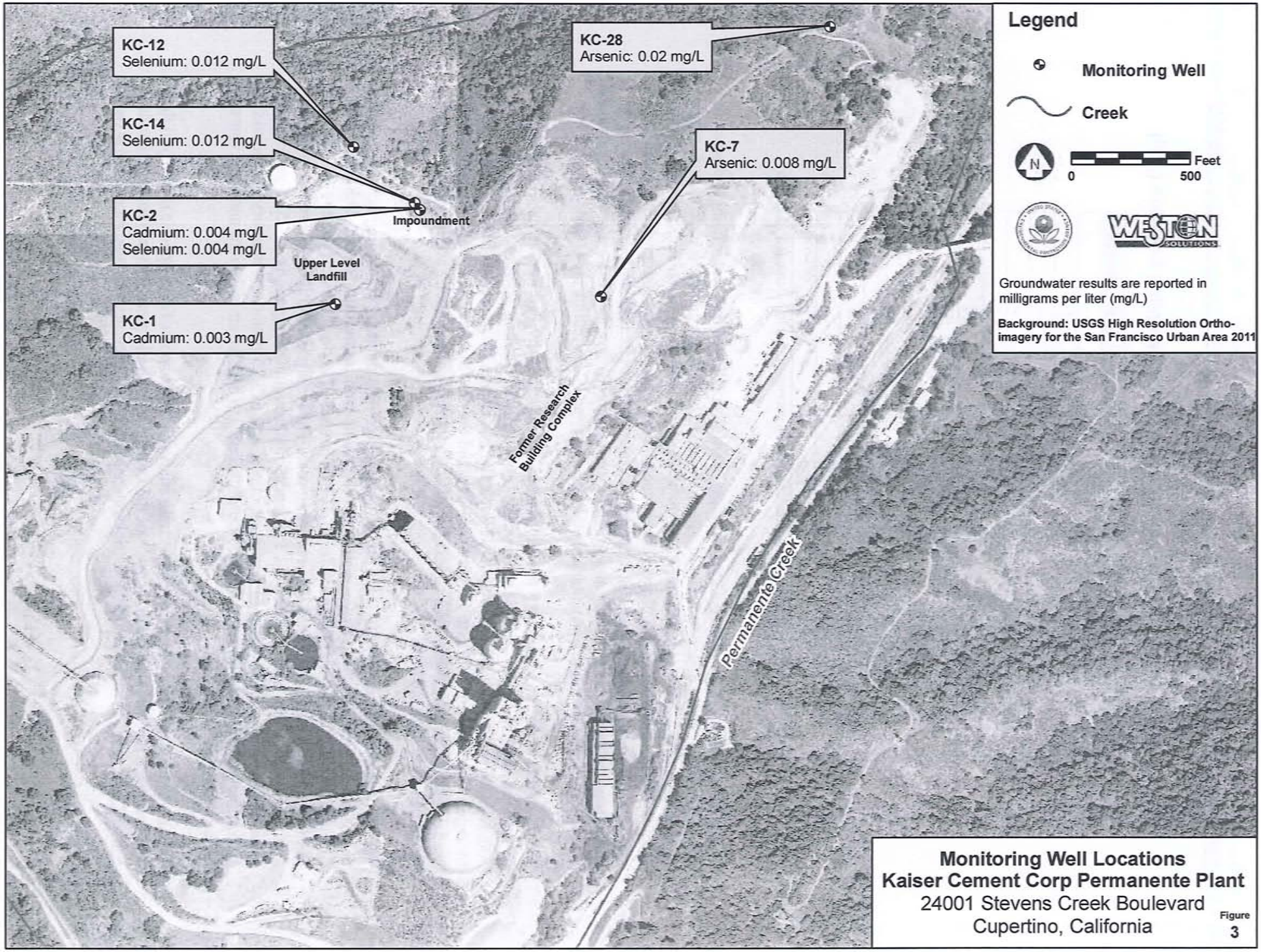
KC-12
Selenium: 0.012 mg/L
KC-14
Selenium: 0.012 mg/L
KC-2
Cadmium: 0.004 mg/L
Selenium: 0.004 mg/L
KC-1
Cadmium: 0.003 mg/L
KC-28
Arsenic: 0.02 mg/L
KC-7
Arsenic: 0.008 mg/L
Impoundment
Upper Level Landfill
Former Research Building Complex
Permanente Creek
Legend
Monitoring Well
Creek
N
Feet
0
500
Groundwater results are reported in milligrams per liter (mg/L)
Background: USGS High Resolution Ortho-imagery for the San Francisco Urban Area 2011
Monitoring Well Locations
Kaiser Cement Corp Permanente Plant
24001 Stevens Creek Boulevard
Cupertino, California
Figure
3

Table 5: Surface Water Results from Quarry Water Sampling Location (µg/l)

Contaminant	Result	Screening Reference*
Antimony	8.2	--
Arsenic	4.5	150
Barium	41	--
Boron	69	--
Cadmium	0.53	0.25
Chromium VI	2.0	11
Copper	1.5	9
Manganese	21	--
Nickel	160	52
Selenium	82	5
Thallium	0.39	--
Vanadium	400	--
Zinc	120	120

* http://water.epa.gov/scitech/swguidance/standards/current/index.cfm#cmc (EPA, 2012b)
-- Benchmark not available.

Based on the results of the quarry water sampling, Lehigh concluded that water being collected in the quarry may contain concentrations of selenium that exceed water quality standards and, when discharged through the quarry dewatering system pursuant to the Storm Water Pollution Prevention Plan (SWPPP), could be contributing to exceedances of the water quality standards for selenium in Permanente Creek (Geosyntec, 2010). Lehigh speculated that elevated selenium levels in the quarry water may result from stormwater and groundwater corning in contact with naturally occurring selenium in the soils and/or sediments located in the quarry and surrounding area (Geosyntec, 2010).

The hazardous materials inventory for the Kaiser Cement site is divided into areas. These areas include the Acetylene Storage, Clinker Process, Concrete Lab, Cooling Towers, Garage, Grinding Aid, Kiln Drive Area, Lab/Warehouse, Oil House II, Pack House, Quarry, Rock Plant, Upper Waste Storage, Water Treatment Plant, Finish Mill Flats, and the Gas Station area. Hazardous materials used on site include propylene, isopropyl alcohol, formaldehyde, diesel fuel, gasoline, batteries, and isopropanol (Lehigh, 2011b).

The Toxic Release Inventory (TRI) is a publicly-accessible EPA database containing information on disposal and other releases of over 650 toxic chemicals from more than 20,000 U.S. industrial facilities. According to the TRI database, 33,161.80 pounds of toxic chemicals were released from the Kaiser Cement site during the 2010 reporting year. The facility's unaudited TRI report indicates that during 2010 the site released 22.1 pounds of chromium compounds, 32,521 pounds of hydrochloric acid, 5.548 pounds of lead compounds, and 613.15 pounds of mercury compounds. According to Lehigh, the reported releases were attributed to fugitive air emissions and point source air emissions (EPA, 2012a).

The San Francisco Estuary Institute conducted a study of the transport of atmospheric mercury in the San Francisco Bay Area air basin. As part of the study, atmospheric mercury was monitored at the Kaiser Cement site to represent an industrial source of mercury. Mercury was also monitored at two

control sites; one urban and one rural. Moffett Field, the urban site, is located approximately 7 miles from the Kaiser Cement site, and Calero Reservoir, the rural site, is located approximately 20 miles from the site. Samples collected in 2008 indicate that gaseous elemental mercury (GEM) ranged from 0.749 to 19.5 nanograms per cubic meter (ng/m^3) near the Kaiser Cement site, 0.100 to 8.19 ng/m^3 at Moffett Field, and 0.100 to 11.7 ng/m^3 at the Calero Reservoir location. To understand the relative risk of these contaminants the air samples are compared to EPA's RSLs in Table 6 (EPA, 2011c; Rothenberg, 2009).

Table 6: Ambient Gaseous Elemental Mercury (GEM) Results (ng/m^3)

Location	Result	Screening Reference*
Kaiser Cement site	0.749 - 19.5	310
Moffett Field	0.100 – 8.19	310
Calero Reservoir	0.100 – 11.7	310

*Regional Screening Levels (RSL) for Residential Air, June 2011

The site also generates hazardous waste. Approximately 152 tons of California waste (primarily waste oil) and 0.06 tons of Resource Conservation and Recovery Act (RCRA) hazardous waste (classified as barium) were manifested from the site in 2011(DTSC, 2012).

2.4 REGULATORY INVOLVEMENT

2.4.1 U.S. Environmental Protection Agency

The Kaiser Cement site was previously identified as a potential hazardous waste site and entered into the EPA's CERCLIS database on June 1, 1981. The site is listed in the Resource Conservation and Recovery Act Information (RCRAInfo) database as a small quantity generator (SQG) under the name of Hanson Permanente Cement (EPA, 2011d; E&E, 1988).

In January 1986, the Department of Toxic Substances Control (DTSC) completed a PA of the Kaiser Cement site per the direction of the EPA. The DTSC noted the disposal of the waste kiln bricks on the former Kaiser Aluminum facility, wastewater discharges into Permanente Creek, leaking USTs that contained oil or fuel, a septic system with leach lines, and a dry well that was used to dispose of wastes. The waste that was disposed of in the dry well was reported as laboratory wastewater. Analytical data was not provided in the document reviewed. The DTSC recommended the site be listed as "medium priority" and recommended a site investigation be conducted on the Kaiser Cement site (DTSC, 1986).

On August 12, 1988 the EPA completed a reassessment of the 1986 PA. Based on documented releases of wastewater to Permanente Creek, the presence of sensitive environments, suspected subsurface contamination with solvents, domestic groundwater use, and potentially significant waste quantities, the EPA's reassessment recommended that a site inspection of the Kaiser Cement site be completed. The EPA characterized the site as medium priority (E&E, 1988).

On February 4, 1991, the EPA completed a Screening Site Inspection (SSI) of the Kaiser Cement site. In the SSI, the EPA noted cement kiln bricks containing 20 percent chromic oxide being disposed of in the unlined landfill at the former Kaiser Aluminum facility, and cement kiln dust being disposed of at an overburden pile near the quarry. Cement kiln dust is referred to as the by-product of the raw materials that have gone through the kiln. The heat inside the kiln volatilizes metals from the limestone causing them to be entrained in dust that is vented from the kiln and preheater tower. The SSI noted that the site was adequately fenced to prevent public access, surface water was not used for drinking water purposes, and the nearest drinking water well was located between two and three miles away. Therefore, the EPA characterized the site as No Further Remedial Action Planned (NFRAP) under CERCLA. The site was archived by the EPA on February 14, 1991 (EPA, 2011a; E&E, 1991).

On March 10, 2010, the EPA issued a Notice of Violation (NOV) to the Lehigh Southwest Cement Company for violating sections of the Clean Air Act. The EPA stated that Lehigh Southwest Cement Company violated the Prevention of Significant Deterioration (PSD) and Title Operating Permit Program requirements of the Act when the Lehigh Southwest Cement Company conducted a series of physical modifications to the facility from 1996 through 1999. The modified equipment resulted in an increase in production of cement and an increase in emissions of air pollutants to the atmosphere. EPA alleged that these modifications should have undergone pre-construction PSD permit review, but the owners of the facility at the time failed to apply for a PSD permit, which would have required additional emissions controls for nitrogen oxides (NO_x) and sulfur dioxide (SO_2) (BAAQMD, 2010; EPA, 2010).

On September 9, 2010, EPA amendments to the National Air Toxics Emission Standards and New Source Performance Standards for Portland Cement Manufacturing were adopted and published. The amended rule sets emission limits for mercury, total hydrocarbons, and particulate matter that apply both to kilns that are major sources of air toxics and to kilns that are area sources. Existing kilns, such as the one at the Kaiser Cement site, must comply with the new limits by 2013 (EPA, 2011f; Appendix C-1).

On October 11, 2011, the EPA listed Permanente Creek on the Clean Water Act's Section 303(d) Impaired Water's List for diazinon, selenium, toxicity and trash. Details of the selenium concentrations are further discussed in Section 2.4.4 (SWRCB, 2012).

According to the EPA's TRI Program, 33,161.80 pounds of toxic chemicals were released during the 2010 reporting year. The facility's unaudited TRI report indicates that during 2010 the site released 22.1 pounds of chromium compounds, 32,521 pounds of hydrochloric acid, 5.548 pounds of lead compounds, and 613.15 pounds of mercury compounds. According to Lehigh, the reported releases were attributed to fugitive air emissions and point source air emissions (EPA, 2012a).

2.4.2 Department of Toxic Substances Control

The DTSC maintains the Hazardous Waste Tracking System (HWTS). The site address had two EPA identification numbers, CAC001342232 under the generator name of Kaiser Cement and CAD981384357 under the generator name of Lehigh Southwest Cement Company. It appears that CAD981384357 is the active EPA generator identification number. According to the HWTS,

approximately 152.9 tons of California waste and 0.06 of RCRA hazardous waste were manifested from the site in 2011. Two other EPA identification numbers (CAC002603872 and CAL000143345) were also listed, but waste information was not available (DTSC, 2012).

2.4.3 Bay Area Air Quality Management District (BAAQMD)

Since July 2004, the BAAQMD has issued several NOVs to the Lehigh facility. The violations can be characterized as emissions-related, administrative, or permit-related in nature. Violations noted in the NOVs include excessive visible emissions of dust or smoke from various facility sources, record keeping deficiencies, late reporting of required reports, and unpermitted material stockpiles. The site has conducted corrective action on these violations and has been brought back into compliance (BAAQMD, 2010).

On April 28, 2008, the Lehigh Southwest Cement Company submitted an application to renew its Title V Permit. A Title V Permit is a compilation of all existing applicable air quality requirements including emissions limits and standards, monitoring, record keeping, and reporting requirements. Approximately one hundred individuals or groups provided comments on the draft Title V permit renewal during a public hearing (BAAQMD, 2010).

On January 5, 2010, the BAAQMD withdrew the proposed permit renewal due to the EPA's amended National Emission Standards for Hazardous Air Pollutants (NESHAP) rule, which would result in additional emission controls and monitors for Toxic Air Contaminants (TACs). The final EPA rule amendments were adopted and published on September 9, 2010. The BAAQMD then incorporated the new standards from the amended NESHAP rule into the permit before it was presented for public comments. The BAAQMD submitted the permit for EPA review on February 16, 2012. The EPA completed its review of the permit on March 23, 2012. The BAAQMD issued the final renewal permit on April 17, 2012 (BAAQMD, 2011a; BAAQMD, 2011b; BAAQMD, 2012; EPA, 2012c; Appendix C-1).

In 2009, the BAAQMD and the EPA installed ambient air monitoring equipment at the Stevens Creek Elementary School, located approximately 1.5 miles from the Kaiser Cement site. The air monitoring was conducted to measure hexavalent chromium as part of BAAQMD's School Air Toxics Monitoring Initiative. From June 30 through September 10, 2009, 13 samples were collected. Three samples were collected when the plant was not operating all of the main units that emit into the air. Of the 10 samples collected when all main units were operating, hexavalent chromium was not detected in five samples and was detected in very small amounts in the other five (ranging from 0.001 to 0.020 nanograms per cubic meter (ng/m^3)) (EPA, 2011e).

In September 2010, the BAAQMD began a one-year air monitoring study in Cupertino. The purpose of the study was to determine if the residents of Cupertino were exposed to elevated pollution levels associated with the site. The air monitoring instruments are housed in a trailer at Monte Vista Park, located approximately one mile east of the Kaiser Cement site. Pollutants continuously measured included ozone, sulfur dioxide, particulate matter, nitrogen oxide, nitrogen dioxide, and carbon monoxide. In addition, 24-hour samples of toxic gases such as benzene, vinyl

chloride, acetone, methyl ethyl ketone, chloroform, tetrachloroethene, and formaldehyde were analyzed. Metals such as chromium, mercury, and lead were also analyzed. Arsenic had a maximum concentration of 0.05 ng/m^3, chromium had a maximum concentration of 0.53 ng/m^3, formaldehyde had a maximum concentration of 5.67 ng/m^3, and mercury had a maximum concentration of 0.05 ng/m^3. When compared to analytes also analyzed at the San Jose station, only methyl ethyl ketone, chloroform, and cobalt concentrations were above the San Jose maximum average. It should be noted that mercury was not analyzed in the San Jose station and, therefore, does not provide a comparison for the Cupertino station. For comparison purposes these concentrations are presented with EPA RSLs in Table 7 (BAAQMD, 2011c; BAAQMD, 2011e; EPA, 2011e).

Table 7: Ambient Air Results from the Monte Vista Sampling Location (ng/m^3)

Contaminant	Result	RSL*
Arsenic	0.05	0.57
Chromium	0.53	--
Formaldehyde	5.67	--
Mercury	0.05	310

*Regional Screening Levels (RSL) for Residential Air, June 2011
-- Benchmark not available.

In 2009, the BAAQMD requested that the Lehigh Southwest Cement Company conduct an AB 2588 Health Risk Assessment (HRA) for emissions from the site. The purpose of the AB2588 program is to identify and rank facilities based on their estimated emissions of TACs to evaluate the potential health risks to the surrounding community, to notify communities if health risk exceed a specific level, and to mitigate emission sources exceeding specified regulatory notification levels (BAAQMD, 2010; BAAQMD, 2011d; AMEC, 2011).

The HRA was submitted to the BAAQMD on September 14, 2010. The BAAQMD provided several comments and required a more refined HRA. The Lehigh Southwest Cement Company submitted a revised HRA on March 30, 2011. Selected facility emission rates from the HRA for 2010 are presented in Table 8. On November 8, 2011, the BAAQMD completed a review of the revised HRA, and approved it as final. Based on current operating conditions and newly installed abatement systems, risk levels were below Air Toxics Hot Spots Program action levels for public notification and mandatory risk reduction. The BAAQMD noted that Lehigh had committed to further risk reduction by installing additional abatement equipment and a new exhaust stack within two years, in order to meet pending federal requirements of the Portland Cement National Emission Standards for Hazardous Air Pollutants. The BAAQMD stated that Lehigh is in compliance with the Air Toxics Hot Spots Program (BAAQMD, 2011d; AMEC, 2011).

Table 8: 2010 Lehigh Facility Emission Rates

Hazardous Substance	Average Annual Production (pounds/year)	Maximum Hourly Production (pounds/hour)
Arsenic	1.43	0.000483
Beryllium	0.463	0.000147
Cadmium	0.654	0.000222
Chromium VI	1.35	0.000397
Copper	9.64	0.00344
Hydrochloric acid	65,100	15.5
Lead	1.21	0.000384
Mercury	546	0.129
Nickel	32.4	0.0104
Selenium	3.32	0.000899

2.4.4 Regional Water Quality Control Board

The facility originally obtained coverage under the National Pollutant Discharge Elimination System's (NPDES) General Permit for Discharges of Storm Water Associated with Industrial Activities, Excluding Construction Activities, Permit No. CAS000001 (Industrial Storm Water Permit) in 1992. The site's Waste Discharge Identification Number (WDID) is 2 43I006267, and the current version of the Industrial Storm Water Permit is Order No. 97-03-DWQ (RWQCB, 2011b).

Between 1998 and 1999, the RWQCB inspected the site and observed sediment-laden water discharging into Permanente Creek from various locations at the site. The water clarity in Permanente Creek was observed to be significantly more turbid downstream than upstream of the site (RWQCB, 1999). On September 17, 1998, the RWQCB issued the site a NOV for discharging sediment laden storm water into Permanente Creek (RWQCB, 1999).

On July 27, 1999, the RWQCB issued Cleanup and Abatement Order (CAO) No. 99-018 (RWQCB, 1999). The CAO required the site to submit a technical report containing an updated storm water monitoring plan, and a number of work plans (RWQCB, 1999).

In 2002 and 2003, the RWQCB collected water samples from Permanente Creek in order to evaluate the watershed under the Clean Water Act section 303(b) reporting and 303(d) listing process. Three out of six samples collected during 2002 exceeded the National Toxic Rule CCC for total selenium (5 µg/l). Total selenium concentrations detected in Permanente Creek above 5 µg/l are as follows: 5.84 µg/l, 10.3 µg/l, and 18.7 µg/l. The samples were collected approximately 0.6 miles downstream of the Lehigh site's entrance (Google, 2010; RWQCB, 2007).

On February 10, 2010, an EPA contractor conducted an Industrial Storm Water Inspection of the site on behalf of the RWQCB (RWQCB, 2010a). On March 26, 2010 the RWQCB issued the site a NOV for violating the NPDES General Permit for Discharges of Storm Water associated with Industrial Activities and the San Francisco Bay Water Quality Control Plan (RWQCB, 2010a). The violations included the following; an inadequate site map, inadequate and non-representative

sampling locations, discharge of pollutants to Permanente Creek due to inadequate Best Management Practices (BMPs), inadequate source control BMPs, inadequate material handling and storage BMPs at the vehicle and equipment maintenance and washing bay, discharge of prohibited non-storm water, failure to identify non-storm water discharges, failure to implement the SWPPP, and incorrectly installed and maintained erosion and sediment controls (RWQCB, 2010a).

On September 15, 2010, a local resident reported an increase in stream flow in the Permanente Creek in the vicinity of Portland Drive and Miramonte Avenue in Los Altos (RWQCB, 2010b). Santa Clara Valley Water District (SCVWD) notified the RWQCB and on October 4, 2010, the RWQCB followed up on the lead and called the site to inquire (RWQCB, 2010b). The site's environmental compliance manager stated the site was pumping water from the quarry bottom, routing the water through Pond #4, and discharging the water into Permanente Creek (RWQCB, 2010b). According to the site manager, this type of discharge is routine (RWQCB, 2010b). On November 29, 2010, the RWQCB ordered Lehigh to submit a Technical Report by January 7, 2011 characterizing any and all non-stormwater discharges that occurred during mid-to-late September 2010 and a description of any and all non-stormwater discharges to Permanente Creek from the site operations during the past three years (RWQCB, 2010b). Lehigh submitted the Technical Report on December 13, 2010 (Lehigh, 2010).

On February 18, 2011, the RWQCB issued an order to Lehigh to obtain coverage for discharges under an Individual NPDES Permit (RWQCB, 2011b). According to the RWQCB's evaluation, Lehigh's discharges of process waste water are not authorized under the State's Industrial General Permit for storm water (RWQCB, 2011b).

On April 29, 2011, the RWQCB recommended imposing an administrative civil liability of $10,000 to Lehigh for one day of discharge (RWQCB, 2011a; RWQCB, 2011b).

2.4.5 County of Santa Clara Department of Environmental Health (DEH)

On June 27, 1994, the DEH issued violations to the site for improper record keeping, improper hazardous materials handling, and improper secondary containment. On January 29, 1997, DEH issued violations for improper labeling, improperly maintained secondary containment, improper tank closure, unauthorized discharges from oil containers, improper storage of hazardous materials, inadequate site map, failure to have a written UST monitoring or response plan, and failure to have a written monitoring plan for aboveground hazardous materials storage (DEH, 1994; DEH, 1997).

From November 2007 through January 22, 2008, the DEH conducted additional inspections of the site. The violations observed consisted of similar violations recorded previously by DEH. The violations included an incomplete hazardous materials inventory, inadequate monitoring records, improper labeling, improper management of spilled materials, improperly maintained secondary containment, improper manifest utilized, failure to sign manifests, failure to submit the 2007 Source Reduction Plan to the DTSC, improper storage of hazardous and universal waste, and failure to recertify the hazardous materials inventory (Hanson, 2008).

2.4.6 Santa Clara Valley Water District (SCVWD)

The SCVWD provided oversight of 10 USTs removed from the Kaiser Cement site. In 1985, six USTs were removed from the site. Four USTs had a capacity of 1,000 gallons and stored diesel fuel. One 5,000-gallon UST and one 8,000-gallon UST formerly contained unleaded gasoline. During the removal of the 1,000 gallon USTs, floating product was observed on the water in the excavation and soils had diesel fuel odors. Holes were observed in three of the four USTs. The 5,000-gallon and 8,000-gallon USTs appeared to be undamaged and no leaks were observed. No soil or groundwater samples were collected at that time. The excavation was backfilled with clean fill and paved over (Radian, 1999).

One 4,000-gallon UST that formerly contained diesel fuel was removed from the site. The tank appeared undamaged but the associated connecting lines and plumbing showed signs of leakage. Excavated soils had a diesel fuel odor and the excavation contained product. No soil or groundwater samples were collected; the excavation was backfilled with clean fill and paved over (Radian, 1999).

In December 1985, three monitoring wells were installed to monitor groundwater near three 10,000-gallon USTs that formerly contained unleaded gasoline. The USTs were subsequently removed and the RWQCB granted closure for this area in December 1995. In 1993, three new USTs containing secondary containment and a leak monitoring protection system were installed. The groundwater monitoring wells were determined to no longer be needed and were removed. No monitoring data from the on-site monitoring wells was available for review (Radian, 1999; RWQCB, 1995).

On May 2, 1999, the SCVWD requested further investigation of the above mentioned USTs. From May 10-12, 1999 samples were collected from five locations. Contaminants detected included benzene at a maximum concentration of 0.006 mg/kg, toluene with concentrations ranging from non detect to 0.046 mg/kg, ethylbenzene with concentrations ranging from non detect to 3.4 mg/kg, xylenes at concentrations ranging from non detect to 4.6 mg/kg, total petroleum hydrocarbons in the gasoline range (TPH-g) were detected at concentrations ranging from 4.8 to 730 mg/kg, and total petroleum hydrocarbons in the diesel range (TPH-d) were detected at concentrations ranging from 260 to 6,000 mg/kg. Benzene was detected in groundwater at a maximum concentration of 340 µg/L, TPH-d range were detected at a maximum concentration of 2,900,000 µg/l, TPH-g was detected at 12,000 µg/l, ethylbenzene was detected at a maximum concentration of 130 µg/l, and xylene was detected at a maximum concentration of 35 µg/l (Radian, 1999; SCVWD, 1999a).

On October 13, 1999, the SCVWD requested further investigation. The SCVWD requested the installation of monitoring wells to characterize the dissolved plume and conduct groundwater monitoring. On January 24, 2001, the SCVWD found the site investigation and corrective actions conducted by Kaiser Cement were in compliance and issued a no further action related to the petroleum releases at the site (SCVWD, 1999b; SCVWD, 2001; URS/Radian, 2000).

Although discussed, petroleum hydrocarbons are excluded as hazardous substances as defined by CERCLA Section 101(14).

3. HAZARD RANKING SYSTEM FACTORS

3.1 SOURCES OF CONTAMINATION

For HRS purposes, a source is defined as an area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

Potential hazardous substance sources associated with the Kaiser Cement site include, but may not be limited to:

- Quarry bottom waters contaminated with hazardous substances from mining activities, which have been discharged into the creek. Hazardous substances detected in quarry bottom waters include, but are not limited to, arsenic, cadmium, hexavalent chromium, copper, nickel, selenium, and zinc (Geosyntec, 2010).
- On-site soils contaminated with hazardous substances from historical site activities. Hazardous substances detected in site soils include, but are not limited to, arsenic, barium, chromium, cadmium, mercury, selenium, and PCBs (E&E, 1991; EMCON, 1993).
- Hazardous substances emitted to ambient air from site activities including, but not limited to, chromium, lead, and mercury (AMEC, 2011).

3.2 GROUNDWATER PATHWAY

In determining a score for the groundwater migration pathway, the HRS evaluates: 1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to groundwater; 2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, mobility, and quantity); and 3) the people (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on the number of people who regularly obtain their drinking water from wells that are located within 4 miles of the site. The HRS emphasizes drinking water usage over other uses of groundwater (e.g., food crop irrigation and livestock watering), because, as a screening tool, it is designed to give the greatest weight to the most direct and extensively studied exposure routes.

3.2.1 Hydrogeological Setting

The Kaiser Cement site lies on the eastern slopes of the Santa Cruz Mountains. The regional geology consists of Mesozoic Franciscan rocks that are partially overlain by Tertiary rocks of the Santa Clara Formation as well as Quaternary surficial deposits. The Santa Cruz Mountains lie to the west of the South Bay Groundwater Sub-basin, which contains Quaternary sediments that comprise the principal aquifer in the region (DWR, 2004).

The Franciscan Formation is a complex assembly of Jurassic to Cretaceous-age marine sediments (limestone, shale, sandstone) as well as mafic (greenstone/meta-basalt) and ultra-mafic (serpentinite)

meta-igneous complexes associated with an oceanic terrane. Franciscan rocks are typically highly deformed and variably metamorphosed throughout the Santa Cruz Mountains (Golder, 2010).

The Kaiser Cement site consists of fill, alluvium, Santa Clara Formation, and rocks of the Franciscan Complex. Typically the fill material is gravelly sand, sandy silt, and silty clay. The Santa Clara Formation is approximately 20 to 70 feet thick. The thickness of the underlying Franciscan Complex could not be determined. No major water-bearing units are present at the Kaiser Cement site. The Santa Clara Formation and the Franciscan Complex rocks contain minor amounts of groundwater in fractures, and do not yield substantial amounts of water to wells. It appears that the Kaiser Cement site is in an area of bedrock and is separated from the adjacent unconfined alluvial aquifer of the Santa Clara Valley groundwater basin. Groundwater in the area was encountered at approximately 25 to 90 feet below ground surface (EMCON, 1993).

3.2.2 Groundwater Targets

The nearest drinking water well is located between two and three miles from the Kaiser Cement site and is operated by California Water Service Company (CWSC). CWSC operates a blended drinking water system that consists of 22 active drinking water wells that serve a population of approximately 55,512. CWSC obtains 20 percent of its drinking water from groundwater. Eight of the 22 wells operated by CWSC are within four miles of the site. Concentrations of arsenic and selenium have been detected in drinking water wells operated by CWSC. Arsenic concentrations ranged from 0.24 to 1.0 µg/l, and selenium was detected with concentrations ranging from 0.852 to 7.0 µg/l. The MCLs for arsenic and selenium are 5 µg/l and 50µg/l, respectively. None of the drinking water wells have been closed due to arsenic or selenium contamination (EPA, 2011g; Appendix C-2).

The City of Sunnyvale operates a blended drinking water system that consists of five active drinking water wells that serve a population of approximately 141,000. The City of Sunnyvale obtains three percent of its drinking water from groundwater. All five wells operated by the City of Sunnyvale are within four miles of the site (EPA, 2011g; Appendix C-3).

Although the EPA Region 9 GIS Report for the Kaiser Cement site indicated that Montebello School District operates a well within one to two miles of the site, it was determined that this well is only used for irrigation purposes at a now closed school (EPA, 2011g; Appendix C-4).

3.2.3 Groundwater Pathway Conclusion

During the July 1991 groundwater sampling event, cadmium, selenium, and arsenic were detected at elevated concentrations in on-site monitoring wells. However, background sampling locations were not available for comparison. Groundwater beneath the site is estimated to be between 25 and 90 feet bgs. There are at least 14 drinking water wells within four miles of the site that serve an apportioned population of approximately 101,182 (EPA, 2011g; EMCON, 1993; Appendices C-3, C-4, C-5).

Although arsenic and selenium have been detected in drinking water wells within the target distance limit from the site, both contaminants were detected in levels below their corresponding MCLs.

Arsenic had a maximum concentration of 1.0 µg/l (MCL = 5 µg/l) and selenium had a maximum concentration of 7.0 µg/l (MCL = 50µg/l). None of the drinking water wells have been closed due to arsenic or selenium contamination (EMCON, 1993; EPA, 2011c; Appendices C-3, C-4, C-5).

3.3 SURFACE WATER PATHWAY

In determining the score for the surface water pathway, the HRS evaluates: 1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to surface water (e.g., streams, rivers, lakes, and oceans); 2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, persistence, bioaccumlulation potential, and quantity); and 3) the people or sensitive environments (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on drinking water intakes, fisheries, and sensitive environments associated with surface water bodies within 15 miles downstream of the site.

3.3.1 Geologic Setting

The discharges of pollutants in storm water and industrial process waste water into Permanente Creek from the Kaiser Cement site is of concern due to, among other reasons, the potential impact of these pollutants on the flora and fauna within Permanente Creek and the San Francisco Bay. These pollutants include, but are not limited to, naturally occurring mercury and selenium associated with the site's geology. Mercury deposits associated with serpentinite bodies in the Coast Ranges are potentially present at the Kaiser Cement site. Serpentinites are very common as mappable units along the southeastern margin of the Santa Clara Valley as well as in smaller, unmappable units throughout the Franciscan to the Santa Cruz Mountains (Golder, 2010; Norfleet, 2011; Appendix B).

Serpentinite is a high-magnesium rock formed by the hydrous metamorphism of ultramafic rocks commonly associated with ophiolite suites that occur as small to large lenses throughout the Franciscan Formation. Serpentinite consists of the mineral serpentine as well as a number of secondary minerals. The Cupertino/W. San Jose and Mindego Hill Geologic Maps identify a large ophiolite complex, as well as several small lenses of ophiolite and serpentinite, along the eastern boundary of the San Andreas Fault. At least one mappable exposure of serpentinite exists within 1.5 miles of the Kaiser Cement site (Dibblee, 2007a; Dibblee, 2007b; Norfleet, 1998; Norfleet, 2011).

The United States Geological Survey Mineral Resources Database indicates a number of mercury mines located approximately 12 miles northwest of the Kaiser Cement site and approximately 11 miles to the southeast of the site. These mercury mines lie along a fault trend that projects into the region of the site. This indicates that the limestones of the site potentially may be impacted by mercury mineralization associated with the regional serpentinite deposits. No mercury mines exist in the Permanente Creek watershed; however, the geologic trends indicate that the conditions for mercury mineralization (i.e. the occurrences of limestone with serpentinite) exist, suggesting the potential for the presence of mercury-bearing bedrock in the site vicinity (Dibblee, 2007a; Dibblee, 2007b; USGS, 2011).

3.3.1.1 Watershed

Permanente Creek drains a watershed of approximately 17.5 square miles on the northeast-facing slopes of the Santa Cruz Mountains. The headwaters originate near Black Mountain along the Montebello Ridge. The main stem flows east through unincorporated County land for about five miles, then turns to the north at the base of the foothills and continues for another eight miles along the valley floor, finally draining to the Lower South San Francisco Bay, located approximately 8 miles from the site. The major tributaries of Permanente Creek are West Branch Permanente Creek and Hale Creek (SCVURPPP, 2011).

Unlike most watersheds in the Santa Clara Basin, the headwaters of the main stem of Permanente Creek are not protected as open space, but are developed for light industry and mining, including the Kaiser Cement site. The majority of the watershed downstream of the site is developed as high-density residential neighborhoods, with commercial development clustered along major surface streets such as El Camino Real (SCVURPPP, 2011).

3.3.2 Surface Water Targets

There are no surface water intakes in Permanente Creek or San Francisco Bay within the target distance limit from the Kaiser Cement site (EPA, 2011g).

The California Red-Legged Frog (CRLF), a federally listed threatened species, has been observed in Ponds 14, 21, and 22. Successful breeding of the CRLF has also been documented in Pond 22. Steelhead trout, a federally listed endangered species, and rainbow trout have been documented in Permanente Creek. In addition, the following federally listed endangered species have been observed in areas surrounding Permanente Creek: Tiger Salamander, Clapper Rail, California Least Tern, and the Salt Marsh Harvest Mouse (Appendix B; EPA, 2011g; Leidy, 2005).

3.3.3 Surface Water Pathway Conclusion

In January 2010, Lehigh collected quarry water samples in anticipation of the RWQCB proposal to list the Permanente Creek as water quality impaired by selenium under the Clean Water Act (Geosyntec, 2010). Hazardous substances detected in quarry bottom waters include, but are not limited to, arsenic, cadmium, hexavalent chromium, copper, nickel, selenium, and zinc (Geosyntec, 2010). Sampling results are presented in Table 5.

In 2002 and 2003, the RWQCB collected water samples from Permanente Creek in order to evaluate the watershed under the Clean Water Act section 303(b) reporting and 303(d) listing process. Total selenium concentrations in samples collected from approximately 0.6 mile downstream of the Kaiser Cement site ranged from 5.84 µg/l to 18.7 µg/l (RWQCB, 2007).

On October 11, 2011, the EPA listed Permanente Creek on the Clean Water Act's 303 (d) list as impaired waters for diazinon, selenium, toxicity, and trash. Permanente Creek supports habitats necessary for the preservation of rare, threatened, or endangered species. There are no drinking

water intakes in Permanente Creek or the San Francisco Bay within the target distance limit from the Kaiser Cement site (EPA, 2011g; SWRCB, 2012; USFWS, 2012; Appendix B).

3.4 SOIL EXPOSURE AND AIR PATHWAYS

In determining the score for the soil exposure pathway, the HRS evaluates: 1) the likelihood that there is surficial contamination associated with the site (e.g., contaminated soil that is not covered by pavement or at least 2 feet of clean soil); 2) the characteristics of the hazardous substances in the surficial contamination (i.e., toxicity and quantity); and 3) the people or sensitive environments (targets) who actually have been or potentially could be, exposed to the contamination. For the targets component of the evaluation, the HRS focuses on populations that are regularly and currently present on or within 200 feet of surficial contamination. The four populations that receive the most weight are residents, students, daycare attendees, and terrestrial sensitive environments.

In determining the score for the air migration pathway, the HRS evaluates: 1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to ambient outdoor air; 2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, mobility, and quantity); and 3) the people or sensitive environments (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on regularly occupied residences, schools, and workplaces within 4 miles of the site. Transient populations, such as customers and travelers passing through the area, are not counted.

3.4.1 Physical Conditions

The Kaiser Cement site occupies approximately 3,600 acres in unincorporated Santa Clara County, just west of the City of Cupertino. A residential development is located less than 0.5 mile southeast of the site in the City of Cupertino. The Rancho San Antonio Open Space Preserve surrounds the site to the north and west. Permanente Creek flows eastward through the site then flows north until it reaches the San Francisco Bay, approximately 8 miles north of the site's entrance (Google, 2010; MROSD, 2012; URS, 2010; Appendix B).

The Kaiser Cement site consists of open land, a quarry, overburden and waste material storage areas, a sand and gravel processing plant (rock plant), a waste water treatment plant, a laboratory, a service station, USTs, ASTs, a shipping area, an office and computer center, a former aluminum factory with an unlined dump, known as the Upper Level Landfill, and an impoundment. Cement production consists of, among other activities, crushers, a series of conveyor belts, a preblend dome, storage areas, mills, silos, a four-stage pre-heater tower, a 1.6 million ton capacity dry rotary kiln, clinker coolers, and a roll press. The site is approximately 95 percent unpaved with some paved roads and buildings. The site is partially fenced, and access is limited. Trespassers have gained access from the active railroad track leading into the eastern portion of the site (E&E, 1991; EMCON, 1993; Hanson, 2000a; Hanson, 2000b; Radian, 1999; Appendix B).

3.4.2 Soil and Air Exposure

There are currently 155 full-time permanent employees and 20 contracted employees at the site. No residents, schools or daycare facilities were observed on or in the vicinity of the site. There are eight residents located between ¼ and ½ mile from the site, and 553 residents living within ½ and 1 mile from the site (EPA, 2011g; Appendix B).

3.4.3 Soil and Air Exposure Pathway Conclusion

The San Francisco Estuary Institute conducted a study of the transport of atmospheric mercury in the San Francisco Bay Area air basin. As part of the study, atmospheric mercury was monitored at the Kaiser Cement site to represent an industrial source of mercury. Mercury was also monitored at two control sites; one urban and one rural. Moffett Field, the urban site, is located approximately 7 miles from the Kaiser Cement site, and Calero Reservoir, the rural site, is located approximately 20 miles from the site. Samples collected in 2008 indicate that GEM ranged from 0.749 to 19.5 nanograms per cubic meter (ng/m^3) near the Kaiser Cement site, 0.100 to 8.19 ng/m^3 at Moffett Field, and 0.100 to 11.7 ng/m^3 at the Calero Reservoir location (see Table 6) (EPA, 2011c; Rothenberg, 2009).

According to the EPA's TRI Program, the site released 33,161.80 pounds of toxic chemicals during the 2010 reporting year. According to the facility's unaudited 2010 TRI report, the site released 22.1 pounds of chromium compounds, 32,521 pounds of hydrochloric acid, 5.548 pounds of lead compounds, and 613.15 pounds of mercury compounds. The releases were generated from fugitive air emissions and point source air emissions (EPA, 2012a).

4. EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40CFR 300.415 (b) (2)] authorizes the EPA to consider emergency response actions at those sites that pose an imminent threat to human health or the environment. For the following reasons, a referral to Region 9's Emergency Response Office does not appear to be necessary:

- The RWQCB, the BAAQMD, and the EPA are actively involved with the regulatory issues at the Kaiser site. Because of the agencies' active involvement the site does not appear to pose an imminent threat to human health or the environment

5. SUMMARY

The Kaiser Cement site occupies approximately 3,600 acres at 24001 Stevens Creek Boulevard, Cupertino, Santa Clara County, California. Based on information currently available, it is known that since 1939 the Kaiser Cement site has been used for excavating limestone from an on-site quarry, then using the limestone in the on-site manufacturing of cement. The cement manufacturing process begins at the quarry where limestone is mined. The raw limestone is then crushed, mixed with bauxite and iron, and ground to create the raw meal. The raw meal is heated in the kiln to create clinker. The clinker is pressed and mixed with gypsum and ground to make the final product. Permanente Creek flows eastward through the site then flows north until it reaches the San Francisco Bay, approximately 8 miles north of the site's entrance. Generally, industrial process water and storm water are diverted to sedimentation ponds on site before being discharged into Permanente Creek.

Mercury, PCBs, cadmium, and selenium have been detected at elevated concentrations in site soils. Mercury, arsenic, beryllium, cadmium, chromium, and lead have been detected at elevated concentrations in cement kiln dust from the site. Cadmium, selenium, and arsenic have been detected in on-site monitoring wells. Antimony, arsenic, hexavalent chromium, barium, boron, cadmium, copper, manganese, nickel, selenium, thallium, vanadium, and zinc have been detected in surface water collected from the quarry bottom. Based on the results of the quarry water sampling, the facility concluded that water in the quarry may contain concentrations of selenium that exceed water quality standards and, when discharged through the quarry dewatering system pursuant to the Storm Water Pollution Prevention Plan, could be contributing to exceedances of the water quality standards for selenium in Permanente Creek. The facility's unaudited Toxic Release Inventory report indicates that during 2010 the site released 22.1 pounds of chromium compounds, 32,521 pounds of hydrochloric acid, 5.548 pounds of lead compounds, and 613.15 pounds of mercury compounds. Atmospheric mercury samples collected at the Kaiser Cement site in 2008 indicated that gaseous elemental mercury (GEM) ranged from 0.749 to 19.5 nanograms per cubic meter (ng/m^3).

The site is listed in the Resource Conservation and Recovery Act Information database as a small quantity generator. On March 10, 2010, the EPA issued a Notice of Violation (NOV) to the facility for violating sections of the Clean Air Act. On October 11, 2011, the EPA listed Permanente Creek on the Clean Water Act's Section 303(d) Impaired Waters List for diazinon, selenium, toxicity and trash.

The facility originally obtained coverage under the National Pollutant Discharge Elimination System's (NPDES) General Permit for Discharges of Storm Water Associated with Industrial Activities, Excluding Construction Activities Permit No. CAS000001 (Industrial Storm Water Permit) in 1992. The site's Waste Discharge Identification Number (WDID) is 2 43I006267, and the current version of the Industrial Storm Water Permit is Order No. 97-03-DWQ. On July 27, 1999, the Regional Water Quality Control Board (RWQCB) issued Cleanup and Abatement Order (CAO) No. 99-018 to the facility. On March 26, 2010 the RWQCB issued the site a NOV for violating the NPDES General Permit for Discharges of Storm Water associated with Industrial Activities and the

San Francisco Bay Water Quality Control Plan. On February 18, 2011, the RWQCB issued an order to the facility to obtain coverage for discharges under an Individual NPDES Permit. According to the RWQCB's evaluation, the site's discharges of process waste water are not authorized under the State's Industrial General Permit for storm water.

Since July 2004, the Bay Area Air Quality Management District (BAAQMD) has issued several NOVs to the facility. In 2009, the BAAQMD requested that the Lehigh Southwest Cement Company conduct an AB 2588 Health Risk Assessment (HRA) for emissions from the site. On November 8, 2011, the BAAQMD completed a review of the revised HRA, and approved it as final. Based on current operating conditions and newly installed abatement systems, risk levels were below Air Toxics Hot Spots Program action levels for public notification and mandatory risk reduction. The BAAQMD noted that Lehigh had committed to further risk reduction by installing additional abatement equipment and a new exhaust stack within two years, in order to meet pending federal requirements of the Portland Cement National Emission Standards for Hazardous Air Pollutants. The BAAQMD stated that Lehigh is in compliance with the Air Toxics Hot Spots Program.

The following pertinent Hazard Ranking System factors are associated with the site:

- Potential hazardous substance sources associated with the Kaiser Cement site include, but may not be limited to, quarry waters contaminated with arsenic, cadmium, hexavalent chromium, copper, nickel, selenium, and zinc; on-site soils contaminated with arsenic, barium, chromium, cadmium, mercury, selenium, and PCBs; and emissions to ambient air of chromium, lead, and mercury.
- Cadmium, selenium, and arsenic have been detected at elevated concentrations in on-site monitoring wells.
- There are at least 14 drinking water wells within four miles of the site that serve an apportioned population of approximately 101,182.
- Permanente Creek supports habitats necessary for the preservation of rare, threatened, or endangered species. There are no drinking water intakes in Permanente Creek or the San Francisco Bay within the target distance limit from the Kaiser Cement site.
- There are currently 155 full-time permanent employees and 20 contracted employees at the site. No residents, schools or daycare facilities were observed on or in the vicinity of the site. There are eight residents located between ¼ and ½ mile from the site, and 553 residents living within ½ and 1 mile from the site.

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Appendix A:

Transmittal List

TRANSMITTAL LIST

Date: **April 2012**
Site Name: **Kaiser Cement Corp. Permanente Plant**
EPA ID No.: **CAD009109539**

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A copy of the Preliminary Assessment Report for the above-referenced site should be sent to the following:

David Vickers
President
Lehigh Southwest Cement Company
12667 Alcosta Blvd.
Bishop Ranch 15
San Ramon, CA 94583

Scott Renfrew
Lehigh Southwest Cement Company
24001 Stevens Creek Blvd.
Cupertino, CA 95014

Daniel Murphy
CA Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, California 94710

Thu Bui
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Chirstine Boschen, M.S.
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Gary Rudholm
Planning Office
70 West Hedding Street, East Wing, 7th Floor
San Jose, California 95110

Cathy Helgerson
20697 Dunbar Drive
Cupertino, California 95014

Appendix B:

Site reconnaissance Interview and Observation Report/Photographic Documentation

SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

DATE: September 21, 2011

OBSERVATIONS MADE BY: Anitra B. Rice (Weston Solutions, Inc.) and Karen Jurist (US EPA, Region IX)

SITE: Kaiser Cement Corp Permanente Plant

EPA ID: CAD009109539

A Site reconnaissance visit was conducted on September 21, 2011. We were escorted throughout the site by Scott Renfrew, Environmental Manager and Henrik Wesseling, the Plant Manager. The following information was obtained and photographs were taken:

The Kaiser Cement Corp Permanente Plant is currently operated under the name of Lehigh Southwest Cement Company and is located at 24001 Stevens Creek Boulevard, Cupertino, California. The Site is not fenced but is guarded at the front entrance of the site. The site is situated in the foothills just west of the City of Cupertino, access to the site is limited. Mr. Renfrew indicated trespassers have gained access from the active railroad track leading into the eastern portion of the site. There are approximately 155 full time permanent employees and 20 contracted employees at the site.

Storm water run-off, groundwater, and dust supersession from the site are collected in sedimentation basins then pumped through a series of pipes to various ponds located throughout the site. Pumps are equipped with a turbidity meter set to turn off if turbidity reaches 30 NTU.

Water from the Quarry bottom is pumped to Pond 4 then to Permanente Creek. Water from the Primary Crusher is diverted to Pond 13B then to Pond 13A, then to Pond 13 before it enters an open metal channelized portion of Permanente Creek. Most of the water generated on the eastern portion of the site is directed to Pond 11 (The Lake) via the Main Lift Station, formerly known as Pearl Harbor. Water from Pond 11 is used back in the process as a gas conditioner in the towers. Pond 11 is only partially lined and does overflow particularly when the kiln is shut down. Water from the Rock Plant is diverted to Pond 9 and 17 then to Permanente Creek. Pond 16, also known as the Dinky Shed Basin also discharges to Pond 9. Ponds 14 and Ponds 19 through 22 are located on the northeast portion of the site. Water from the Eastern Material Storage Area (EMSA) is directed to Ponds 19 and 20. However, Pond 19 has been filled in with sediment.

The California Red-Legged Frog (CRLF), a federally listed endangered species, has been observed in Ponds 14, 21, and 22. Successful breeding of the CRLF has also been documented in Pond 22. The fact that the site discharges to Permanente Creek via these ponds have generated much debate as to whether the site is operating under the correct storm water permit with the San Francisco Regional Water Quality Control Board (RWQCB).

The ponds are periodically dredged and the material is stored at the EMSA. In addition, kiln dust generated during the wet-kiln process days, was also sent to the EMSA. These areas are maintained to prevent erosion. The site wishes to expand the EMSA area, however, the County of Santa Clara has not approved Lehigh's Reclamation Plan.

No schools or daycare centers were observed on or in the vicinity of the site.

Photo 1: View of the quarry facing north. Groundwater from this area is diverted to Pond 4.

Photo 2: Closer view of the quarry pit.

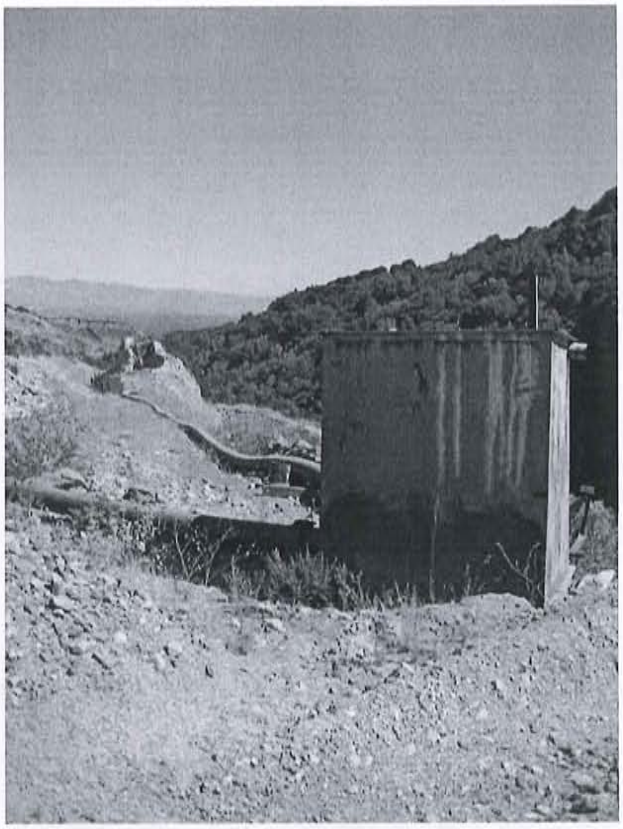


Photo 3: View of piping diverting water from the quarry pit to Pond 4 in the distance.

Photo 4: Primary Crusher with Permanente Creek below (not shown).

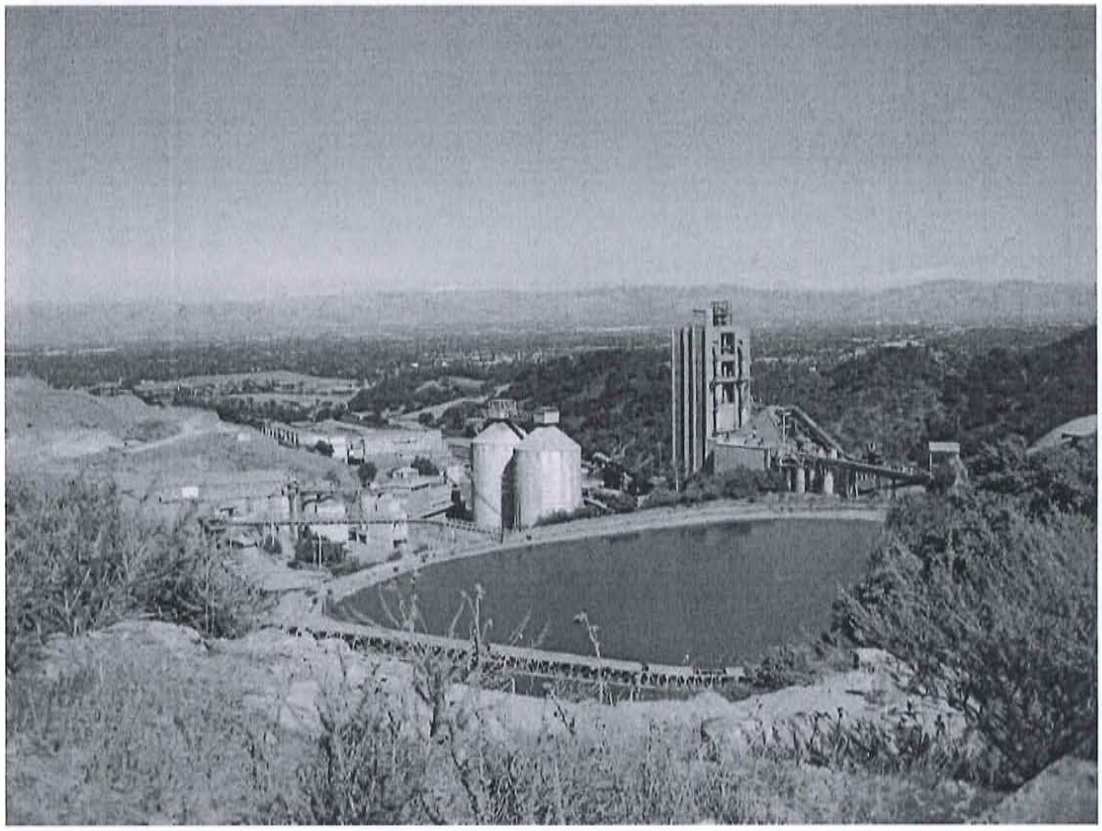


Photo 5: Pond 11 (The Lake), with the Preheater Tower to the right and the cement silos to the left.

Photo 6: Pond 13B which discharges to Pond 13A then to Pond 13.

Photo 7: Pond 13A which discharges to Pond 13.

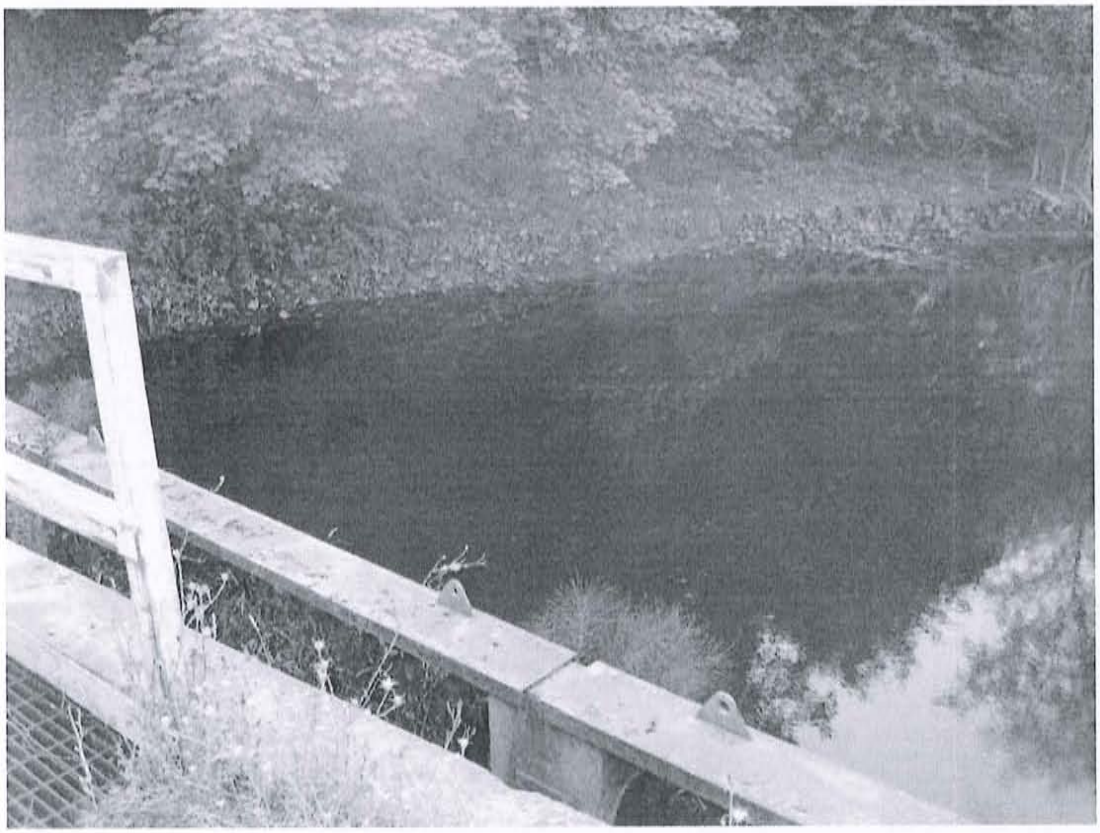


Photo 8: Pond 13 which discharges to Permanente Creek. Photo taken from walking path over weir.

Photo 9: Discharged area from Pond 13 into Permanente Creek (open culvert).

Photo 10: View of Pond 14 and the diversion structures which allows water to flow to Pond 22.

Appendix C:

Contact Reports

CONTACT REPORT #1

AGENCY/AFFILIATION: United States Environmental Protection Agency		
DEPARTMENT: Air Division		
ADDRESS/CITY: 75 Hawthorn Street, San Francisco		
COUNTY/STATE/ZIP: San Francisco, California 94105		
CONTACT(S)	TITLE	PHONE
Kelly Shaheerah		(415) 947-4156
PERSON MAKING CONTACT: Anitra Rice		DATE: 08/15/2011
SUBJECT: National Emission Standards for Hazardous Air Pollutants Amendment		
SITE NAME: Kaiser Cement Corp. Permanente Plant		EPA ID#: CAD009109539

According to Ms. Shaheerah, the National Emission Standards for Hazardous Air Pollutants Amendment (NESHAP) was made final in September 2010. The amendments would allow mercury, hydrocarbons, particulate matter, and acid gases to have emission limits set on existing sources, not just new sources. The San Francisco Bay Area Air Quality Management District (BAAQMD) incorporated the new emission standards into Lehigh's Title V permit conditions and issued the permit application for public comment in March 2011. All public comments have been submitted to the BAAQMD. The BAAQMD is currently responding to the comments. Once the BAAQMD responds to the comments the permit will be submitted to the EPA for final review. The EPA will have 45 days to respond.

CONTACT REPORT #2

AGENCY/AFFILIATION: California Water Service Company		
DEPARTMENT: Water Quality		
ADDRESS/CITY: 341 N. Delaware Street, San Mateo		
COUNTY/STATE/ZIP: Santa Clara, California 94401		
CONTACT(S)	TITLE	PHONE
Sam Silva	Project Manager	(650) 558-7841
PERSON MAKING CONTACT: Anitra Rice		DATE: 08/18/2011 Revised 12/05/11
SUBJECT: Drinking Water Well		
SITE NAME: Kaiser Cement Corp. Permanente Plant		EPA ID#: CAD009109539

The following information was obtained from Mr. Silva:

Population Served: 55,512

Source of supply: Approx 80% annual purchased from Santa Clara Valley Water District West Pipeline supplied from Surface Water Source (Rinconada), 20% from district groundwater supply.

Active Wells: 22, Standby Wells: 0

Blending of Wells with Surface Water: Yes. We are in process of hydraulic modeling of the distribution system as there is isolation of some sources from the purchased water. We do not fully know the influence of the blending.

Inactive / Destroyed Well Status: There are several sources that have been inactivated due to nitrates. Two sources are in question due to compromised casing and respective Iron / Manganese content above the secondary MCL levels. Re activation of the nitrate impacted sources is in progress, however due to new well construction standards(Sanitary Seal Depth), several do not qualify and are candidates for destruction.

Aquifer Depth / Screening; Our district does not have a hydro geological model that accurately represents the respective aquifers for our sources. Screening will have a range dependent upon each individual source.

Mr. Silva emailed additional information regarding historical drinking water well testing in relation to arsenic and selenium. No historical detections of cadmium have been detected in drinking water wells.

CONTACT REPORT #3

AGENCY/AFFILIATION: City of Sunnyvale		
DEPARTMENT: Public Works – Water Division		
ADDRESS/CITY: Public Works/Field Services, Attn: Water, PO Box 3707, Sunnyvale		
COUNTY/STATE/ZIP: Santa Clara, California 94088-3707		
CONTACT(S)	TITLE	PHONE
Val Conzet	Manager	(408) 730-7560
PERSON MAKING CONTACT: Anitra Rice		DATE: 9/15/2011
SUBJECT: Drinking Water Well		
SITE NAME: Kaiser Cement Corp. Permanente Plant		EPA ID#: CAD009109539

According to Mr. Conzet the City of Sunnyvale operates five active drinking water wells and one standby. Groundwater accounts for approximately 2-3% of the drinking water. The remaining 97-98% is purchased surface water from Santa Clara Valley Water. Surface water is obtained more than 15 miles from the site. Surface water is blended with the groundwater prior to distribution. No wells have been permanently closed due to contamination. Mr. Conzet did not know what aquifer the drinking water is screened in but stated the screen in located between 300 to 350 feet below ground surface. The City of Sunnyvale provides water to approximately 141,000 people.

CONTACT REPORT #4

AGENCY/AFFILIATION: Cupertino Unified School District		
DEPARTMENT: Facilities		
ADDRESS/CITY: 10301 Vista Drive, Cupertino		
COUNTY/STATE/ZIP: Santa Clara, California 95014		
CONTACT(S)	TITLE	PHONE
Donna Bills	Secretary	(408) 252-3000 x341
PERSON MAKING CONTACT: Anitra Rice		DATE: 9/15/2011
SUBJECT: Drinking Water Well		
SITE NAME: Kaiser Cement Corp. Permanente Plant		EPA ID#: CAD009109539

According to Ms. Bills there is one groundwater well located at the Cupertino School; however this well is used for irrigation purposes. The school is not open but the grounds are maintained.

Appendix D:

Latitude and Longitude Calculations Worksheet

Latitude and Longitude Calculation Worksheet (7.5' quads) Using an Engineer's Scale (1/50)

Site Name Kaiser Cement Corp Permanente Plant **CERCLIS #** C A D 0 0 9 1 0 9 5 3 9

AKA

Address 24001 Stevens Creek Boulevard

City Cupertino **State** C A **ZIP** 95014

Site Reference Point

USGS Quad Name lat-longs acquired from Google Earth **Scale**

Township **Range** **Section** ¼ ¼ ¼

Map Datum ☐ 1927 ☐ 1983 (Check one) **Meridian**

Map coordinates at southeast corner of 7.5' quadrangle (attach photocopy)

Latitude ° ' "N **Longitude** ° ' "W

Map coordinates at southeast corner of 2.5' grid cell

Latitude ° ' "N **Longitude** ° ' "W

Calculations

LATITUDE(x)

A) Number of ruler graduations between 2.5' (150") grid lines (a)

B) Number of ruler graduations between south grid line and the site reference point (b)

C) Therefore, a/150 = b/x, where **x= Latitude in decimal seconds, north of the south grid line**

Expressed as minutes and seconds (1' = 60") = ° ' "N

Add to grid cell latitude = ° ' "N + ° ' "N

Site latitude = 3 7 ° 1 9 ' 0 3 "N

LONGITUDE(y)

A) Number of ruler graduations between 2.5' (150") grid lines (a)

B) Number of ruler graduations between south grid line and the site reference point (b)

C) Therefore, a/150 = b/x, where **x= Longitude in decimal seconds, west of the east grid line**

Expressed as minutes and seconds (1" = 60") = ° ' "W

Add to grid cell longitude = ° ' "N + ° ' "N

Site longitude = 1 2 2 ° 0 5 ' 3 5 "W

Appendix E:

EPA Quick Reference Fact Sheet

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | Publication 9345.4-03FS | September 1993

EPA

SITE ASSESSMENT:
Evaluating Risks at Superfund Sites

Office of Emergency and Remedial Response
Hazardous Site Evaluation Division 5204G

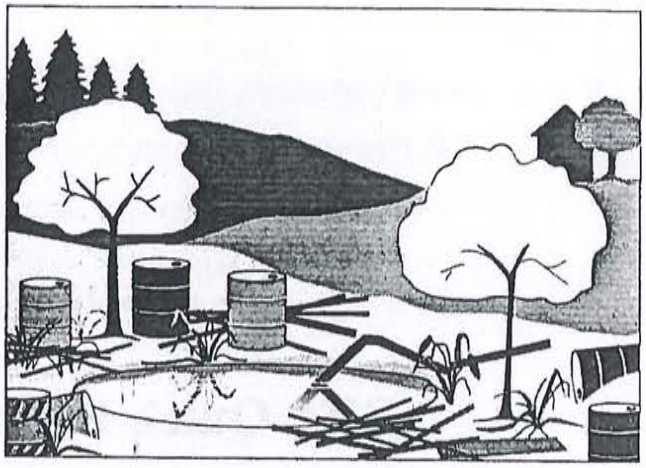
Quick Reference Fact Sheet

The Challenge of the Superfund Program

A series of headline-grabbing stories in the late 1970s, such as Love Canal, gave Americans a crash course in the perils of ignoring hazardous waste. At that time, there were no Federal regulations to protect the country against the dangers posed by hazardous substances (mainly industrial chemicals, accumulated pesticides, cleaning solvents, and other chemical products) abandoned at sites throughout the nation. And so, in 1980 Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, to address these problems.

The major goal of the Superfund program is to protect human health and the environment by cleaning up areas, known as "sites," where hazardous waste contamination exists. The U.S. Environmental Protection Agency (EPA) is responsible for implementing the Superfund program.

At the time it passed the Superfund law, Congress believed that the problems associated with uncontrolled releases of hazardous waste could be handled in five years with $1.6 billion dollars. However, as more and more sites were identified, it became apparent that the problems were larger than anyone had originally believed. Thus, Congress passed the Superfund Amendments and Reauthorization Act (SARA) in 1986. SARA expanded and strengthened the authorities given to EPA in the original legislation and provided a budget of $8.5 billion over five years. Superfund was extended for another three years in 1991.



What is EPA's Job at Superfund Sites?

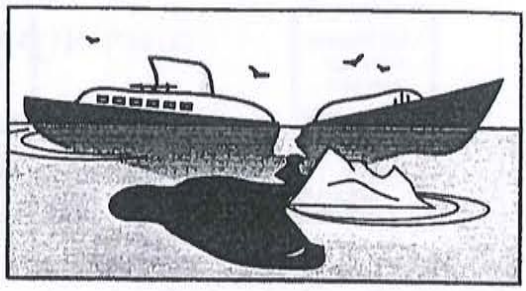
For more than 10 years, EPA has been implementing the Superfund law by:

- Evaluating potential hazardous waste sites to determine if a problem exists;
- Finding the parties who caused the hazardous waste problems and directing them to address these problems under EPA oversight or requiring them to repay EPA for addressing these problems; and
- Reducing immediate risks and tackling complex hazardous waste problems.

The Superfund site assessment process generally begins with the discovery of contamination at a site and ends with the completion of remediation (i.e., cleaning up the waste at a site) activities. This fact sheet explains the early part of the process, called the *site assessment* phase.

The National Response Center

The National Response Center (NRC), staffed by Coast Guard personnel, is the primary agency to contact for reporting all oil, chemical, and biological discharges into the environment anywhere in the U.S. and its territories. It is responsible for:



- Maintaining a telephone hotline 365 days a year, 24 hours a day;
- Providing emergency response support in specific incidents; and
- Notifying other Federal agencies of reports of pollution incidents.

To report a pollution incident, such as an oil spill, a pipeline system failure, or a transportation accident involving hazardous material, call the NRC hotline at **800-424-8802.**

1 Site Discovery

Hazardous waste sites are discovered in various ways. Sometimes concerned residents find drums filled with unknown substances surrounded by dead vegetation and call the NRC, EPA, or the State environmental agency; or an anonymous caller to the NRC or EPA reports suspicious dumping activities. Many sites come to EPA's attention through routine inspections conducted by other Federal, State, or local government officials. Other sites have resulted from a hazardous waste spill or an explosion. EPA enters these sites into a computer system that tracks any future Superfund activities.

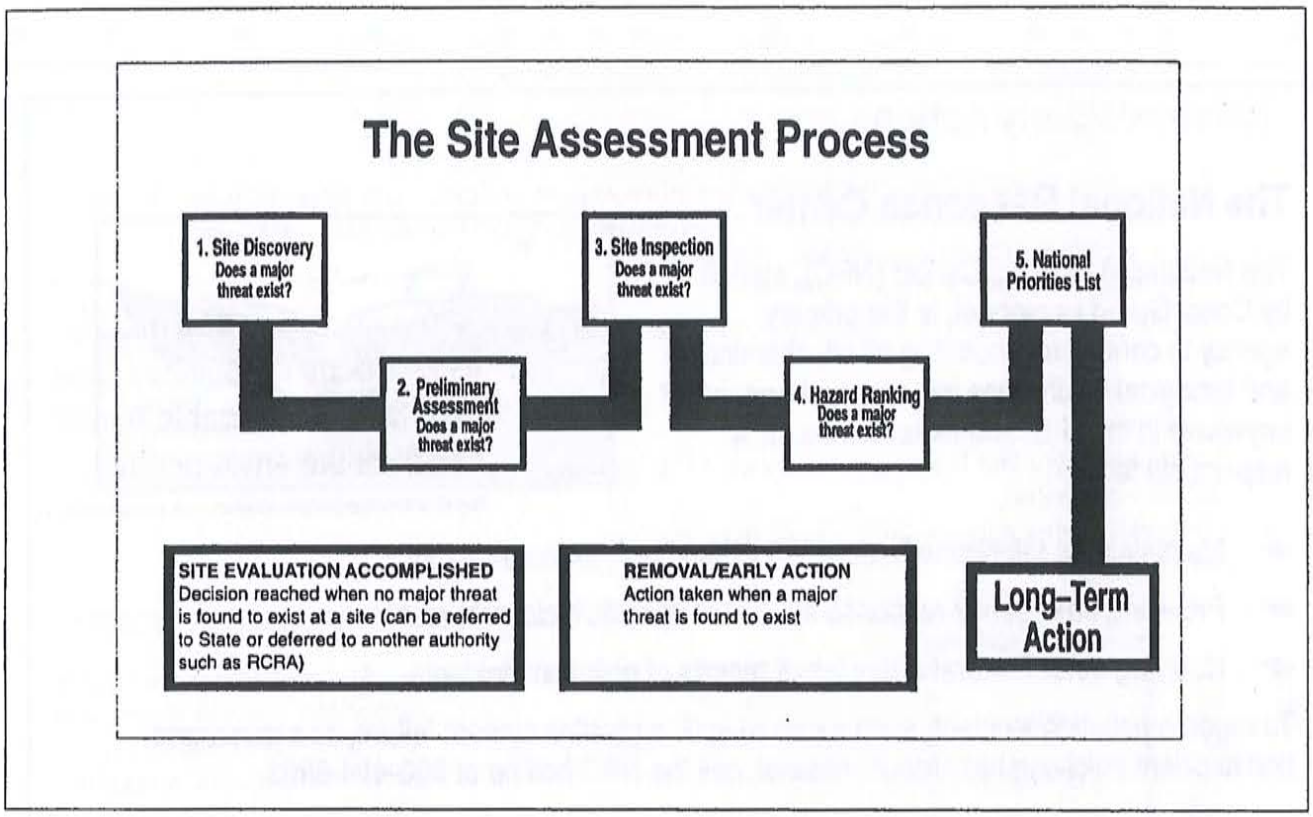
2 Preliminary Assessment

After learning about a site, the next step in the site assessment process is to gather existing information about the site. EPA calls this the *preliminary assessment.* Anyone can request that a preliminary assessment be performed at a site by petitioning EPA, the State environmental agency, local representatives, or health officials.

During the preliminary assessment, EPA or the State environmental agency:

- Reviews available background records;
- Determines the size of the site and the area around it;
- Tries to determine whether hazardous substances are involved;
- Identifies actual or potential pollution victims, such as the nearby population and sensitive environments;
- Makes phone calls or interviews people who may be familiar with the site; and
- Evaluates the need for early action using EPA's removal authority.

By gathering information and possibly visiting the site, EPA or the State environmental agency is able to determine if major threats exist and if cleanup is needed. Many times, the preliminary assessment indicates that no major threats exist.



However, if hazardous substances do pose an immediate threat, EPA quickly acts to address the threat. When a site presents an immediate danger to human health or the environment—for example, there is the potential for a fire or an explosion or the drinking water is contaminated as a result of hazardous substances leaking out of drums—EPA can move quickly to address site contamination. This action is called a *removal* or an *early action.* Additional information on early actions can be found on page 4.

EPA or the State environmental agency then decides if further Federal actions are required. Of the more than 35,000 sites discovered since 1980, only a small percentage have needed further remedial action under the Federal program.

A report is prepared at the completion of the preliminary assessment. The report includes a description of any hazardous substance release, the possible source of the release, whether the contamination could endanger people or the environment, and the pathways of the release. The information outlined in this report is formed into hypotheses that are tested if further investigation takes place. You can request a copy of this report once it becomes final— just send your name and address to your EPA regional Superfund office. See page 8 for further information on these contacts.

Sometimes it is difficult to tell if there is contamination at the site based on the initial information gathering. When this happens, EPA moves on to the next step of the site assessment, called the *site inspection.*

Making Polluters Pay

One of the major goals of the Superfund program is to have the responsible parties pay for or conduct remedial activities at hazardous waste sites. To accomplish this goal, EPA:

- Researches and determines who is responsible for contaminating the site;
- Issues an order requiring the private parties to perform cleanup actions with EPA oversight; and
- Recovers costs that EPA spends on site activities from the private parties.

Removals/Early Actions

EPA can take action quickly if hazardous substances pose an immediate threat to human health or the environment. These actions are called *removals* or *early actions* because EPA rapidly eliminates or reduces the risks at the site. EPA can take a number of actions to reduce risks, including:

- Fencing the site and posting warning signs to secure the site against trespassers;
- Removing, containing, or treating the source of the contamination;
- Providing homes and businesses with safe drinking water; and, as a last resort,
- Temporarily relocating residents away from site contamination.

"EPA can take action quickly if hazardous substances pose an immediate threat to human health or the environment."

3 Site Inspection

If the preliminary assessment shows that hazardous substances at the site may threaten residents or the environment, EPA performs a site inspection. During the site inspection, EPA or the State collects samples of the suspected hazardous substances in nearby soil and water. EPA may initiate a concurrent SI/remedial investigation at those sites that are most serious and determined early as requiring long-term action. Sometimes, wells have to be drilled to sample the ground water. Site inspectors may wear protective gear, including coveralls and respirators, to protect themselves against any hazardous substances present at the site. Samples collected during the site inspection are sent to a laboratory for analysis to help EPA answer many questions, such as:

- Are hazardous substances present at the site? If so, what are they, and approximately how much of each substance is at the site?
- Have these hazardous substances been released into the environment? If so, when did the releases occur, and where did they originate?
- Have people been exposed to the hazardous substances? If so, how many people?
- Do these hazardous substances occur naturally in the immediate area of the site? At what concentrations?
- Have conditions at the site gotten worse since the preliminary assessment? If so, is an early action or removal needed? (See box above.)

Often, the site inspection indicates that there is no release of major contamination at the site, or that the hazardous substances are safely contained and have no possibility of being released into the environment. In these situations, EPA decides that no further Federal inspections or remedial actions are needed. This decision is referred to as *site evaluation accomplished.* (See page 5 for more details on the *site evaluation accomplished* decision.)

At the completion of the site inspection, a report is prepared. This report is available to the public–call your EPA regional Superfund office for a copy. See page 8 for the phone numbers of these offices.

"During the site inspection, EPA or the State collects samples of the suspected hazardous substances in nearby soil and water."

At sites with particularly complex conditions, EPA may need to perform a second SI to obtain legally defensible documentation of the releases.

Because EPA has limited resources, a method has been developed to rank the sites and set priorities throughout the nation. That method, known as the *Hazard Ranking System*, is the next step in the site assessment process.

4 Hazard Ranking System

EPA uses the information collected during the preliminary assessment and site inspection to evaluate the conditions at the site and determine the need for long-term remedial actions. When evaluating the seriousness of contamination at a site, EPA asks the following questions:

- Are people or sensitive environments, such as wetlands or endangered species, on or near the site?
- What is the toxic nature and volume of waste at the site?
- What is the possibility that a hazardous substance is in or will escape into ground water, surface water, air, or soil?

Based on answers to these questions, each site is given a score between zero and 100. Sites that score 28.5 or above move to the next step in the process: listing on the *National Priorities List*. Sites that score below 28.5 are referred to the State for further action.

Site Evaluation Accomplished

In many instances, site investigators find that potential sites do not warrant Federal action under the Superfund program. This conclusion can be attributed to one of two reasons:

- The contaminants present at the site do not pose a major threat to the local population or environment; or
- The site should be addressed by another Federal authority, such as EPA's Resource Conservation and Recovery Act (RCRA) hazardous waste management program.

When investigators reach this conclusion, the site evaluation is considered accomplished. A site can reach this point at several places during the site assessment process, namely at the conclusion of the preliminary assessment or the site inspection, or once the site is scored under the Hazard Ranking System.

5 National Priorities List

Sites that are listed on the *National Priorities List* present a potential threat to human health and the environment, and require further study to determine what, if any, remediation is necessary. EPA can pay for and conduct remedial actions at NPL sites if the responsible parties are unable or unwilling to take action themselves. There are three ways a site can be listed on the National Priorities List:

- It scores 28.5 or above on the Hazard Ranking System;
- If the State where the site is located gives it top priority, the site is listed on the National Priorities List regardless of the HRS score; or
- EPA lists the site, regardless of its score, because all of the following are true about the site:
  - The Agency for Toxic Substances and Disease Registry (ATSDR), a group within the U.S. Public Health Service, issues a health advisory recommending that the local population be *dissociated* from the site (i.e., that the people be temporarily relocated or the immediate public health threat be removed);
  - EPA determines that the site poses a significant threat to human health; and
  - Conducting long-term remediation activities will be more effective than addressing site contamination through early actions.

The list of proposed sites is published in the *Federal Register*, a publication of legal notices issued by Federal agencies. The community typically has 60 days to comment on the list. After considering all comments, EPA publishes a list of those sites that are officially on the National Priorities List. When a site is added to the National Priorities List, the site assessment is completed. Long-term actions take place during the next phase. See page 6 for more details on long-term actions.

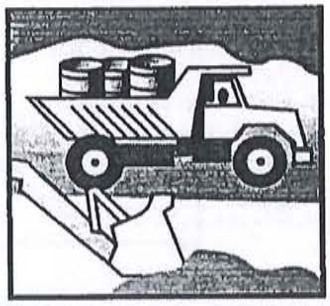
As a Concerned Citizen, How Can I Help ?

- Read this fact sheet.
- Call EPA with any potential sites in your area.
- Provide EPA with site information.
- Comment on proposed listing of sites on the National Priorities List.
- If the site is listed on the NPL, work with your citizens' group to apply for a technical assistance grant.

Addressing Sites in the Long Term

Once a site is placed on the National Priorities List, it enters the long-term or remedial phase. The stages of this phase include:

- ✓ Investigating to fully determine the nature and extent of contamination at the site, which can include a public health assessment done by the ATSDR;
- ✓ Exploring possible technologies to address site contamination;
- ✓ Selecting the appropriate technologies—also called remedies;
- ✓ Documenting the selected remedies in a record of decision (ROD);
- ✓ Designing and constructing the technologies associated with the selected remedies;
- ✓ If necessary, operating and maintaining the technologies for several years (e.g., long-term treatment of ground water) to ensure safety levels are reached; and
- ✓ Deleting the site from the National Priorities List, completing Superfund's process and mission.



Some Commonly Asked Questions

Q: **What exactly is a site?**
A: EPA designates the area in which contamination exists as the "site." Samples are taken to define the area of contamination. At any time during the cleanup process the site may be expanded if contamination is discovered to have spread further.

Q: **How long will it take to find out if a threat exists?**
A: Within one year of discovering the site, EPA must perform a preliminary assessment. The preliminary assessment allows EPA to determine if there is an immediate danger at the site; if so, EPA takes the proper precautions. You will be notified if you are in danger. EPA may also contact you to determine what you know about the site.

Q: **What is the State's role in all these investigations?**
A: The State can take the lead in investigating and addressing contamination. It also provides EPA with background information on (1) immediate threats to the population or environment, and (2) any parties that might be responsible for site contamination. The State shares in the cost of any long-term actions conducted by the Superfund program, comments on the proposal of sites to the National Priorities List, and concurs on the selected remedies and final deletion of sites from the National Priorities List.

Q: **Why are private contractors used to assess sites?**
A: EPA has a limited workforce. By using private contractors, EPA is able to investigate more sites. Also, EPA is able to draw on the expertise of private contracting companies.

Q: **Why are there so many steps in the evaluation process? Why can't you just take away all the contaminated materials right now, just to be safe?**
A: When EPA assesses a site, it first determines if contamination poses any threats to the health of the local population and the integrity of the environment. Dealing with worst sites first is one of Superfund's national goals. By evaluating contamination in a phased approach, EPA can quickly identify sites that pose the greatest threats and move them through the site assessment process. Once EPA understands the conditions present at a site, it searches for the remedy that will best protect public health and the environment. Cost is only one factor in weighing equally protective remedies. Many sites do not warrant actions because no major threat exists. However, if a significant threat does exist, EPA will take action.

about Superfund Sites

Q: **If a site is added to the National Priorities List, how will we know when EPA has completed the cleanup efforts?**

A: EPA notifies the public and requests their comments on the actions proposed to treat site contaminants. In addition, the community is notified when a site will be deleted from the National Priorities List. The entire process can take as long as 7 years; at sites where ground water is contaminated, it can take even longer.

Q: **I live next door to a site and I see EPA and contractor personnel wearing "moon suits." Am I safe?**

A: EPA and contractor personnel wear protective gear because they might actually be handling hazardous materials. Also, these people are regularly exposed to contaminants at different sites and do not always know what contaminants they are handling. EPA takes steps to protect the public from coming in contact with the site contamination. If a dangerous situation arises, you will be notified immediately.

Q: **If a site is added to the National Priorities List, who pays for the activities?**

A: EPA issues legal orders requiring the responsible parties to conduct site cleanup activities under EPA oversight. If the parties do not cooperate, Superfund pays and files suit for reimbursement from responsible parties. The sources of this fund are taxes on the chemical and oil industries; only a small fraction of the fund is generated by income tax dollars.

Q: **How can I get more information on any health-related concerns?**

A: Contact your EPA regional Superfund office for more information. The ATSDR also provides information to the public on the health effects of hazardous substances. Ask your EPA regional Superfund office for the phone number of the ATSDR office in your region.

Q: **How can I verify your findings? What if I disagree with your conclusions?**

A: You can request copies of the results of the site assessment by writing to your EPA regional Superfund office. The public is given the opportunity to comment on the proposal of a site to the National Priorities List and the actions EPA recommends be taken at the site. If a site in your community is listed on the National Priorities List, a local community group may receive grant funds from EPA to hire a technical advisor. Call your EPA regional Superfund office (see page 8) for the location of an information repository and for information on applying for a **technical assistance grant.**

Q: **How can I get further information? How can I get a list of the sites EPA has investigated?**

A: Contact your EPA regional Superfund office (see page 8) for more information and a list of sites in your area.

Important Phone Numbers

For information on the Superfund program or to report a hazardous waste emergency, call the national numbers below.

U.S. EPA Headquarters Hazardous Site Evaluation Division

☎ Site Assessment Branch
703-603-8860

Federal Superfund Program Information

☎ EPA Superfund Hotline
800-424-9346

Emergency Numbers:

Hazardous Waste Emergencies

☎ National Response Center
800-424-8802

ATSDR Emergency Response Assistance

☎ Emergency Response Line
404-639-0615

For answers to site-specific questions and information on opportunities for public involvement, contact your region's Superfund community relations office.

EPA Region 1: *Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont*

☎ Superfund Community Relations Section
617-565-2713

EPA Region 2: *New Jersey, New York, Puerto Rico, Virgin Islands*

☎ Superfund Community Relations Branch
212-264-1407

EPA Region 3: *Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia*

☎ Superfund Community Relations Branch
800-438-2474

EPA Region 4: *Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee*

☎ Superfund Site Assessment Section
404-347-5065

EPA Region 5: *Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin*

☎ Office of Superfund
312-353-9773

EPA Region 6: *Arkansas, Louisiana, New Mexico, Oklahoma, Texas*

☎ Superfund Management Branch, Information Management Section
214-655-6718

EPA Region 7: *Iowa, Kansas, Missouri, Nebraska*

☎ Public Affairs Office
913-551-7003

EPA Region 8: *Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming*

☎ Superfund Community Involvement Branch
303-294-1124

EPA Region 9: *Arizona, California, Hawaii, Nevada, American Samoa, Guam*

☎ Superfund Office of Community Relations
800-231-3075

EPA Region 10: *Alaska, Idaho, Oregon, Washington*

☎ Superfund Community Relations
206-553-2711

Comments from

Hanson Permanente Cement, Inc.

and

Lehigh Southwest Cement Company

Lehigh Hanson
HEIDELBERGCEMENT Group

24001 Stevens Creek Blvd.
Cupertino, CA 95014
(408) 996-4000

May 17, 2018

VIA EMAIL AND U.S. MAIL

Ms. Lindsay Whalin, MS, PG
Engineering Geologist
Groundwater Protection Division
San Francisco Bay RWQCB
1515 Clay Street
Suite 1400
Oakland, CA 94612

RE: Comments on April 2018 Tentative Order to Adopt Waste Discharge Requirements for Lehigh Southwest Cement Company, and Hanson Permanente Cement Inc., for the Permanente Quarry and Cement Plant, Cupertino, Santa Clara County

Dear Ms. Whalin:

Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc. (collectively, "Lehigh") submits these comments on the April 2018 Tentative Order to Adopt Waste Discharge Requirements for the Permanente Quarry and Cement Plant ("Tentative Order") circulated by the San Francisco Regional Water Quality Control Board ("Regional Water Board"). Before engaging in the substantive comments, Lehigh would like to extend its appreciation to Regional Water Board staff for the effort in preparing the Tentative Order. We hope to collaboratively work with you to address the comments below.

1. Finding 5: While Lehigh recognizes that the definition of "mining waste" in this finding is derived from Title 27, section 22480, Lehigh notes that due to advancements in the ability to process for a commercial purpose some of the material that was once discarded, some "natural geologic material which has been removed or relocated but not been processed," is expected to be processed at the Permanente Facility. Lehigh does not anticipate this is to be an issue, but wanted to note this circumstance.

2. Findings 6 through 8. The description of waste that may have historically been placed in overburden storage areas may be misleading to the public, in that the WMSA and EMSA are referenced collectively as a potential repository for the listed waste. For the items described, the EMSA should be the focus of the discussion, it does not appear such materials were ever disposed of in the upgradient WMSA. *See, e.g.,* May 1, 2012 Preliminary Assessment Report,

Weston Solutions prepared for USEPA, Region 9; January 22, 1993 Supplemental Site Characterization, EMCON prepared for Facility.

3. Finding 8. Lehigh requests that the following phrase be omitted from Finding 8 "(… , even with twenty times as many soil borings that were advanced."), it is speculative and discounts the value of the comprehensive work more recently advanced by Lehigh in coordination with the Regional Water Board.

4. Finding 25: Lehigh requests that the Regional Water Board provide the DWR Bulletin 118-1 reference upon which the Santa Clara sub-basin is designated as a "Hydrogeologically Vulnerable Area." Publicly available information related to this bulletin does not appear to reference this designation.

5. Finding 29: The Tentative Order states that "[b]oth Permanente and Stevens Creeks ultimately discharge to the San Francisco Bay Estuary via either Permanente Creek or Stevens Creek through Mountain View Slough." Lehigh requests that this finding be updated to reflect that Mountain View Slough is the terminus for Permanente Creek, but not Stevens Creek.

6. Finding 35: Lehigh requests that the Quarry be included as a current WMU, rather than a potential future WMU. In accordance with the applicable requirements of the Reclamation Plan, mining waste has already been placed in the Quarry for reclamation of the western slope. Given the dynamic nature of the Quarry, an existing WMU designation is more appropriate.

7. Finding 35.a. Per the comments to Findings 6 through 8 above, Lehigh requests that the language presented in this finding regarding the placement of cement kiln brick and dust in the WMSA be eliminated, as there is no evidence these materials were disposed of in the WMSA. Rather, Finding 35.b.iii properly describes the Upper Level Landfill of the EMSA as the historical disposal location for these materials. *See, e.g.*, May 1, 2012 Preliminary Assessment Report, Weston Solutions prepared for USEPA, Region 9; January 22, 1993 Supplemental Site Characterization, EMCON prepared for Facility.

8. Finding 35.a.iii. A typographical error exists, Lehigh requests the removal of the "/" after the word "reports."

9. Finding 35.b.i. – v.: Lehigh is unaware of PCB detections in the Dry Canyon Storage Area, we request this reference be removed.

10. Finding 35.b.iii. A typographical error exists, Lehigh requests the removal of the underlining after the title, "Upper Level Landfill."

11. Finding 35.b.vi.: A typographical error exists, Lehigh requests the removal of the "\" after the date "1990-1." Additionally, Lehigh would like to note that interim and final covers

described in this finding are being implemented per the updated Reclamation Plan with the County of Santa Clara.

12. Prohibition Section A.: The Tentative Order appears to include prohibitions from more general provisions of Title 27 (Cal. Code Regs.) that are inapplicable to mining wastes. Mining wastes are specifically (and more narrowly) regulated by Title 27 via sections 22470 - 22510. *See, e.g.*, 27 CCR section 22470 ("This article applies to all discharges of mining wastes. No SWRCB-promulgated parts of this subdivision except those in this article, Article 1 of Chapter 1 (*i.e.*, section 20080 *et seq*.), and such provisions of the other articles of this subdivision as specifically are referenced in this article shall apply to discharges of "mining wastes" as that term is defined in section 22480."). As noted in Section 22470, Title 27 provisions applicable to landfills and similar types of waste management units do not apply to the regulation of mining waste, unless expressly incorporated into the specific sections cited above. This is due largely to the fact that mining wastes are of a different characteristic than landfill waste or other types of waste management units more typically covered by Title 27. For these reasons, Lehigh requests the following prohibitions be eliminated or modified:

- Prohibition A.2.: (subsurface transport prohibition) should be removed from the Tentative Order; no basis in the mining waste regulations exists to include this provisions.
- Prohibition A.4.: By its own terms, the Tentative Order is not seeking to regulate surface impoundments already regulated by the Facility's NPDES permit or other WDRs. Further, discharges to surface waters are already addressed by the Facility's NPDES permit, which prohibits discharge to surface waters not otherwise authorized by the terms of that permit; also Prohibition A.3. already addresses the discharge of wastes to surface waters. Finally, the prohibition at the heart of Prohibition A.4. is already stated in Prohibition A.1.; thus, Prohibition A.4. is redundant and unnecessary. For these reasons, Lehigh requests removal of Prohibition A.4.
- Prohibition A.7.: By its own terms, the Tentative Order is not seeking to regulate surface impoundments already regulated by the Facility's NPDES permit or other WDRs. For this reason, the prohibition should be omitted. Further, this Prohibition appears confusing, because it first references a "leaking" WMU, and then references no further "discharges to that surface impoundment." Lehigh requests its removal.
- Prohibition A.8.: This Prohibition appears more relevant to non-mining waste WMUs, as it anticipates the "creation" of a new WMU. At the Permanente facility, "new" WMUs are not anticipated (a new landfill location or newly created location for waste placement); rather, WMUs due to historical practices may be identified via future investigation and ultimately included/subject to the Tentative Order's requirements. For this reason, Prohibition A.8. should be removed.
- Prohibition A.10.: This Prohibition does not appear applicable to the regulation of mining waste. Instead, Title 27, CCR, section 22480(b) states that Group "A" mining wastes must be managed as hazardous waste pursuant to Chapter 11 of Division 4.5, of Title 22, CCR, provided the Regional Water Board finds that such mining wastes pose a significant threat to water quality. Thus, any prohibition included in the Tentative Order

should reflect the specific mining waste regulation regarding the placement and management of hazardous waste.

- Prohibition A.13.: Title 27, CCR, section 20310(a) is inapplicable to the mining waste at issue (applicable to Class II waste management units/landfills); this Prohibition should be omitted from the Tentative order. Further, Prohibition A.1. already addresses protection of ground water and surface waters.

Other issues arise with respect to other included Prohibitions as follows:

- Prohibitions A.5. and A.9.: Consistent with Title 27, CCR, section 22510(c), this prohibition should be amended to except from the prohibition any actions taken in conformance with the applicable Reclamation Plan (in addition to the currently exception for actions taken pursuant to an acceptable Operation, Maintenance, and Contingency Plan).
- Prohibition A.6.: Lehigh seeks to confirm that by "unregulated" surface impoundment, the Regional Water Board is intending to apply this prohibition to surface impoundments that are not otherwise regulated by WDRs or an NPDES permit.
- Prohibition A.11.: The phrase "or WDRs" should be included after the term "NPDES permit" in the first paragraph of this Prohibition to account for the regulation of activities under other Facility WDRs (wastewater treatment and reuse), in addition to the facility's individual NPDES Permit.

13. Specifications B.27.: Lehigh requests the following language be added to the first sentence, so that the sentence reads as follows: "All borings for monitoring wells shall be continuously cored unless otherwise agreed by Regional Water Board staff."

14. Provision C.4.: Please modify the reference to the Reclamation Plan to the final June 2012 Reclamation Plan that was adopted by Santa Clara County (the Tentative Order cites to an earlier draft 2011 version superseded by the final 2012 version).

15. Provision C.8.: In the last paragraph of this Provision, the phrase, "consistent with contingency plans required in Provision 6" should be changed to "consistent with contingency plans required in Provision 7."

Lehigh appreciates Regional Water Board consideration of the enclosed comments.

Sincerely,

Erika Guerra

Erika Guerra
Director, Environmental and Land Resource Development

Cc: Lisa McCann, Asst. Executive Officer, Regional Water Board
Tressa Jackson, Area Environmental Manager, Lehigh
Bill Fowler, Golder Associates
George Wegmann, Golder Associates
Nicole Granquist, Downey Brand LLP

RE: WDRs

Granquist, Nicole

Wed 5/30/2018 3:51 PM

To: Whalin, Lindsay@Waterboards <Lindsay.Whalin@waterboards.ca.gov>;

Cc: Granquist, Nicole <ngranquist@DowneyBrand.com>;

Hi Lindsay,

Just making sure my message was clear, we are just withdrawing comment/request #6 because the on the ground facts to support the comment/request were different than we originally thought. I am happy to submit a letter/email to that effect. And I am hoping that was clear from my vm, your message has me potentially concerned we might be talking past one another (in other permitting contexts, when comments get withdrawn, it is noted on the response to comments, so I assumed we would just follow a similar path).

I look forward to discussing with you tomorrow or Friday.

Thanks,

Nicole E. Granquist

DOWNEYBRAND

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From: Whalin, Lindsay@Waterboards [mailto:Lindsay.Whalin@waterboards.ca.gov]
Sent: Wednesday, May 30, 2018 3:45 PM

Comments from

Libby Lucas

From:	Jack Lucas
To:	Whalin, Lindsay@Waterboards
Subject:	Lehigh Quarry Permanente Creek Water Quality reports for discherge certification
Date:	Wednesday, May 16, 2018 3:50:14 PM

Lindsay,

Fear I have fallen from twig so unable to review latest reports on Lehigh Quarry waste discharges to Permanente Creek....also your report seems to have disappeared from my data base so if you would be so kind as to re-send.

Continue to find that averaging out COC contaminant levels in quarry discharges does nothing to protect human exposure in the over four miles of Permanente Creek riparian corridor that extends below quarry through Rancho San Antonio Preserve, Heritage Oaks Park, McKelvey Park, Rengstorff Park and Shoreline Park, and over a mile of frontage of Blach Junior High and St. Francis High School.

It is peaks of concentrated COC;s that impair human health and each release incident needs be tracked full length of trajectory between quarry and San Francisco Bay. When parents send children out to play in parks it should not be a matter of Russian Roulette with exposure to unseen contaminant sources bordering a stream..

Think public angst about Shipyard cleanup oversight may be just start of heightened concern on these issues.

Libby Lucas

APPENDIX C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Response to Comments on
Tentative Order for Waste Discharge Requirements
Hanson Permanente Cement, Inc., and Lehigh Southwest Cement Company
Permanente Quarry and Cement Plant, Santa Clara County

This document provides responses to comments received on the tentative order (TO) to adopt Waste Discharge Requirements (WDRs) for the Permanente Quarry and Cement Plant, which was published for public comment on April 17, 2018. Several minor revisions to the TO, primarily to clarify or correct inadvertent omissions or typos, as discussed below. Comments were received from the following parties:

1. Cathy Helgerson (neighbor)
2. Rhoda Fry (neighbor)
3. Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc., collectively (Dischargers)
4. Libby Lucas (neighbor)

General Response: Water Board (WB) staff appreciate receiving thoughtful comments and the opportunity to address concerns with respect to the TO for the Permanente Quarry and Cement Plant site (Site), especially those of Site neighbors who are concerned about the potential for groundwater pollution from the Site, given its history and the disclosure that materials removed from the Quarry Pit constitute mining waste. WB staff share these concerns, which is why we required that the Dischargers perform seven environmental investigations, each of which was broad in scope and rigorously vetted, prior to developing WDRs for the Site. The results of these investigations indicated that there is not an immediate threat to human health from groundwater at the Site but rather the ongoing potential for impacts that will require our WB staff oversight. The WDRs will expand environmental Site investigations, mandate WB staff oversight of mining operations that generate waste, and ensure Site reclamation activities will be protective of water quality and human health.

Several comments received related to surface water discharges, which are regulated by the WB under an NPDES permit and are not the focus of this TO; and offsite Permanente Creek water quality and onsite restoration efforts, which are being addressed by the WB's Planning/TMDL and Watershed Management Divisions, respectively. We have forwarded copies of these letters to the appropriate WB staff and have limited our responses here to issues related to the WDRs contained in the TO.

Cathy Helgerson

Ms. Cathy Helgerson, a neighbor of the Site, submitted two sets of written comments as well as verbal comments in phone conversations with WB staff Lindsay Whalin. The first comments consisted of a letter on April 27, 2018, which are outlined below. On May 9, 2018, a phone conversation yielded two additional comments: a request for the Water Board to shut down Lehigh (which is not related to the TO), and a suggestion that the Quarry Pit be backfilled with engineered materials so that residential housing could be constructed at the Site. On May 19, 2018, Ms. Helgerson submitted an email with additional comments that are also addressed below.

Comments provided were provided in a format such that direct quotation was problematic and may cause confusion. WB staff have therefore summarized comments made but copied and pasted language where possible to avoid misrepresentation.

1. **Comment**: The EPA Superfund Division conducted an investigation at the Site in May of 2012, the Site qualified, they decided to leave the matter in the hands of the regulating agencies.

   Response: U.S. EPA conducted a preliminary assessment for CERCLA and produced a Remedial Site Assessment Decision dated May 1, 2012 (available in GeoTracker). The Preliminary Assessment did not indicate any impact to drinking water supplies. Findings included the potential presence of hazardous substances (defined as substances that *may* cause harm, in contrast to hazardous waste), and the potential for contamination in Site surface water discharges, which they recommended would be best addressed by the Water Board.

   U.S. EPA's findings are consistent with those of WB staff regarding the Site and require no changes to the TO. As mentioned in the general comment, these TOs do not address surface water discharges or off-site impacts to Permanente Creek, which are being addressed by other WB staff and regulatory measures.

   In addition, in 1989 the Department of Toxic Substances Control and in 1991 the USEPA completed Site screening for CERCLA (Superfund) specific to the Kaiser Aluminum facility and published inspection reports in (available in GeoTracker). Both concluded the Site did not qualify for listing on the National Priorities List. The final recommendation by USEPA was no further remedial action for CERCLA, but did indicate there was some potential for groundwater contamination. This conclusion is consistent with our evaluation of the Site, based on waste characterization studies and groundwater monitoring outlined in the Findings of the TO, that historical and current mining and waste disposal activities have the potential to contaminate groundwater and hydrogeologically connected surface waters. Adoption of WDRs pursuant to California Code of Regulations (CCR) title 27 is the appropriate regulatory mechanism for addressing this concern. The TO requires reporting of all such activities and plans to protect groundwater quality, in addition to monitoring of groundwater and hydrogeologically connected surface waters.

2. **Comment**: The East Materials Storage Area (EMSA) overburden is covering the Site that was the manufacturing of magnesium and aluminum foil products and it has never been cleaned up.

   Response: WB staff are aware of historical aluminum and magnesium research and foil manufacturing activities that took place on the Site. Cleanup was conducted by Peregren Environmental Group as outlined in *Cleanup and Facility Decommissioning, Kaiser Permanente Facility* January 21, 1991 (available in GeoTracker). WB staff are aware of disposal units that were in use at the time, all of which are located beneath and are therefore considered waste management units as part of the EMSA defined waste management unit (WMU) in the TO, as outlined in the Findings.

   Two years of groundwater monitoring required by WB staff (discussed in Finding 17 of the TO) suggests localized exceedances of constituents of concern from these units. However, there is currently no evidence of migration of contaminants from these units. While investigations and monitoring to date to not indicate impacts or a threat to human health or the environment from

these units, WB staff recognize that these areas still have the potential to impact groundwater and hydrogeologically connected surface waters, especially in response to closure/reclamation activities and a changing climate. For this reason, the TO designates these historical disposal units as WMUs and requires groundwater detection monitoring along the entire perimeter of the Site.

3. **Comment**: The TO does not require cleanup, which should be conducted under USEPA Superfund, by EPA Superfund Site Cleanup Professionals.

   Response: As noted in our response to Comment 1, U.S. EPA evaluated this Site for Superfund status and determined that the Site did not qualify. Nonetheless, WB staff appreciate and share Ms. Helgerson's concern about the potential for contamination from the Site; therefore, we required multiple investigations to identify and characterize the types of wastes present onsite, the development of a hydrogeologic conceptual site model to understand groundwater flow and possible contaminant migration pathways, and groundwater monitoring to evaluate if contamination may be discharging offsite, as outlined in the Findings of the TO. Waste characterization studies indicated that the types of mining wastes stored onsite do indeed have the potential to impact water quality (due primarily to the observed concentrations of metals and metalloids) and should therefore be regulated under WDRs. We also had concerns about the potential for water contamination from other types of wastes known or suspected to be present onsite (e.g., from aluminum foil or cement manufacturing). WB staff therefore required groundwater (and hydrogeologically-connected surface water) monitoring to evaluate an extensive list of potential constituents of concern (COCs) that was developed by WB staff based on known or suspected waste generating historical activities.

   No significant threat to human health via groundwater has been identified in these investigations (note again that the TO does not regulate surface water, which is addressed by other regulatory actions); however, we recognize the potential for contamination exists. For this reason, Provision 3 of the TO requires continued and expanded detection and evaluation monitoring to identify whether groundwater may be a source of selenium (or any other potential COCs) to surface waters. Corrective actions, possibly including cleanup, will be required if monitoring (or any other lines of evidence) indicates wastes are migrating offsite via groundwater.

4. **Comment**: Drinking water is contaminated because contamination discharging from the Site ends up in Permanente Creek and water from it and Stevens Creek eventually end up in our aquifer below the Silicon Valley.

   Response: The Santa Clara Valley Water District has confirmed that drinking water has not been impacted by selenium, the primary constituent of concern identified at this Site. This reflects U.S. EPA's finding in its 2012 Preliminary Assessment. In addition, WB staff found no impacts to domestic and municipal wells in a search of GAMA.

   This is consistent with the conceptual site model developed from groundwater flow and contaminant studies conducted thus far, which indicates that the majority of groundwater from the Site discharges to surface water (Permanente Creek or its tributaries) on-site or downstream, and direct discharges to a drinking water aquifer from the Site is unlikely. Flows from Permanente Creek are at times diverted to Stevens Creek, which infiltrates to become groundwater that feeds drinking water sources. Therefore, surface water is the most likely pathway for exposure; but

drinking water is still considered a beneficial use in the TO due to recharge (see Finding 40, which identifies groundwater recharge as a beneficial use of Stevens Creek).

Furthermore, studies indicate most COCs detected in groundwater are localized to specific disposal units and are not migrating. The only elevated COCs in groundwater measured at distance from the disposal units (i.e., potentially migrating) have been metals and metalloids. Elevated concentrations have primarily been in suspended particulates (rather than dissolved in the groundwater), which have limited mobility in the subsurface. Finally, metals and metalloids that are dissolved in groundwater tend to attenuate rapidly by sorbing to particles encountered as they travel through the subsurface (or, if daylighted, suspended solids and sediments in a creek bed).

This means that contamination of drinking water aquifers, either by direct discharge from groundwater, or from recharge after groundwater has daylighted into Permanente Creek, is unlikely. Despite these findings, Provision 3 of the TO requires updates to this conceptual site model and continued monitoring of groundwater, specifically to confirm these conclusions and ensure groundwater is protected in the future, to expand the scope of studies to include the entire perimeter (including Quarry Pit, which must be evaluated before closure/reclamation), and to assess whether groundwater is contributing metals and/or metalloids to surface water. If the latter is confirmed, corrective action will be considered in consultation with WB staff in surface water programs that regulate the Site (NPDES permits cover surface water discharges, and our TMDL/Planning Division is currently evaluating Permanente Creek, including for selenium and toxicity).

5. **Comment**: Selenium is important, but not the only concern. Mercury, PCBs, cadmium, etc. have also been detect at the Site, no one is considering cumulative effects, and the public is not being protected from them.

   Response: Historical and recent Site investigations, have yielded a long list of potential COCs, including those listed in the comment letter. These COCs are specifically identified in the TO as chemicals that must be included in the Discharger's proposal for detection and evaluation monitoring, as well as other investigations and closure/reclamation activities.

6. **Comment**: The Financial cost for reclamation does not reflect a major Super Fund Cleanup.

   Response: There is no evidence at this point that a "major Superfund Cleanup" is necessary at the Site. The Site is not a Superfund site (see response to Comment1 and 3). However, the TO requires the Dischargers to demonstrate they are capable of covering costs associated with closure and post-closure maintenance, as well as corrective actions should a release be identified. The term "corrective actions" is used in CCR title 27 for cleanup, and includes any major cleanup that might be necessary to address a catastrophic release of contamination.

7. **Comment**: Regulatory agencies need to work together, sharing information.

   Response: WB staff and managers meet twice yearly with representatives of all regulatory agencies involved at the Site. In addition, we communicate periodically with the County by written correspondence and phone to keep them up to date on our work and provide water quality technical expertise as feasible when requested. WB staff provided significant and detailed

comments on the County's 2011 Draft Environmental Impact Report for the Reclamation Plan. Finally, the County and the public have access to all official technical documents and correspondence via GeoTracker and a webpage specific to this Site (https://www.waterboards.ca.gov/sanfranciscobay/water_issues/hot_topics/lehigh.html).

8. **Comment**: They decided to put top soil on top of the overburden to see if it would help contain selenium, which is not completely fool proof.

   Response: The runoff and seep investigation discussed in the Findings of the TO and monitoring required by NPDES and TMDL WB staff (as well as Santa Clara County) suggest that the East Material Storage Area (EMSA) was a source of selenium to stormwater. As an interim measure to reduce selenium concentrations in runoff, the Dischargers covered limestone rocks at the surface of the EMSA (which is the source of selenium) with other (non-limestone) types of rock quarried from the mine, that contain little selenium. Provision 4 of the TO requires an evaluation of the efficacy of this interim measure as well as a proposal for a final cover system to ensure groundwater and hydrogeologically connected surface waters are adequately protected.

9. **Comment**: There needs to be more than a self-monitoring system in place; we should not trust Lehigh to monitor themselves.

   Response: WB staff in the TMDL and SWAMP programs conduct monitoring of Permanente Creek; however, the groundwater monitoring conducted at the Site must be performed by professional contractors that are hired by the Dischargers. This is necessary due to limited State resources, but also because the responsible party should incur the cost of activities related to the Site. We understand the concern in this regard; however, all geologic and hydrogeologic work is conducted by engineers or geologists licensed by the State of California and overseen by WB staff (who are also licensed by the State of California). In addition, both the TO and any investigative orders pursuant to Water Code section 13267 require the professional contractors and/or Lehigh to submit data under penalty of perjury. For the contractors, this means that falsified data could result in a loss of state licensing. The WB also has enforcement authority over the professional contractor who conducts the sampling, through the Environmental Lab Accreditation Act, Health & Safety Code sections 100825 et seq. This agency utilizes our enforcement authorities under the California Water Code and Health & Safety Code to de-incentivize unethical behavior via the risk of penalties, license suspension or revocation.

   To be abundantly cautious, the TO requires workplans for every investigation and specifies that plans must be reviewed and approved by WB staff prior to implementation. This, and a requirement that reports be acceptable, is written into each Provision of the TO specifically to ensure investigations are conducted in manner in keeping with the standard of practice in geology, hydrogeology, and chemistry; and will adequately identify and fill data gaps and address objectives. WB staff will continue to rigorously review the data collection procedures, results, and analysis methodologies and fully evaluate the conclusions and recommendations provided by Dischargers or their representatives.

10. **Comment**: The waste should be removed from the Site, it is inadequate to contain/isolate it.

    Response: Unfortunately, removal of the waste and transport to another disposal site is not a feasible option. There is an estimated 54,500,000 tons of overburden in the EMSA and WMSA.

An entirely new landfill would have to be constructed to contain it and it would require approximately 3,500,000 trips for dump trucks to haul it offsite. The environmental cost of the carbon-footprint alone makes this prohibitive. Fortunately, there is no indication that waste cannot be adequately isolated on-site in a manner that protects groundwater.

11. **Comment**: The mention of filling the Quarry Pit upon reclamation needs to be reconsidered due to the serious contamination of the waste material.

    Response: The June 2012 Final Reclamation Plan by Lehigh and approved by Santa Clara County does propose to backfill the Quarry Pit with material from the WMSA. However, the TO does not expressly permit or prohibit this activity. WB staff are obligated to evaluate these proposed actions for potential groundwater impacts, which is accomplished in the TO. As outlined in the Findings, WB staff are concerned about potential impacts and have addressed them in Provision 4, which requires a characterization of any proposed fill and an evaluation of the Quarry Pit as a potential source of pollutants to groundwater and hydrogeologically connected surface waters. Provision 4 dictates that the Dischargers are required to demonstrate that this action will not impact water quality. If this cannot be accomplished, even with mitigation, it will be prohibited and WB staff will continue to work with Santa Clara County and Lehigh to find a suitable and protective alternative.

12. **Comment**: I am very upset about the exemption of liners in the ponds and there needs to be a type of liner in all ponds at Lehigh.

    Response: Groundwater monitoring performed at the Site to date indicates that liners are not necessary at all ponds, however the Dischargers have lined the majority of on-site ponds and redirected flows from others (see NPDES permit and WB Lehigh webpage for further details). Should detection monitoring data indicate (or any other information come to light) to suggest liners are appropriate, the WB has the authority to require their installation.

13. **Comment**: Lehigh is considering mining a new pit.

    Response: The WB staff routinely participates in public meetings with representatives from numerous agencies, including Santa Clara County. At the last public meeting, held on February 15, 2018, Santa Clara County stated that there was an application for a second quarry pit approximately eight years ago that was withdrawn. If such an application to mine outside of any area with existing vested mining rights were re-submitted, it would require a Reclamation Plan amendment and use permit by the County, both of which require public hearings. Pursuant to further questions from the audience, the County clarified that a proposal for additional mining would require input from various agencies, including the WB and would likely take more than a year, with many opportunities for public comment. No application has been received, and we have no information that there is support from Santa Clara County, who would be the decision-making authority. Regardless, the WB does not have the jurisdiction to prevent this action.

14. **Comment**: The reclamation plan is not part of the cement plant in any way and does not regulate the cement plant.

    Response: The TO does not expressly permit or prohibit any action outlined in the June 2012 Final Reclamation Plant. Note also that the cement plant is regulated by an NPDES permit. If it is

determined that waste on-site that has the potential to impact state waters, those areas of the cement plant will be regulated by this TO or future WDRs (e.g., as part of closure plans).

15. **Comment**: This Dischargers are planning to start the reclamation plan, including the WMSA and Quarry Pit.

    Response: WB staff are aware that the Dischargers recently began backfilling a limited section of the Quarry Pit, reportedly to address slope stability/safety concerns. It is unclear at this time whether the material is waste from the WMSA or clean fill sourced elsewhere, as the Dischargers have reported this material is waste (see comment 43) and then withdrawn this statement and comment, indicating Site staff had researched further and determined the material is not waste. It is WB staff's understanding that regardless of whether it is WMSA waste of clean fill, this action is in accordance with the County-approved Reclamation Plan (https://www.sccgov.org/sites/dpd/Programs/SMARA/PermanenteQuarry/Pages/LehighRPA2012.aspx); however, the Dischargers did not inform WB staff prior to initiating this activity. We are therefore gathering the information needed to evaluate if this activity has the potential to impact groundwater and/or is an unauthorized discharge. This is accomplished in the TO in Provision 7 (Operation, Maintenance and Contingency Plans), which requires the Dischargers describe this activity and demonstrate that it will not impact groundwater quality or in Provision 4 (Preliminary Closure Plans) if this activity is deemed part of reclamation, rather than part of mining operations. In this way, the TO prohibits this activity if it cannot be demonstrated that it is performed in a manner that protects groundwater quality; and in combination with WB staff inspections, it also provides us the information necessary to evaluate whether the Dischargers are liable for penalties associated with the unauthorized discharge of waste according to title 27 CCR and or the California Water Code.

    Fortunately, there is limited potential for significant water quality impacts from this activity in the short-term while we are evaluating the issue, because any water that comes into contact with the backfill material in the Quarry Pit is treated before discharge under an NPDES permit. Adoption of the WDRs proposed in the TO will allow WB staff to regulate quarry backfilling and any other waste-generating activities that have the potential to impact groundwater and hydrogeologically connected surface water and identify if enforcement actions are appropriate.

16. **Comment**: What is under the ponds, was this soil taken away, and can it still be a problem?

    Response: The results of pond solids investigation are outlined in Finding 15a of the TO. WB staff also have concerns over elevated metals and metalloids that may remain in the soil after a pond is no longer used. For this reason, Provision 4 in the TO requires waste characterization of all historical, current, and future planned solid and liquid disposal units and a schedule of anticipated closure, which includes ponds.

17. **Comment**: It also looks as though Monte Bello and Ohlone creeks are in jeopardy from pollution form Lehigh.

    Response: The hydrogeologic investigation discussed in the TO indicates that groundwater from the Site interacts primarily with adjacent surface water in Permanente Creek. However, we share this concern about the creeks to the north of the Site, which is the reason we required seep

monitoring historically and Provision 3b of the TO requires groundwater monitoring of the entire perimeter.

18. **Comment**: San Francisco Bay Estuary and Permanente Creek are listed as impaired due to selenium (in the TO) and it also looks as if Stevens Creek is polluted. I am very sure there are more contaminants that need to be mentioned here.

    Response: Permanente Creek is on the 303(d) for impairment due to selenium, diazinon, trash and toxicity. Stevens Creek is listed for diazinon, temperature, trash and toxicity. Of these, the Site may be a source for selenium and toxicity. We initially erroneously omitted toxicity and have therefore modified the TO to include toxicity. Notification of this omission is much appreciated.

19. **Comment**: Backfilling the Quarry Pit with WMSA waste is a big mistake especially because of the hazardous waste material in the overburden.

    Response: Waste characterization studies conducted to date and summarized in the TO Findings, indicate overburden is appropriately classified in accordance with title 27 as designated waste, not hazardous waste. It is therefore appropriate to regulate them with WDRs. Please see the response to comment 11.

20. **Comment**: The Permanente Creek and Stevens Creek, tributaries to the San Francisco Estuary and a. through j. are noted but one has been left out the beneficial value to our groundwater, drinking water, aquifers and wells.

    Response: The beneficial uses of groundwater are listed below the surface water section in Finding 41.

21. **Comment**: The WB establish what they call acceptable contaminant levels that they state are designed to protect human health and ensure that water is safe for domestic use these levels do not consider cumulative levels. The problem is that we the public are not sure how these levels are even reached and what science is behind them.

    Response: The TO does not propose water quality objectives; however, it does require the development of Water Quality Protection Standards that can be based on published standards or background/ambient concentrations. An assessment of cumulative risks is generally considered in the development of a conceptual site model, an update of which is required by the TO. Source information that details methods used to calculate water quality objectives often used by this agency can be found here:
    https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html

    As an example for how to use information provided at this link, the lowest water quality standard for selenium can be found in the Summary Tables or the Workbook; USEPA's California Toxics Rule (CTR) Criterion for Continuous Concentration (CCC) is currently 5ug/L. The User's Guide provides a reference for this documentation, which can be reviewed at this link:
    https://www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criteria-priority-toxic-pollutants-state

    A description of the CTR and other water quality objectives/goals can also be found here:

https://www.waterboards.ca.gov/water_issues/programs/water_quality_goals/docs/wq_goals_text.pdf

22. **Comment**: Several of the prohibitions are not currently being met.

    Response: Correct, Lehigh is not in compliance with several Prohibitions in the TO, but please note that WDRs have not yet been adopted by the Board. One objective of the TO is to ensure that Site operations are being performed in a manner that is adequately protective of groundwater. For example, Provision 7 requires an Operation, Maintenance, and Contingency Plan to describe these activities and protective measures. If threats to water quality associated with a particular activity can be adequately mitigated, that activity can continue under WB oversight. If we identify an activity that cannot be performed in a manner that protects water quality, it will be prohibited and enforcement may be considered, as appropriate.

23. **Comment**: How is the overburden from the continued mine operation being disposed of especially after they have been told they cannot used the WMSA and the EMSA.

    Response: The TO does not prohibit the use of either the EMSA or WMSA for waste disposal. Our understanding is that the Dischargers stopped using the EMSA and added an interim cover in order to reduce selenium concentrations in runoff (note surface water discharges are not regulated by the TO). They are currently managing mining waste in the WMSA and cement waste is being reused in the manufacturing process. Please see also the response to comment 8.

24. **Comment**: Why did it take so long for the WB to regulate the Lehigh site?

    Response: The WB has regulated the Site with stormwater permits since 1974. Quarry operations generally do not have significant groundwater impacts and are sufficiently regulated by general permits that regulate stormwater. WB staff began developing individual orders to regulate waste disposal and surface water discharges when we became aware that the Site and waste units contains elevated selenium (which is not typical). To clarify, we have added information about WB's history of surface discharge regulation to Finding 3 in Appendix A.

Rhoda Fry

Ms. Rhoda Fry, a neighbor of the Site, submitted a letter on May 15, 2018, with several links and attachments. Similar to the format above, WB staff have summarized comments but have copied language where possible to avoid misrepresentation.

25. **Comment**: Ms. Fry included as an attachment a Santa Clara County Planning Development Application by Midpeninsula Region Open Space District sent an appeal to the Board of Supervisors the decision by the Planning Commission to approve the Permanente Reclamation Plan Amendment and EIR. June 22, 2012 with letters from the following attached:

    - Schaffner, Sheryl, Letter to Board of Supervisors for Santa Clara County; Subject: Appeal of Permanente Quarry Reclamation Plan Amendment and of Environmental Impact Report Certification, June 22, 2012

- Baldzikowski, Matt, Letter to Santa Clara County Planning Office; Subject: Comments/Clarifications related to the May 24th, 2012 Planning Commission Hearing Concerning Lehigh Permanente Quarry Reclamation Plan Amendment Final Environmental Impact Report, May 31, 2012

- Baldzikowski, Matt, Letter to Santa Clara County Planning Office; Subject: Planning Commission Hearing Concerning Lehigh Permanente Quarry Reclamation Plan Amendment Final Environmental Impact Report, May 23, 2012

- Baldzikowski, Matt, Letter to Santa Clara County Planning Office; Subject: The Lehigh Permanente Quarry Reclamation Plan Amendment Draft Environmental Impact Report, February 17, 2011

- Brosseau, Kimberley, Letter to Santa Clara County Planning Office; Subject: Notice of Preparation of an Environmental Impact Report for the Mining Reclamation Plan Amendment for Permanente Quarry, September 1, 2011

- Baldzikowski, Matt, Letter to Santa Clara County Planning Office; Subject: Notice of Preparation of and EIR Comprehensive Reclamation Plan Amendment and Conditional Use Permit for Permanente Quarry, May 17, 2011

- Abbors, Steven, Letter to Board of Supervisors for Santa Clara County; Subject: Public Hearing Regarding Permanente Quarry/Lehigh Southwest Cement Company Legal Non-Conforming Use Determination, February 3, 2011

- Ruiz, Ana, Letter to Santa Clara County Planning Office; Subject: Lehigh Hanson Permanente Quarry 2010 Reclamation Plan Amendment for the East Materials Storage Area, May 21, 2010

- Baldzikowski, Matt, Letter to Santa Clara County Planning Office; Subject: Hanson Permanente Quarry Reclamation Plan Amendment EIR, June 20, 2007

Response: WB staff share Ms. Fry's concerns regarding potential water quality impacts related to reclamation plans at the Site as discussed in the attachments. Staff submitted similar and substantive comments to the County on the associated Draft Environmental Impact Report, which can be reviewed on our Lehigh webpage. No new information was gleaned from the attachments and no revisions to the TO were necessary in response. (***https://www.waterboards.ca.gov/sanfranciscobay/water_issues/hot_topics/lehigh.html***)

26. **Comment**: Ms. Fry included as an attachment the U.S. EPA Region IX, Remedial Site Assessment Decision, May 1, 2012

    Response: Please see the response to comment 1. This document has been uploaded to GeoTracker.

27. **Comment**: Ms. Fry attached a link, Statement of Financial Affairs for Hanson Permanente Cement, INC. Case no. 16-31614 (jcw) page 12 https://cases.primeclerk.com/kaisergypsum/Home-DocketInfo?DockSearchValue=257 and indicated Hanson Permanente Cement, Inc. declared bankruptcy in October 2016. She stated she is concerned that there may be insufficient funds to address environmental issues.

    Response: We appreciate this information. Provision 8 of the TO requires the Dischargers demonstrate ability to cover the costs associated with closure and post-closure maintenance, and any reasonably foreseeable cleanup (see comment 6). We will include this information in our evaluation of that submittal. In addition, the Reclamation Plan issued by the County of Santa Clara also has financial assurance information that is reviewed periodically and can be increased.

28. **Comment**: The Site has a toxic history, including the manufacture of magnesium incendiary bombs (similar to napalm, also known as "goop") during WWII. Ms. Fry also attached a link to a USGS publication, that suggested it was related, but was not (Wilson, Mark. (2011). Making "Goop" Out of Lemons: The Permanente Metals Corporation, Magnesium Incendiary Bombs, and the Struggle for Profits during World War II. Enterprise and Society. Source: Geology and quicksilver deposits of the New Almaden district, Santa Clara County, California https://pubs.er.usgs.gov/publication/pp360)

    Response: WB staff received a tip about "goop" in 2015, conducted a literature search on its ingredients and ensured these chemicals were added to the list of constituents of concern (COCs) the Dischargers were required to investigate (outlined in the Findings of the TO). The April 1989 Preliminary Assessment from the DTSC specifies magnesium incendiary bombs, which were also made with thermite instead of napalm, which is more likely given the Kaiser facility manufactured aluminum and magnesium products. The ingredients for thermite (metals) are also already on the list of COCs. The 1989 report has been added to GeoTracker to document this potential waste source and the appropriate Findings in the TO have been updated to include this information. However, no changes to requirements are necessary as this waste source is accounted for in investigations and monitoring requirements.

29. **Comment**: Santa Clara County of Environmental Health reports indicate a history of problems with underground tanks.

    Response: The cleanup and closure of several underground tanks have been documented by Santa Clara County. We are not aware of any unregulated underground tanks at the Site; however, the long history of the Site raises the concern that additional tanks and wastes may be present. This is accounted for in the TO as described in the Findings and Provision, as discussed in comment 28.

30. **Comment**: The EMSA is a newly-constructed pile that would have to adhere to modern standards. Therefore, the statement "However, the site was in operation before regulation and before waste records were kept" is likely incorrect. Please consider these two areas differently. Please also state explicitly when title 27 of CCR went into effect. Ms. Fry also attached a link (https://www.sccgov.org/sites/dpd/DocsForms/Documents/Lehigh_RPA_20090414_EMSA_Agreement.pdf)

Response: This statement was included in Finding 13 to demonstrate that the Site may contain unknown sources of contamination and does not specifically refer to any WMU, including the EMSA. This Finding is justification for requiring an extensive list of potential COCs, because none could be ruled out based on information provided by the Dischargers, due to a fire that destroyed documentation.

The WMU defined in the TO as the EMSA includes the historical disposal units buried beneath it, but which are separate from other WMUs in the TO (namely the WMSA). Overburden mining wastes were disposed of in the EMSA after title 27 was adopted in 1997. We appreciate notification of this error. Finding 11 has been updated to reflect this. Please note, however, that title 27 does not mandate liners, as discussed in Finding 11. The Dischargers are currently implementing alternative control mechanisms (for example, the interim cover on the EMSA), and they are required to evaluate the efficacy of these controls in Provisions 4 and 7 of the TO. Should monitoring indicate current control mechanisms are insufficient to protect groundwater, additional control measures will be required, though a liner may be infeasible due to the size of the EMSA. The impact on surface water is currently being addressed under the Site's NPDES permit.

31. **Comment**: Finding 6 mentions that these waste piles may contain wastes from cement manufacturing, whereas documents from other regulators confirm that they do.

    Response: This is orrect; this was an oversight. We have revised Finding 6 to clarify that it is known that cement wastes were disposed of in the WMSA, in accordance with the description of this WMU in Finding 35a. See also the comment and response 44.

32. **Comment**: Santa Clara County intends to allow Lehigh to remine and move waste piles. What will the WB do to override the County?

    Response: The current reclamation plan calls for materials from the WMSA to be used to fill the Quarry Pit. It is possible that Lehigh may decide to utilize limestone uncovered in the process to produce cement. The TO requires that this, or any proposed reclamation activity involving wastes be, evaluated for potential impacts to water quality. As noted in our response to Comment 22 by Ms. Helgerson, if it cannot be demonstrated that such activities can be performed in a manner that protects state waters, the activities will be prohibited.

33. **Comment**: The areas under the EMSA were never fully addressed, despite a 2012 EPA investigation that found pollutants.

    Response: See our responses to comment 1.

34. **Comment**: Historical and current aerials (provided from Google Earth) indicate three prominent buildings in 1948 in the EMSA area.

    Response: Based on the date and location, these buildings were part of the Aluminum Facility, outlined in Figure 2 of the TO, which is discussed in Finding 35.b.vi. This area is not specifically included as a WMU with the EMSA because the area was cleaned up between 1988 and 1991

(see response to comment 2), however any potential residual contamination is covered in the TO by Provision 3, which requires groundwater monitoring at the entire perimeter of the Site.

35. **Comment**: Ms. Fry attached a document (County of Santa Clara Department of Planning and Development, Public Records Request for Demolition Permit, February 10, 2011) that suggests that at that time, the Dischargers failed to receive permission to demolish onsite buildings.

    Response: Such activities are outside of the Water Board's jurisdiction, unless a WB permit was required, which we are not aware of.

36. **Comment**: Ms. Fry attached a document from the Department of Toxic Substance Control Region 2, Preliminary Assessment, April 19, 1989, which details the results of an evaluation by DTSC for Superfund which included the following of relevance:

    a. Confirmation that magnesium incendiary bombs were produced onsite during WWII;

    b. Confirmation that aluminum foil was produced on-site at the time;

    c. A statement that the Site was used for electrochemical reduction of magnesium;

    d. A list of wastes, including municipal, waste rolling oil from foil mills, filter powder, and methylethyl ketone;

    e. An on-site liquid pond was used to dispose of sodium carbonate-neutralized sludge from SO2 scrubber wastes as well as coal-tar fractions;

    f. The presence of transformers and the possibility of PCBs, though the two on-site were PCB free;

    g. The presence of underground storage tanks with kerosene, waste oil, paint, and diesel fuel;

    h. Concluded that the Site did not appear to be a threat to local groundwater and did not have the potential to score high enough in the hazard ranking system factors to qualify for the National Priorities List.

    Response: We appreciate receipt of this document. It has been uploaded to GeoTracker. Other than the adjustments made in the response to comment 28, no additional modifications have been made because WB staff were aware of all of these potential sources of contamination (as outlined in Site history documentation also found in GeoTracker). These were therefore already accounted for in the TO.

37. **Comment**: An attachment of the National Primary Drinking Water Regulations indicating maximum contaminant levels for radiological materials was included without discussion.

    Response: There is no evidence that radiological material is present at the Site and no historical activity suggests that it might be.

Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc., collectively

38. **Comment**: *Finding 5: While Lehigh recognizes that the definition of "mining waste" in this finding is derived from Title 27, section 22480, Lehigh notes that due to advancements in the ability to process for a commercial purpose some of the material that was once discarded, some "natural geologic material which has been removed or relocated but not been processed," is expected to be processed at the Permanente Facility. Lehigh does not anticipate this is to be an issue, but wanted to note this circumstance.*

    Response: WB staff interpret this comment to refer to the potential extraction of limestone from disposal areas (e.g., the WMSA) for future use in cement manufacturing purposes. Advances in technology may allow the Dischargers to process limestone that was previously disposed of in the WMSA, that was previously discarded as waste rock. The definition of mining waste remains applicable; however, the WDRs do not prohibit this activity if it can be performed in a manner that is protective of groundwater and hydrogeologically connected surface waters. This capability must be demonstrated prior to commencement in the Preliminary Closure Plans required in Provision 4; or if performed separately from closure/reclamation in Operation, Maintenance and Contingency Plan required in Provision 7.

39. **Comment**: *Findings 6 through 8. The description of waste that may have historically been placed in overburden storage areas may be misleading to the public, in that the WMSA and EMSA are referenced collectively as a potential repository for the listed waste. For the items described, the EMSA should be the focus of the discussion, it does not appear such materials were ever disposed of in the upgradient WMSA. See, e.g., May 1, 2012 Preliminary Assessment Report, Weston Solutions prepared for USEPA, Region 9; January 22, 1993 Supplemental Site Characterization, EMCON prepared for Facility.*

    Response: Findings 5-10 are general descriptions of the type of waste found on Site, or potentially anticipated for the purposes of protecting water quality. Specific information about individual disposal units is provided in Findings describing the WMUs (see comment 31).

40. **Comment**: *Finding 8. Lehigh requests that the following phrase be omitted from Finding 8 "(… ,even with twenty times as many soil borings that were advanced."), it is speculative and discounts the value of the comprehensive work more recently advanced by Lehigh in coordination with the Regional Water Board.*

    Response: This statement in the TO was intended to describe the infeasibility of a comprehensive waste characterization in situ, however WB staff understand concern over the speculative nature of the statement and we have eliminated it from the TO. Because the statement was duplicative, removing it does not change the meaning of the Finding.

41. **Comment**: *Finding 25: Lehigh requests that the Regional Water Board provide the DWR Bulletin 118-1 reference upon which the Santa Clara sub-basin is designated as a "Hydrogeologically Vulnerable Area." Publicly available information related to this bulletin does not appear to reference this designation.*

Response: WB staff mistakenly cited the source (DWR Bulletin) used by the State Board Division of Water Quality to develop the designation, instead of the documentation of the designation. We appreciate notification of this error. The citation has been updated, including a link to a GIS database and the source information.

42. **Comment**: *Finding 29: The Tentative Order states that "[b]oth Permanente and Stevens Creeks ultimately discharge to the San Francisco Bay Estuary via either Permanente Creek or Stevens Creek through Mountain View Slough." Lehigh requests that this finding be updated to reflect that Mountain View Slough is the terminus for Permanente Creek, but not Stevens Creek.*

    Response: WB staff concur that the statement was confusing and have amended the language to clarify.

43. **Comment**: *Finding 35: Lehigh requests that the Quarry be included as a current WMU, rather than a potential future WMU. In accordance with the applicable requirements of the Reclamation Plan, mining waste has already been placed in the Quarry for reclamation of the western slope. Given the dynamic nature of the Quarry, an existing WMU designation is more appropriate.*

    Lehigh withdrew this comment on May 30, 2018 (see Appendix B).

    Response: Comment withdrawn. Please see also response to comment 15.

44. **Comment**: *Finding 35.a. Per the comments to Findings 6 through 8 above, Lehigh requests that the language presented in this finding regarding the placement of cement kiln brick and dust in the WMSA be eliminated, as there is no evidence these materials were disposed of in the WMSA. Rather, Finding 35.b.iii properly describes the Upper Level Landfill of the EMSA as the historical disposal location for these materials. See, e.g., May 1, 2012 Preliminary Assessment Report, Weston Solutions prepared for USEPA, Region 9; January 22, 1993 Supplemental Site Characterization, EMCON prepared for Facility.*

    Response: The following statement is from the Executive Summary of the Site History Description submitted December 2, 2013 (available in GeoTracker), which was submitted in response to Order R2-2013-1005, described in Finding 13 of the TO:

    > *West Materials Storage Area (WMSA)… cement kiln dust (CKD) was reportedly disposed of from 1950 to 1981.*

45. **Comment**: *Finding 35.a.iii. A typographical error exists, Lehigh requests the removal of the "/" after the word "reports."*

    Response: We have corrected this error.

46. **Comment**: *Finding 35.b.i. – v.: Lehigh is unaware of PCB detections in the Dry Canyon Storage Area, we request this reference be removed.*

    Response: The June 1993 Environmental Evaluation Report by Emcon Associates for Kaiser Aluminum & Chemical Corporation, section 4.2.2 (page 4-3, available in GeoTracker) states the following:

Dry Canyon Storage Area… PCB concentrations above the TTLC (50ppm) were found only in one soil sample in the dry canyon storage area.

Note that this COC was required in waste characterization studies (described in Finding 15 of the TO).

47. **Comment**: *A typographical error exists, Lehigh requests the removal of the underlining after the title, "Upper Level Landfill."*

    Response: We have corrected this error.

48. **Comment**: *Finding 35.b.vi.: A typographical error exists, Lehigh requests the removal of the "\" after the date "1990-1." Additionally, Lehigh would like to note that interim and final covers described in this finding are being implemented per the updated Reclamation Plan with the County of Santa Clara.*

    Response: We have corrected this error.

49. **Comment**: *Prohibition Section A.: The Tentative Order appears to include prohibitions from more general provisions of Title 27 (Cal. Code Regs.) that are inapplicable to mining wastes. Mining wastes are specifically (and more narrowly) regulated by Title 27 via sections 22470 - 22510. See, e.g., 27 CCR section 22470 ("This article applies to all discharges of mining wastes. No SWRCB-promulgated parts of this subdivision except those in this article, Article 1 of Chapter 1 (i.e., section 20080 et seq.), and such provisions of the other articles of this subdivision as specifically are referenced in this article shall apply to discharges of "mining wastes" as that term is defined in section 22480."). As noted in Section 22470, Title 27 provisions applicable to landfills and similar types of waste management units do not apply to the regulation of mining waste, unless expressly incorporated into the specific sections cited above. This is due largely to the fact that mining wastes are of a different characteristic than landfill waste or other types of waste management units more typically covered by Title 27. For these reasons, Lehigh requests the following prohibitions be eliminated or modified:*

    This was followed by a list of specific prohibitions.

    Response: The section does not include citations from title 27 outside of the referenced section, accept where applicable. Furthermore, note that this section also cites the California Water Code (CWC), which is the source for several. Specific responses:

    a. *Prohibition A.2.: (subsurface transport prohibition) should be removed from the Tentative Order; no basis in the mining waste regulations exists to include this provisions.*

       The migration of pollutants through subsurface transport to waters of the State is prohibited because it would constitute and unauthorized discharge, in accordance with the CWC.

    b. *Prohibition A.4.: By its own terms, the Tentative Order is not seeking to regulate surface impoundments already regulated by the Facility's NPDES permit or other WDRs. Further, discharges to surface waters are already addressed by the Facility's NPDES permit, which prohibits discharge to surface waters not otherwise authorized by the terms of that permit; also Prohibition A.3. already addresses the discharge of wastes to surface*

waters. Finally, the prohibition at the heart of Prohibition A.4. is already stated in Prohibition A.1.; thus, Prohibition A.4. is redundant and unnecessary. For these reasons, Lehigh requests removal of Prohibition A.4.

WB staff concur. This Prohibition is redundant with the combination of Prohibitions1-3, it has therefore been removed.

c. *Prohibition A.7.: By its own terms, the Tentative Order is not seeking to regulate surface impoundments already regulated by the Facility's NPDES permit or other WDRs. For this reason, the prohibition should be omitted. Further, this Prohibition appears confusing, because it first references a "leaking" WMU, and then references no further "discharges to that surface impoundment." Lehigh requests its removal.*

The Prohibition has been amended to clarify it refers to surface impoundments and WMUs. Discharges that could impact groundwater quality are regulated by these WDRs. This includes waste disposal and waste-generating activities. While surface impoundments used on the Site have not been designated as WMUs in the TO, corrective actions will be necessary should an unauthorized discharge of pollution from a surface impoundment be identified (e.g., via groundwater monitoring conducted pursuant to the self-monitoring program required in Provision 3 of the TO). This Prohibition ensures the unit will be taken out of service to prevent further pollution. Furthermore, the Mining Waste Management section of title 27 does not preclude the regulation of surface impoundments via WDRs, from section 22740(a):

> *Mining Units (including surface impoundments, waste piles, and tailings ponds) which receive WDRs after November 27, 1984, shall comply with the siting and construction standards in this article. Existing active and inactive Mining Units shall comply with the siting and construction requirements of this article as required by the RWQCB.*

d. *Prohibition A.8.: This Prohibition appears more relevant to non-mining waste WMUs, as it anticipates the "creation" of a new WMU. At the Permanente facility, "new" WMUs are not anticipated (a new landfill location or newly created location for waste placement); rather, WMUs due to historical practices may be identified via future investigation and ultimately included/subject to the Tentative Order's requirements. For this reason, Prohibition A.8. should be removed.*

WDRs are updated periodically to account for changes at the Site or in regulations. These WDRs will be amended or updated as necessary to incorporate new WMUS; therefore, this action is correctly prohibited.

e. *Prohibition A.10.: This Prohibition does not appear applicable to the regulation of mining waste. Instead, Title 27, CCR, section 22480(b) states that Group "A" mining wastes must be managed as hazardous waste pursuant to Chapter 11 of Division 4.5, of Title 22, CCR, provided the Regional Water Board finds that such mining wastes pose a significant threat to water quality. Thus, any prohibition included in the Tentative Order should reflect the specific mining waste regulation regarding the placement and management of hazardous waste.*

The discharge of hazardous waste is prohibited as it would not be a permitted discharge. This Prohibition does not specifically reference any type of waste, including mining waste. Furthermore, the section cited is for definition purposes and is therefore applicable.

f. Prohibition A.13.: Title 27, CCR, section 20310(a) is inapplicable to the mining waste at issue (applicable to Class II waste management units/landfills); this Prohibition should be omitted from the Tentative order. Further, Prohibition A.1. already addresses protection of ground water and surface waters.

This Prohibition is not duplicative and in fact summarize the main objective of the TO, which is to protect water quality from activities on-site through operations, closure and post-closure. The citation has been updated.

g. Prohibitions A.5. and A.9.: Consistent with Title 27, CCR, section 22510(c), this prohibition should be amended to except from the prohibition any actions taken in conformance with the applicable Reclamation Plan (in addition to the currently exception for actions taken pursuant to an acceptable Operation, Maintenance, and Contingency Plan).

Section 22510(c) of title 27 CCR states that WB shall incorporate relevant provisions of an approved plan, prescribe conditions and ensure water quality is protected. To our knowledge, the TO does not prohibit any current activity approved in the Reclamation Plan, however it does require that it be demonstrated that these and planned activities will protect water quality. The Reclamation Plan does not limit our ability or obligation to regulate the site in accordance with our mission and authorities and we will continue to work cooperatively with the County to regulate the Site and oversee implementation.

h. Prohibition A.6.: Lehigh seeks to confirm that by "unregulated" surface impoundment, the Regional Water Board is intending to apply this prohibition to surface impoundments that are not otherwise regulated by WDRs or an NPDES permit.

Correct.

i. Prohibition A.11.: The phrase "or WDRs" should be included after the term "NPDES permit" in the first paragraph of this Prohibition to account for the regulation of activities under other Facility WDRs (wastewater treatment and reuse), in addition to the facility's individual NPDES Permit.

This Prohibition specifies that the discharge is prohibited under specific conditions, listed as a-d, which are not permitted by the TO.

50. **Comment**: *Specifications B.27.: Lehigh requests the following language be added to the first sentence, so that the sentence reads as follows: "All borings for monitoring wells shall be continuously cored unless otherwise agreed by Regional Water Board staff."*

Response: The Specification has been amended to recognize that this style of coring may not be feasible in certain cases at this Site.

51. **Comment**: *Provision C.4.: Please modify the reference to the Reclamation Plan to the final June 2012 Reclamation Plan that was adopted by Santa Clara County (the Tentative Order cites to an earlier draft 2011 version superseded by the final 2012 version).*

    Response: This change has been made.

52. **Comment**: *Provision C.8.: In the last paragraph of this Provision, the phrase, "consistent with contingency plans required in Provision 6" should be changed to "consistent with contingency plans required in Provision 7."*

    Response: This change has been made.

Libby Lucas

Ms. Lucas is a neighbor who submitted comments about Quarry discharges in an email on May 16, 2018. These discharges are not regulated by the TO but by an NPDES permit; therefore, we have no made changes or responded.