APPENDIX D

Jurisdictional Delineation

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Regulatory Services

June 18, 2010
[Revised May 21, 2012]

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5808 State Highway 18
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SUBJECT: Jurisdictional Delineation Report for the South Quarry Expansion Project, an Approximate 572-Acre Study Area Located in Lucerne Valley, San Bernardino County, California.

Dear Mr. Rib:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFG) jurisdiction for the above-referenced property.[1]

The South Quarry Expansion Project (Project) Study Area, located in Lucerne Valley, San Bernardino County, California [Exhibit 1], comprises approximately 572 acres and contains two blue-line drainages (as depicted on the U.S. Geological Survey (USGS) topographic map Big Bear City, California [dated 1971 and photorevised in 1979]) [Exhibit 2]. On December 2, 2009 and January 14, 2010, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the Project site to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act, (2) RWQCB jurisdiction pursuant to Section 401 of the Clean Water Act and Section 13260 of the California Water Code (CWC), and (3) CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Enclosed is a 600-scale map [Exhibit 3] that depicts the areas of Corps, RWQCB, and CDFG jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 4. A soil map of the Project area is included as Exhibit 5. A copy of the *Approved Jurisdictional Determination Form* is included as Appendix A.

[1] This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

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With respect to the Clean Water Act, the Project Study Area contains a total of 2.39 acres of non-relatively permanent waters (non-RPWs), none of which consist of wetlands. All of the on-site drainages consist of isolated waters pursuant to the January 9, 2001 Supreme Court decision entitled *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et al.* (SWANCC). The on-site drainage features are isolated waters that do not exhibit a significant nexus to a Traditional Navigable Water (TNW), and, as such, these features are not jurisdictional waters of the United States regulated by the Corps. A copy of the Project's impact memorandum is attached as Appendix B.

The Project Study Area contains a total of 2.39 acres of potential Waters of the State , none of which exhibit wetland characteristics, which may be regulated by the Regional Board under Section 13260 of the CWC. Potential Regional Board jurisdictional areas that may be impacted by the Project would be substantially less than the acreage estimated within the Study Area. The Project, as proposed, would permanently impact 0.08 acre of potential Regional Board jurisdiction, none of which exhibits wetland characteristics, and a total of 1,231 linear feet of streambed will be permanently disturbed. A copy of the Project's impact memorandum is attached as Appendix B.

CDFG jurisdiction at the Project Study Area totals approximately 2.39 acres, none of which consist of vegetated riparian habitat. CDFG jurisdictional areas that may be impacted by the Project would be substantially less than the acreage estimated within the Study Area. The Project, as proposed, would permanently impact 0.08 acre of CDFG jurisdiction, none of which consists of vegetated riparian habitat, and a total of 1,231 linear feet of streambed would be permanently disturbed. A copy of the Project's impact memorandum is attached as Appendix B.

II. METHODOLOGY

Prior to beginning the field delineation, a 200-scale color aerial photograph, a 200-scale topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps, RWQCB, and CDFG jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[2] (Wetland Manual) and the 2008 Regional Supplement to the Corps

[2] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experimental Station.

of Engineers Wetland Delineation Manual: Arid West Region (Arid West Supplement).[3] Lateral limits of non-wetland waters were identified using field indicators of an Ordinary High Water Mark (OHWM)[4]. While in the field, the limits of RWQCB and CDFG jurisdiction were recorded onto a 200-scale color aerial photograph using visible landmarks.

The Soil Conservation Service (SCS)[5] has mapped the following soil types as occurring in the general vicinity of the project site [Exhibit 5]:

Lithic Xerorthents, calcareous-Rock outcrop complex, 50 to 100 percent slopes (LcG)

The Map Unit Composition consists of 50 percent Lithic Xerorthents, Calcareous, and similar soils and 30 percent Rock Outcrop. The Lithic Xerorthents, Calcareous soils are located on the backslopes of mountains with a parent material of residuum weathered from limestone. Slopes range from 50 to 75 percent. This soil is somewhat excessively drained and contains a restrictive layer at 15-19 inches consisting of lithic bedrock. A typical profile consists of very cobbly fine sandy loam from 0 to 15 inches and unweathered bedrock from 15 to 19 inches.

The Rock Outcrop soils are located on the backslopes of mountains with a parent material of residuum weathered from limestone. Slopes range from 50 to 100 percent. This soil is excessively drained and contains a restrictive layer at 0 to4 inches consisting of lithic bedrock. A typical profile consists of unweathered bedrock from 0 to 4 inches.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States[6].

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[3] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center and Engineering Laboratory.

[4] U.S. Army of Corps of Engineers. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. R.W. Lichvar and S. McColley. ERDC/CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Cold Regions Research and Engineering Laboratory.

[5] SCS is now known as the National Resource Conservation Service or NRCS.

[6] United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

II. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide;*
> *(2) All interstate waters including interstate wetlands;*
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
> *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
> *(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
> *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...*
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
> *(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
> *(6) The territorial seas;*
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*
>
> *Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.*

> *(8) Waters of the United States do not include prior converted cropland.*[7] *Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

> *...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce clause and the Clean Water Act in a manner that restricted Corps jurisdiction over isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

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[7] The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season...." [Emphasis added.]

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The *SWANCC* opinion goes on to state:

> *In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum, which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form.* For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision, are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The agencies will assert jurisdiction over the following waters:
• Traditional navigable waters • Wetlands adjacent to traditional navigable waters • Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)

- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

3. Corps Preliminary Jurisdictional Determination

A *Corps Preliminary Jurisdictional Determination Form* may be used to concede Corps jurisdiction where all streambeds within the Project area are considered Corps jurisdictional waters. The Project would be able to move forward pursuant to Corps Regulatory Guidance Letter (RGL) 08-02, issued on June 26, 2008, which allows the Corps to issue preliminary jurisdictional determinations (Preliminary JD) for a project. A Preliminary JD allows you to move forward with the project by setting aside/voluntarily waiving questions regarding CWA jurisdiction over drainages on site in the interest of allowing you to expeditiously obtain a Section 404 Permit, when it is in your best interest to do so.

As stated in RGL 08-02:

While a landowner, permit applicant, or other affected party can elect to request and obtain an approved JD, he or she can also decline to request an approved JD, and instead obtain a Corps individual or general permit authorization based on either a preliminary JD, or, in appropriate circumstances (such as authorizations by non-reporting nationwide general permits), no JD whatsoever. The Corps will determine what form of JD is appropriate for any particular circumstance based on all the relevant factors, to include, but not limited to, the applicant's preference, what kind of permit authorization is being used (individual permit versus general permit), and the nature of the proposed activity needing authorization.

The Corps typically completes Preliminary JDs within 60 days of receipt of the request for such a determination. If the Corps project manager cannot complete the Preliminary JD within the 60-day timeframe, they must provide their supervisor, who would also provide the applicant, with a schedule to complete the determination (i.e., unlike the Rapanos significant nexus guidelines, there is a specific timeframe to complete the Preliminary JD and move forward with your project, without uncertainty, and the EPA will not be involved with the Preliminary JD process as the Corps is not required to coordinate with the EPA to review Preliminary JDs).

4. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the 1987 manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands[8]);

- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- Whereas the 1987 manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

B. Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.[9] The memorandum states:

> *California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...*
>
> *The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....*
>
> *Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to*

[8] Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

[9] Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

> *file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....*

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

> *"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.*

Regional Board jurisdiction under Section 13260 of the CWC defines mining waste as:

> *"All solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as defined in Section 2732 of the Public Resources Code, and tailings, slag, and other processed waste materials, including cementitious materials that are managed at the cement manufacturing facility where the materials were generated."*

Pursuant to Section 13260(k) of the CWC, in addition to the reporting requirements contained in Section 13260(a) of the CWC, before any person discharges mining waste, the person shall first submit both of the following to the Regional Board:

(1) A report on the physical and chemical characteristics of the waste that could affect its potential to cause pollution or contamination. The report shall include the results of all tests required by regulations adopted by the board, any test adopted by the Department of Toxic Substances Control pursuant to Section 25141 of the Health and Safety Code for extractable, persistent, and bio-accumulative toxic substances in a waste or other material, and any other tests that the state board or regional board may require, including, but not limited to, tests needed to determine the acid-generating potential of the mining waste or the extent to which hazardous substances may persist in the waste after disposal.

(2) A report that evaluates the potential of the discharge of the mining waste to produce, over the long term, acid mine drainage, the discharge or leaching of heavy metals, or the release of other hazardous substances.

Regional Board jurisdiction under Section 13260 of the CWC includes those areas within the boundaries of Corps jurisdiction, such as areas supporting the presence of an OHWM, as well as adjacent and/or abutting wetlands. In cases where the Corps does not exert its jurisdiction over drainage features, such as drainages that are isolated pursuant to SWANCC, features that do not meet the significant nexus standard established under Rapanos, or other features, such as seasonal pools, supporting beneficial uses, the Regional Board may exert its jurisdiction under the CWC. If the Regional Board exerts its jurisdiction over such features and a project results in the discharge of fill material into a Water of the State, the Regional Board may require authorization through an application for waste discharge requirements (WDRs) or through a waiver of WDRs in compliance with the CWC.

C. California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1602 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has

supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...

- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFG] as natural waterways...

- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFG jurisdictional limits closely mirror those of the Corps. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

III. RESULTS

A. Corps Jurisdiction

The Study Area contains a total of 2.39 acres of non-relatively permanent waters (non-RPWs), none of which consist of wetlands. All of the on-site drainage features consist of isolated waters pursuant to the January 9, 2001 SWANCC Decision. Six drainage features were observed within the Study Area: Marble Canyon Creek and Drainages A through E. All of the drainage features within the Study Area consist of ephemeral drainage features and a majority of the drainage features exhibit an OHWM along much of their length through signs of an incised channel, the presence of litter and debris, shelving, debris wracks, and sediment deposits. All of the drainage features flow in a northern to northwesterly direction and are isolated waters that do not exhibit a significant nexus to a TNW, and, as such, these features are not jurisdictional waters of the United States regulated by the Corps. The boundaries of the non-RPWs are depicted on the enclosed delineation map [Exhibit 3]. Total non-RPWs are summarized in Table One below.

1. Marble Canyon Creek

Non-RPWs associated with Marble Canyon Creek total 1.91 acres, none of which consist of jurisdictional wetlands. Marble Canyon Creek is an ephemeral drainage that originates within the Study Area and flows in a northwesterly direction for approximately 9,364 linear feet before discharging into a massive quarry pit. Marble Canyon Creek is an isolated non-RPW feature that terminates within a massive quarry pit, although historically Marble Canyon Creek flowed in a northerly direction for an additional 12 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Marble Canyon Creek within the Study Area is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Marble Canyon Creek exhibits an OHWM ranging from one (1) to 20 feet in width.

Vegetation within Marble Canyon Creek included limited areas of upland species consisting of thickleaf yerba santa (*Eriodictyon crassifolium*, UPL), holly-leaved redberry (*Rhamnus ilicifolia*, UPL), buckwheat (*Eriogonum* sp., UPL), brickellbush (*Brickellia* sp., FAC), canyon live oak (*Quercus chrysolepis*, UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), ceanothus (*Ceanothus* sp., UPL), and rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL). No soil pits were excavated within Marble Canyon Creek due to the lack of hydrophytic vegetation.

2. Drainage A

Non-RPWs associated with Drainage A total 0.23 acre, none of which consist of jurisdictional wetlands. Drainage A is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 3,234 linear feet before it terminates within the Cushenbury Mine East. Drainage A is an isolated non-RPW feature that terminates within the Cushenbury Mine East, although historically Drainage A flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage A is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage A exhibits an OHWM ranging from one (1) to five (5) feet in width.

Vegetation within Drainage A included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage A due to the lack of hydrophytic vegetation.

3. Drainage B

Non-RPWs associated with Drainage B total 0.04 acre, none of which consist of jurisdictional wetlands. Drainage B is an ephemeral drainage that originates within the Study Area and flows in a northerly direction for approximately 1,093 linear feet before it terminates within the Cushenbury Mine East. Drainage B is an isolated non-RPW feature that terminates within the Cushenbury Mine East, although historically Drainage B flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage B is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage B exhibits an OHWM ranging from one (1) to three (3) feet in width.

Vegetation within Drainage B included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage B due to the lack of hydrophytic vegetation.

4. Drainage C

Non-RPWs associated with Drainage C total 0.01 acre, none of which consist of jurisdictional wetlands. Drainage C is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 536 linear feet before it terminates within the Cushenbury Mine East. Drainage C is an isolated non-RPW feature that terminates within the Cushenbury Mine East, although historically Drainage C flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for

an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage C is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage C exhibits an OHWM one (1) foot wide.

Vegetation within Drainage C included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage C due to the lack of hydrophytic vegetation.

5. Drainage D

Non-RPWs associated with Drainage D total 0.08 acre, none of which consist of jurisdictional wetlands. Drainage D is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 1,718 linear feet before it terminates within the Cushenbury Mine East. Drainage D is an isolated non-RPW feature that terminates within the Cushenbury Mine East, although historically Drainage D flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage D is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage D exhibits an OHWM ranging from one (1) to three (3) feet in width.

Vegetation within Drainage D included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage D due to the lack of hydrophytic vegetation.

6. Drainage E

Non-RPWs associated with Drainage E total 0.12 acre, none of which consist of jurisdictional wetlands. Drainage E is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 2,035 linear feet before it terminates within the Cushenbury Mine East. Drainage E is an isolated non-RPW feature that terminates within the Cushenbury Mine East, although historically Drainage E flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage E is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage E exhibits an OHWM ranging from one (1) to five (5) feet in width.

Vegetation within Drainage E included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage E due to the lack of hydrophytic vegetation.

Table One. Summary of Total Isolated Waters

Drainage Features	Total Corps Non-Wetland Waters (Acres)	Total Isolated Non-Wetland Waters (Acres)	Length of Drainage (Linear Feet)*
Marble Canyon Creek	0	1.91	9,364
Drainage A	0	0.23	3,234
Drainage B	0	0.04	1,093
Drainage C	0	0.01	536
Drainage D	0	0.08	1,718
Drainage E	0	0.12	2,035
Total(s)	**0**	**2.39**	**17,980**

*The total linear feet described in this table include only those areas that are part of a drainage supporting an OHWM and/or defined bed, bank, and channel.

B. Regional Water Quality Control Board Jurisdiction

The Study Area contains a total of 2.39 acres of potential Regional Board jurisdiction, none of which exhibits wetland characteristics. All of the drainage features within the Study Area (Marble Canyon Creek and Drainages A through E) are ephemeral features and a majority of the drainage features exhibit an OHWM along much of their length through signs of an incised channel, the presence of litter and debris, shelving, debris wracks, and sediment deposits. . The drainage features flow in a north to northwesterly direction and are isolated waters that are not subject to regulation pursuant to Section 401 or 404 of the Clean Water Act per the *SWANCC* decision. However, the Colorado River Basin Regional Water Quality Control Board may attempt to exert its jurisdiction over the on site drainage features pursuant to Section 13260 of the CWC and require a WDR for the Project. The boundaries of potential Regional Board jurisdiction are depicted on the enclosed delineation map [Exhibit 3] and summarized below. The total acreage for potential Regional Board jurisdiction is listed in Table Two.

1. Marble Canyon Creek

Potential Regional Board jurisdiction associated with Marble Canyon Creek totals 1.91 acres, none of which exhibits wetland characteristics. Marble Canyon Creek is an ephemeral drainage that originates within the Study Area and flows in a northwesterly direction for approximately 9,364 linear feet before discharging into a massive quarry pit. Marble Canyon Creek is isolated and terminates within a massive quarry pit, although historically Marble Canyon Creek flowed in a northerly direction for an additional 12 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Marble Canyon Creek is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Marble Canyon Creek exhibits an OHWM ranging from one (1) to 20 feet in width.

Vegetation within Marble Canyon Creek included limited areas of upland species consisting of thickleaf yerba santa (*Eriodictyon crassifolium*, UPL), holly-leaved redberry (*Rhamnus ilicifolia*, UPL), buckwheat (*Eriogonum* sp., UPL), brickellbush (*Brickellia* sp., FAC), canyon live oak (*Quercus chrysolepis*, UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), ceanothus (*Ceanothus* sp., UPL), and rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL). No soil pits were excavated within Marble Canyon Creek due to the lack of hydrophytic vegetation.

2. Drainage A

Potential Regional Board jurisdiction associated with Drainage A totals 0.23 acre, none of which exhibits wetland characteristics. Drainage A is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 3,234 linear feet before it terminates within the Cushenbury Mine East. Drainage A is isolated and terminates within the Cushenbury Mine East, although historically Drainage A flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage A is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage A exhibits an OHWM ranging from one (1) to five (5) feet in width.

Vegetation within Drainage A included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage A due to the lack of hydrophytic vegetation.

3. Drainage B

Potential Regional Board jurisdiction associated with Drainage B totals 0.04 acre, none of which exhibits wetland characteristics. Drainage B is an ephemeral drainage that originates within the Study Area and flows in a northerly direction for approximately 1,093 linear feet before it terminates within the Cushenbury Mine East. Drainage B is isolated and terminates within the Cushenbury Mine East, although historically Drainage B flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage B is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage B exhibits an OHWM ranging from one (1) to three (3) feet in width.

Vegetation within Drainage B included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage B due to the lack of hydrophytic vegetation.

4. Drainage C

Potential Regional Board jurisdiction associated with Drainage C totals 0.01 acre, none of which exhibits wetland characteristics. Drainage C is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 536 linear feet before it terminates within the Cushenbury Mine East. Drainage C is isolated and terminates within the Cushenbury Mine East, although historically Drainage C flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage C is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage C exhibits an OHWM one (1) foot wide.

Vegetation within Drainage C included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage C due to the lack of hydrophytic vegetation.

5. Drainage D

Potential Regional Board jurisdiction associated with Drainage D totals 0.08 acre, none of which exhibits wetland characteristics. Drainage D is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 1,718 linear feet before it terminates within the Cushenbury Mine East. Drainage D is isolated and terminates within the Cushenbury Mine East, although historically Drainage D flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for

an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage D is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage D exhibits an OHWM ranging from one (1) to three (3) feet in width.

Vegetation within Drainage D included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage D due to the lack of hydrophytic vegetation.

6. Drainage E

Potential Regional Board jurisdiction associated with Drainage E totals 0.12 acre, none of which exhibits wetland characteristics. Drainage E is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 2,035 linear feet before it terminates within the Cushenbury Mine East. Drainage E is isolated and terminates within the Cushenbury Mine East, although historically Drainage E flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake, with no surficial connection to any Corps-regulated water. The substrate of Drainage E is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage E exhibits an OHWM ranging from one (1) to five (5) feet in width.

Vegetation within Drainage E included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp., UPL), antelope bitterbrush (*Pursia tridentata*, UPL), California juniper (*Juniperus californica*, UPL), Mojave yucca (*Yucca schidigera*, UPL), rubber rabbitbrush (*Chrysothamnus nauseosus*, UPL), Joshua tree (*Yucca brevifolia*, UPL), singleleaf pinyon (*Pinus monophylla*, UPL), ephedra (*Ephedra* sp., UPL), and ceanothus (*Ceanothus* sp., UPL). No soil pits were excavated within Drainage E due to the lack of hydrophytic vegetation.

Table Two. Summary of Potential RWQCB Porter-Cologne Act Jurisdiction

Drainage Features	Potential RWQCB Streambed (Acres)	Potential RWQCB Wetlands (Acres)	Total Potential RWCQB Jurisdiction (Acres)	Length of Drainage (Linear Feet)*
Marble Canyon Creek	1.91	0.00	1.91	9,364
Drainage A	0.23	0.00	0.23	3,234
Drainage B	0.04	0.00	0.04	1,093
Drainage C	0.01	0.00	0.01	536
Drainage D	0.08	0.00	0.08	1,718
Drainage E	0.12	0.00	0.12	2,035
Total(s)	**2.39**	**0.00**	**2.39**	**17,980**

*The total linear feet described in this table include only those areas that are part of a drainage supporting an OHWM and/or defined bed, bank, and channel.

C. CDFG Jurisdiction

CDFG jurisdiction associated with the Study Area totals 2.39 acres, none of which consist of vegetated riparian habitat. Six drainage features were observed within the Study Area: Marble Canyon Creek and Drainages A through E. All of the drainage features within the Study Area consist of ephemeral drainage features and a majority of the drainage features exhibit signs of flow along much of their length through the presence of an incised channel, the presence of litter and debris, shelving, debris wracks, and sediment deposits, all of which are regulated by the CDFG pursuant to Section 1602 of the Fish and Game Code. All of the drainage features flow in a northerly to northeasterly direction. All of the drainage features are ephemeral and subject to CDFG jurisdiction. The boundaries of CDFG jurisdictional waters are depicted on the enclosed delineation map [Exhibit 3]. Total CDFG jurisdictional waters are summarized in Table Three below.

1. Marble Canyon Creek

CDFG jurisdiction associated with Marble Canyon Creek totals 1.91 acres, none of which consists of vegetated riparian habitat. Marble Canyon Creek is an ephemeral drainage that originates within the Study Area and flows in a northwesterly direction for approximately 9,364 linear feet before discharging into a massive quarry pit. Marble Canyon Creek is an isolated feature that terminates within a massive quarry pit, although historically, Marble Canyon Creek flowed in a northerly direction for an additional 12 miles where it discharged into the Lucerne

Dry Lake. The substrate of Marble Canyon Creek within the Study Area is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Marble Canyon Creek exhibits CDFG jurisdiction consisting of bed, bank, and channel ranging from one (1) to 20 feet in width.

Vegetation within Marble Canyon Creek included limited areas of upland species consisting of thickleaf yerba santa (*Eriodictyon crassifolium*), holly-leaved redberry (*Rhamnus ilicifolia*), buckwheat (*Eriogonum* sp.), brickellbush (*Brickellia* sp.), canyon live oak (*Quercus chrysolepis*), antelope bitterbrush (*Pursia tridentata*), California juniper (*Juniperus californica*), singleleaf pinyon (*Pinus monophylla*), ephedra (*Ephedra* sp.), ceanothus (*Ceanothus* sp.), and rubber rabbitbrush (*Chrysothamnus nauseosus*).

2. Drainage A

CDFG jurisdiction associated with Drainage A totals 0.23 acre, none of which consists of vegetated riparian habitat. Drainage A is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 3,234 linear feet before it terminates within the Cushenbury Mine East. Drainage A is an isolated feature that terminates within the Cushenbury Mine East, although historically Drainage A flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake. The substrate of Drainage A is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage A exhibits CDFG jurisdiction consisting of bed, bank, and channel ranging from one (1) to five (5) feet in width.

Vegetation within Drainage A included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp.), antelope bitterbrush (*Pursia tridentata*), California juniper (*Juniperus californica*), Mojave yucca (*Yucca schidigera*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Joshua tree (*Yucca brevifolia*), singleleaf pinyon (*Pinus monophylla*), ephedra (*Ephedra* sp.), and ceanothus (*Ceanothus* sp.).

3. Drainage B

CDFG jurisdiction associated with Drainage B totals 0.04 acre, none of which consists of vegetated riparian habitat. Drainage B is an ephemeral drainage that originates within the Study Area and flows in a northerly direction for approximately 1,093 linear feet before it terminates

within the Cushenbury Mine East. Drainage B is an isolated feature that terminates within the Cushenbury Mine East, although historically Drainage B flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake. The substrate of Drainage B is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage B exhibits CDFG jurisdiction consisting of bed, bank, and channel ranging from one (1) to three (3) feet in width.

Vegetation within Drainage B included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp.), antelope bitterbrush (*Pursia tridentata*), California juniper (*Juniperus californica*), Mojave yucca (*Yucca schidigera*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Joshua tree (*Yucca brevifolia*), singleleaf pinyon (*Pinus monophylla*), ephedra (*Ephedra* sp.), and ceanothus (*Ceanothus* sp.).

4. Drainage C

CDFG jurisdiction associated with Drainage C totals 0.01 acre, none of which consists of vegetated riparian habitat. Drainage C is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 540 linear feet before it terminates within the Cushenbury Mine East. Drainage C is an isolated feature that terminates within the Cushenbury Mine East, although historically Drainage C flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake. The substrate of Drainage C is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage C exhibits CDFG jurisdiction consisting of bed, bank, and channel one (1) foot wide.

Vegetation within Drainage C included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp.), antelope bitterbrush (*Pursia tridentata*), California juniper (*Juniperus californica*), Mojave yucca (*Yucca schidigera*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Joshua tree (*Yucca brevifolia*), singleleaf pinyon (*Pinus monophylla*), ephedra (*Ephedra* sp.), and ceanothus (*Ceanothus* sp.).

5. Drainage D

CDFG jurisdiction associated with Drainage D totals 0.08 acre, none of which consists of vegetated riparian habitat. Drainage D is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 1,718 linear feet before it terminates within the Cushenbury Mine East. Drainage D is an isolated feature that terminates within the Cushenbury Mine East, although historically Drainage D flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake. The substrate of Drainage D is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage D exhibits CDFG jurisdiction consisting of bed, bank, and channel ranging from one (1) to three (3) feet in width.

Vegetation within Drainage D included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp.), antelope bitterbrush (*Pursia tridentata*), California juniper (*Juniperus californica*), Mojave yucca (*Yucca schidigera*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Joshua tree (*Yucca brevifolia*), singleleaf pinyon (*Pinus monophylla*), ephedra (*Ephedra* sp.), and ceanothus (*Ceanothus* sp.).

6. Drainage E

CDFG jurisdiction associated with Drainage E totals 0.12 acre, none of which consists of vegetated riparian habitat. Drainage E is an ephemeral drainage that originates within the Study Area and flows in a northeasterly direction for approximately 2,035 linear feet before it terminates within the Cushenbury Mine East. Drainage E is an isolated feature that terminates within the Cushenbury Mine East, although historically Drainage E flowed in a northeasterly direction for approximately one mile where it discharged into Cushenbury Creek and then flowed for 1.5 miles where it discharged into Marble Canyon Creek, which flowed in a northerly direction for an additional 10.5 miles where it discharged into the Lucerne Dry Lake. The substrate of Drainage E is predominantly unvegetated and consists of boulders, rocks, cobbles, and gravel due to the velocity of the water flow and extreme gradient of the drainage feature. Drainage E exhibits CDFG jurisdiction consisting of bed, bank, and channel ranging from one (1) to five (5) feet in width.

Vegetation within Drainage E included limited areas of upland species consisting of manzanita (*Arctostaphylos* sp.), antelope bitterbrush (*Pursia tridentata*), California juniper (*Juniperus*

californica), Mojave yucca (*Yucca schidigera*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Joshua tree (*Yucca brevifolia*), singleleaf pinyon (*Pinus monophylla*), ephedra (*Ephedra* sp.), and ceanothus (*Ceanothus* sp.).

Table Three. Summary of CDFG Jurisdiction

Drainage Features	Unvegetated Streambed (Acres)	Riparian Vegetation (Acres)	Total CDFG Jurisdiction (Acres)	Length of Drainage (Linear Feet)*
Marble Canyon Creek	1.91	0.00	1.91	9,364
Drainage A	0.23	0.00	0.23	3,234
Drainage B	0.04	0.00	0.04	1,093
Drainage C	0.01	0.00	0.01	536
Drainage D	0.08	0.00	0.08	1,718
Drainage E	0.12	0.00	0.12	2,035
Total(s)	**2.39**	**0.00**	**2.39**	**17,980**

*The total linear feet described in this table include only those areas that are part of a drainage supporting an OHWM and/or defined bed, bank, and channel.

IV. CONCLUSION

A. U.S. Army Corps of Engineers Jurisdiction

The Study Area contains a total of 2.39 acres of isolated waters, none of which consist of wetlands. Since all of the on-site drainage features are isolated waters pursuant to the January 9, 2001 SWANCC Decision, they are not subject to Corps regulation pursuant to Section 404 of the Clean Water Act.

B. Potential Regional Water Quality Control Board Jurisdiction

The Study Area contains a total of 2.39 acres of potential Regional Board jurisdiction, none of which exhibits wetland characteristics. Since all of the on-site drainage features are isolated waters pursuant to the January 9, 2001 SWANCC Decision, they are not subject to regulation pursuant to Section 401 of the Clean Water Act; however, the Regional Board may attempt to exert its jurisdiction over the on site drainage features, pursuant to Section 13260 of the CWC, if they support beneficial uses identified in the Basin Plan. Potential Regional Board jurisdictional areas that may be impacted by the Project would be substantially less than the acreage estimated within the Study Area. The Project, as proposed, will result in permanent impacts to 0.08 acre of

Potential Regional Board jurisdiction, none of which exhibits wetland characteristics, and 1,231 linear feet of streambed will be permanently disturbed. A copy of the Project's impact memorandum is attached as Appendix B.

C. California Department of Fish and Game Jurisdiction

CDFG jurisdiction associated with the Study Area totals 2.39 acres, none of which consist of vegetated riparian habitat. CDFG jurisdictional areas that may be impacted by the Project would be substantially less than the acreage estimated within the Study Area. The Project, as proposed, will result in permanent impacts to 0.08 acre of CDFG jurisdiction, none of which consists of vegetated riparian habitat, and 1,231 linear feet of streambed will be permanently disturbed.

A copy of the curriculum vitae (CV) for Martin Rasnick is attached as Appendix C.

If you have any questions about this letter report, please contact Martin Rasnick at (949) 837-0404.

Sincerely,

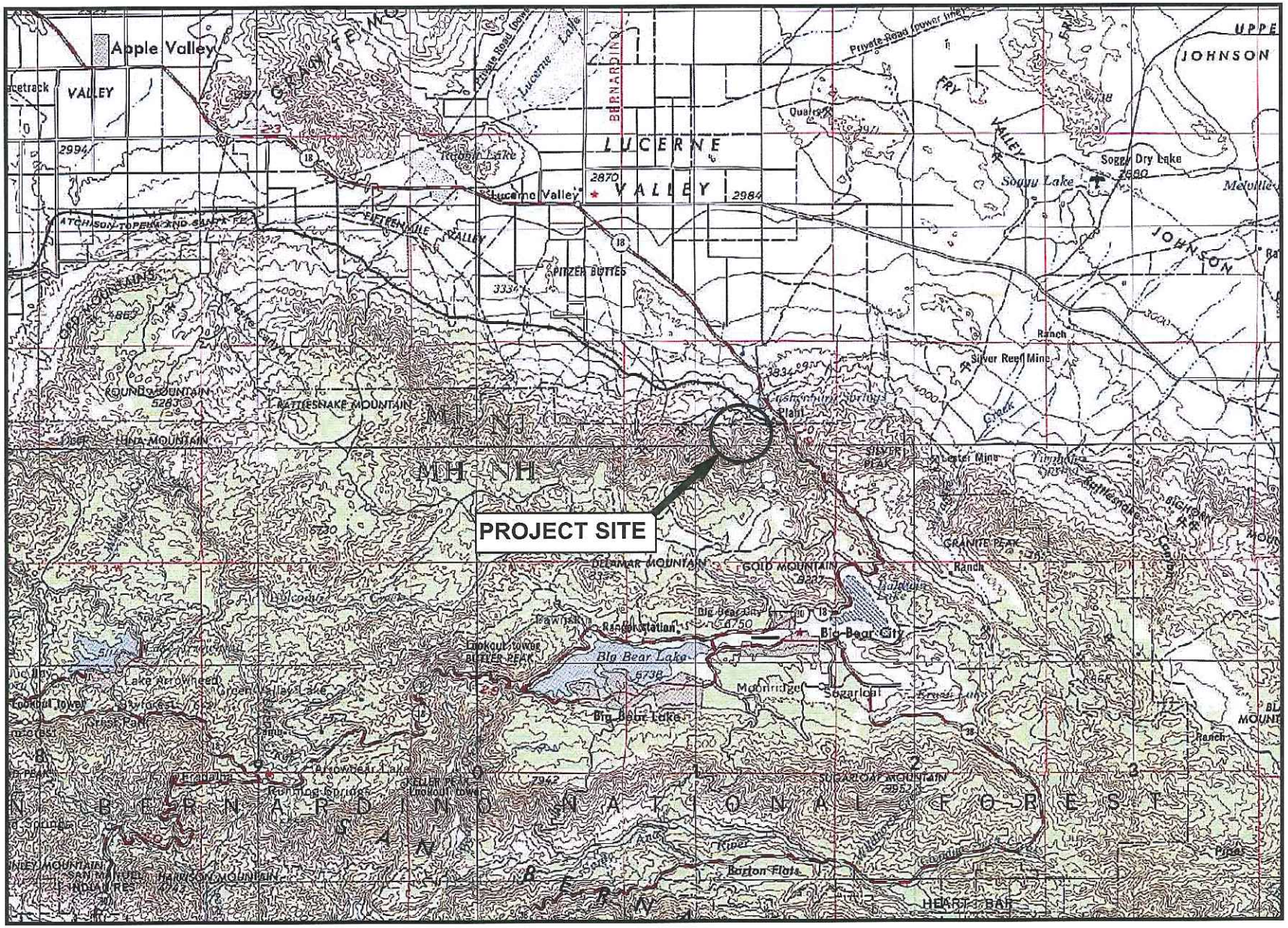
GLENN LUKOS ASSOCIATES, INC.

Martin A. Rasnick
Sr. Regulatory Specialist

s:0551-4f.rpt.doc

Exhibit 1

Regional Map



Adapted from USGS quadrangle

SOUTH QUARRY EXPANSION PROJECT

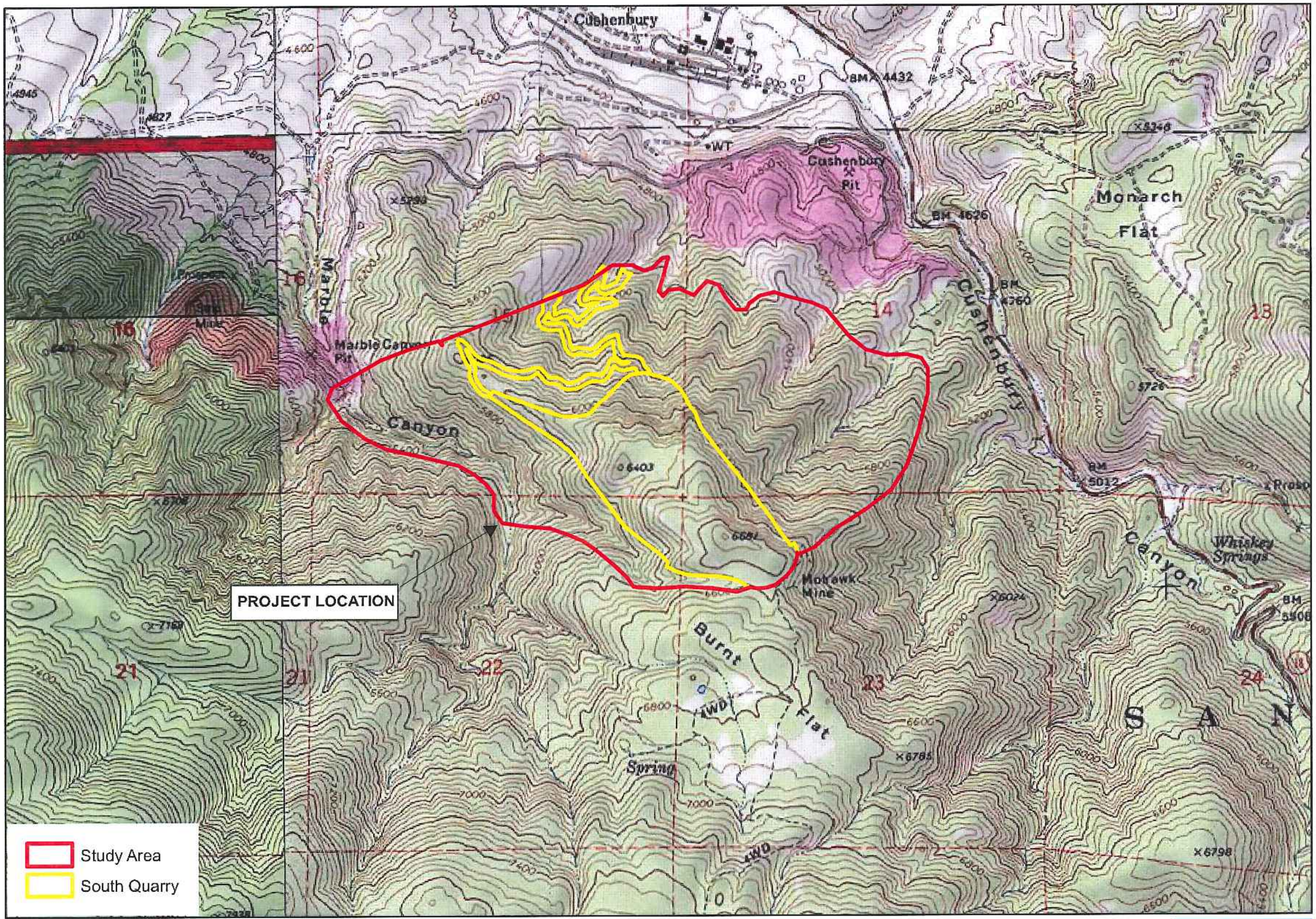
Regional Map

GLENN LUKOS ASSOCIATES

EXHIBT 1

Exhibit 2

Vicinity Map



Adapted from USGS Big Bear City, CA quadrangle

NORTH

0 1,000 2,000 3,000
FEET

SOUTH QUARRY EXPANSION PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES

EXHIBIT 2

Exhibit 3

Jurisdictional Delineation Map

Legend

- Study Area
- Non-Corps/RWCQB/CDFG Jurisdiction
- No OHWM, Bed, Bank, or Channel
- 8 Width of Jurisdiction in Feet

Reference Elevation Datum: State Plane 5
Aerial Photo: USGS
Map Prepared by: K. Kartunen, Glenn Lukos Associates

X:\0363-THE REST\0551-04SPIT\551-4_GIS\DelineationGIS\551-4Delineation.mxd
May 21, 2012

N

0 300 600 1,200
Feet

1 inch = 600 feet

SOUTH QUARRY EXPANSION PROJECT

Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

EXHIBIT 3

Exhibit 4

Site Photographs

PHOTOGRAPH 1. This photograph depicts the general conditions present at the bottom of Mable Canyon directly upstream from the large berm. Photograph taken on 01-14-2010.

PHOTOGRAPH 2. This photograph depicts a large debris wrack within Marble Canyon. Photograph taken on 01-14-2010.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

SOUTH QUARRY EXPANSION PROJECT

Site Photographs

PHOTOGRAPH 3. This photogragh depicts the general conditions within Drainage A. Photograph taken on 01-14-2010.

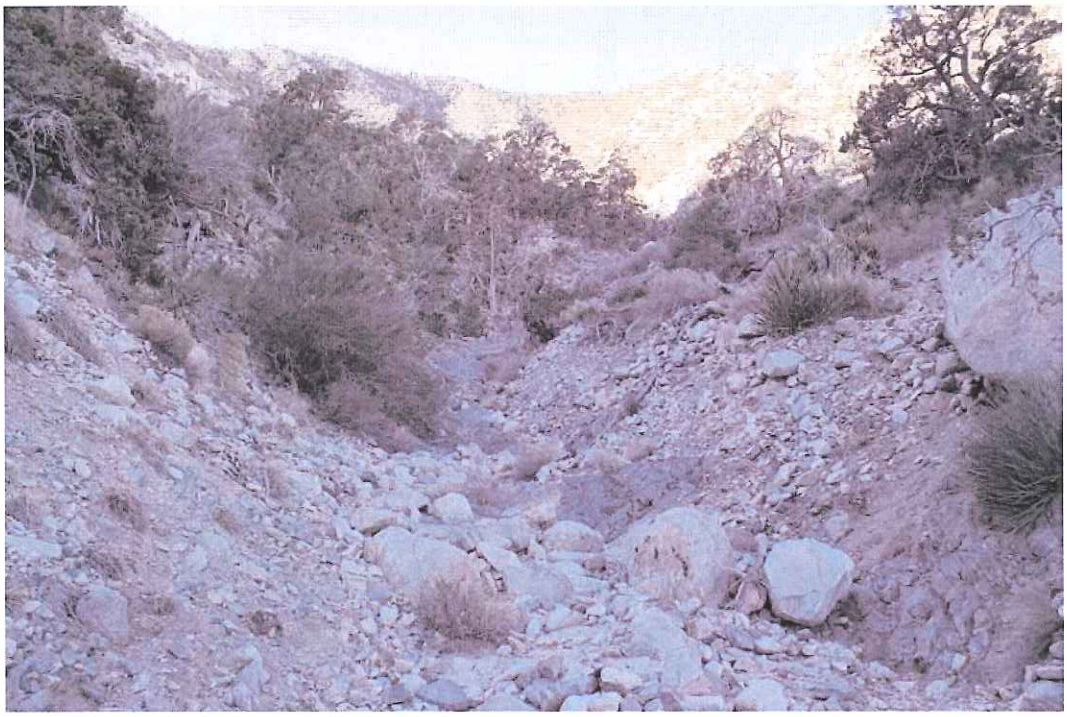
PHOTOGRAPH 4. This photograph depicts general conditions and a large debris wrack at the bottom of Drainage B. Photograph taken on 01-14-2010.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

SOUTH QUARRY EXPANSION PROJECT

Site Photographs



PHOTOGRAPH 5. This photograph depicts the general conditions at the bottom of Drainage E. Photograph taken on 01-14-2010.

PHOTOGRAPH 6. This photograph depicts Drainage D (right) and Drainage E (left) as they flow directly into the Cushenberry Mine East pit. Photograph taken on 01-14-2010.

GLENN LUKOS ASSOCIATES

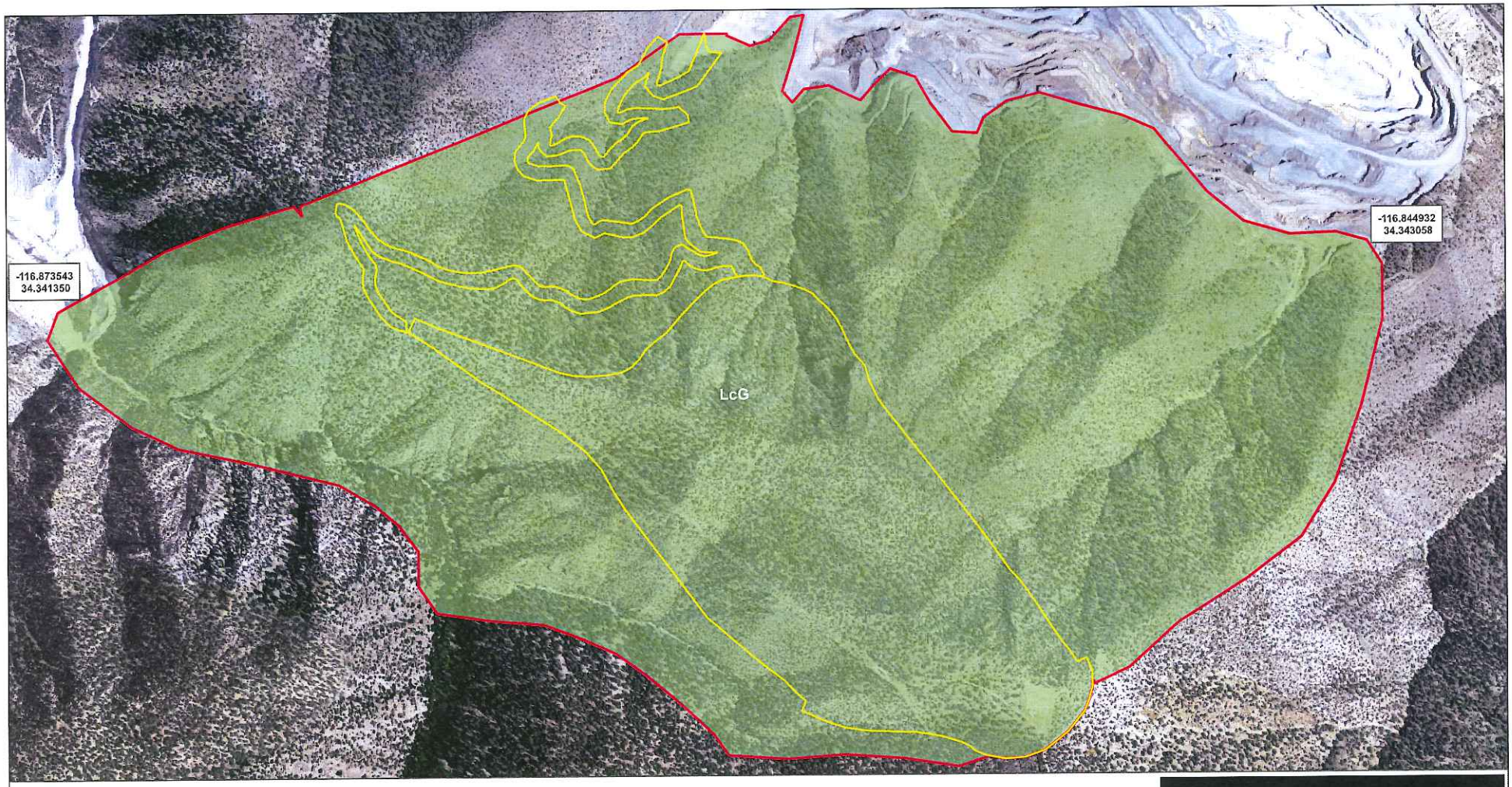
EXHIBIT 4

SOUTH QUARRY EXPANSION PROJECT

Site Photographs

Exhibit 5

Soils Map



Legend

- South Quarry
- Study Area
- LcG, Lithic Xerorthents, calcareous-Rock outcrop complex, 50 to 100 percent slopes

Reference Elevation Datum: State Plane 5
Aerial Photo: USGS
Map Prepared by: K. Kartunen, Glenn Lukos Associates

X:\0363-THE REST\0551-04SPIT\551-4_GIS\SoilsGIS\
551-4Soils.mxd
May 21, 2012

N

0 300 600 1,200

Feet

1 inch = 600 feet

SOUTH QUARRY EXPANSION PROJECT

Soils Map

GLENN LUKOS ASSOCIATES

EXHIBIT 5

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January 19, 2010

Appendix A

Corps Approved Jurisdictional Determination Forms

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION: South Quarry Expansion Project-Marble Canyon Creek
State:CA County/parish/borough: San Bernardino City: Lucerne Valley
Center coordinates of site (lat/long in degree decimal format): Lat. 31.343° N, Long. 116.860° W.
Universal Transverse Mercator:
Name of nearest waterbody: Marble Canyon Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A
Name of watershed or Hydrologic Unit Code (HUC): Southern Mojave 18100100
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Pick List** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Pick List**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: **The Project site contains non-relatively permanent waters (non-RPWs), none of which consist of wetlands. All of the on-site drainages consist of Corps isolated waters pursuant to the January 9, 2001 Supreme Court decision**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

entitled Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et al. (SWANCC). The on-site drainage features are isolated waters that do not exhibit a significant nexus to a Traditional Navigable Water (TNW), and, as such, these features are not jurisdictional waters of the United States regulated by the Corps..

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List.** Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

---

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☒ Non-wetland waters (i.e., rivers, streams): **9,364** linear feet **1-20**width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: Southern Mojave 18100100 .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:7.5 Minute Big Bear City, California.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:www.websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.
☒ National wetlands inventory map(s). Cite name:NHD Streams - http://www.fws.gov/wetlands/data/Mapper.html.
☐ State/Local wetland inventory map(s): .
☒ FEMA/FIRM maps:06071C7305H.
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Google 2009.
or ☒ Other (Name & Date):Site Photos January 2010.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION: South Quarry Expansion Project-Drainages A through E
State:CA County/parish/borough: San Bernardino City: Lucerne Valley
Center coordinates of site (lat/long in degree decimal format): Lat. 31.343° N, Long. 116.860° W.
Universal Transverse Mercator:
Name of nearest waterbody: Cushenbury Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A
Name of watershed or Hydrologic Unit Code (HUC): Southern Mojave 18100100
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Pick List** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Pick List**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: **The Project site contains non-relatively permanent waters (non-RPWs), none of which consist of wetlands. All of the on-site drainages consist of Corps isolated waters pursuant to the January 9, 2001 Supreme Court decision**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

entitled Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et al. (SWANCC). The on-site drainage features are isolated waters that do not exhibit a significant nexus to a Traditional Navigable Water (TNW), and, as such, these features are not jurisdictional waters of the United States regulated by the Corps..

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:	☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

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[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]**
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☒ Non-wetland waters (i.e., rivers, streams): **8,616** linear feet **1-5** width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: Southern Mojave 18100100 .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:7.5 Minute Big Bear City, California.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:www.websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.
☒ National wetlands inventory map(s). Cite name:NHD Streams - http://www.fws.gov/wetlands/data/Mapper.html.
☐ State/Local wetland inventory map(s): .
☒ FEMA/FIRM maps:06071C7305H.
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Google 2009.
or ☒ Other (Name & Date):Site Photos January 2010.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Appendix B

Project impact Memorandum

MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services

PROJECT NUMBER: 0551-0004SPIT

TO: Mr. David M. Rib
Environmental Manager
Mitsubishi Cement Corporation
5808 State Highway 18
Lucerne Valley, California 92356

CC: Jocelyn Thompson

FROM: Martin Rasnick

DATE: May 21, 2012

SUBJECT: South Quarry Expansion Project, Located in the Community of Lucerne Valley, San Bernardino County, California: Jurisdictional Delineation Impact Analysis.

Mr. Rib:

This memorandum summarizes our preliminary findings and an impact analysis of U.S. Army Corps of Engineers (Corps), California Department of Fish and Game (CDFG), and Colorado River Basin Regional Water Quality Control Board (Regional Board) jurisdiction for the South Quarry Expansion Project (Project) located in the Community of Lucerne Valley, San Bernardino County, California. An impact analysis was conducted for the Project from digital files received from the Project team on May 17, 2012.

1. Impacts to Corps Jurisdiction

There are no temporary or permanent impacts to Corps jurisdiction on site. All drainages within the Project area are isolated waters pursuant to the January 9, 2001 U.S. Supreme Court decision in the case titled *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et al.* (SWANCC); therefore, these drainages do not support a surficial connection to a Corps jurisdictional water and would not be regulated by the Corps under Section 404 of the Clean Water Act (CWA). Since no Corps jurisdiction is present, no Section 404 Permit is required for the Project.

2. Impacts to Potential Regional Board Jurisdiction

The Project Study Area contains a total of 2.39 acres of potential Regional Board jurisdiction, none of which exhibits wetland characteristics, and 17,980 linear feet of streambed. The Project, as proposed, would permanently impact 0.08 acre of potential Regional Board jurisdiction, none of which exhibit wetland characteristics, and a total of 1,231 linear feet of streambed. Table One below depicts impacts to potential Regional Board jurisdiction on site. A graphic depicting the Project's impacts to potential Regional Board jurisdiction is attached.

Table One. Impacts to Potential RWQCB Porter-Cologne Act Jurisdiction

Drainage Features	Total Potential RWQCB Jurisdiction (Acres)	Length of Drainage (Feet)*	Total Impacts to Potential RWCQB Jurisdiction (Acres)	Linear-Foot Impacts (Feet)*
Marble Canyon Creek	1.91	9,364	0.03	548
Drainage A	0.23	3,234	0.05	683
Drainage B	0.04	1,093	0.00	0
Drainage C	0.01	536	0.00	0
Drainage D	0.08	1,718	0.00	0
Drainage E	0.12	2,035	0.00	0
Total(s)	**2.39**	**17,980**	**0.08**	**1,231**

*The total linear feet described in this table include only those areas that are part of a drainage supporting an OHWM and/or defined bed, bank, and channel. There are no wetlands within the Study Area or the Project impact footprint.

3. Impacts to CDFG Jurisdiction

The Project Study Area contains a total of 2.39 acres of CDFG jurisdiction, none of which consists of vegetated riparian habitat, and 17,980 linear feet of streambed. The Project, as proposed, would permanently impact 0.08 acre of CDFG jurisdiction, none of which consists of vegetated riparian habitat, and a total of 1,231 linear feet of streambed. Table Two below depicts impacts to CDFG jurisdiction on site. A graphic depicting the Project's impacts to CDFG jurisdiction is attached.

Table Two. Impacts to CDFG Jurisdiction

Drainage Features	Total CDFG Jurisdiction (Acres)	Length of Drainage (Feet)*	Total Impact to CDFG Jurisdiction (Acres)	Linear-Foot Impacts (Feet)*
Marble Canyon Creek	1.91	9,364	0.03	548
Drainage A	0.23	3,234	0.05	683
Drainage B	0.04	1,093	0.00	0
Drainage C	0.01	536	0.00	0
Drainage D	0.08	1,718	0.00	0
Drainage E	0.12	2,035	0.00	0
Total(s)	**2.39**	**17,980**	**0.08**	**1,231**

*The total linear feet described in this table include only those areas that are part of a drainage supporting an OHWM and/or defined bed, bank, and channel. There is no riparian habitat within the Study Area or the Project impact footprint.

If you have any questions regarding this memorandum, please call me at (949) 837-0404, Ext. 20. Thanks again.

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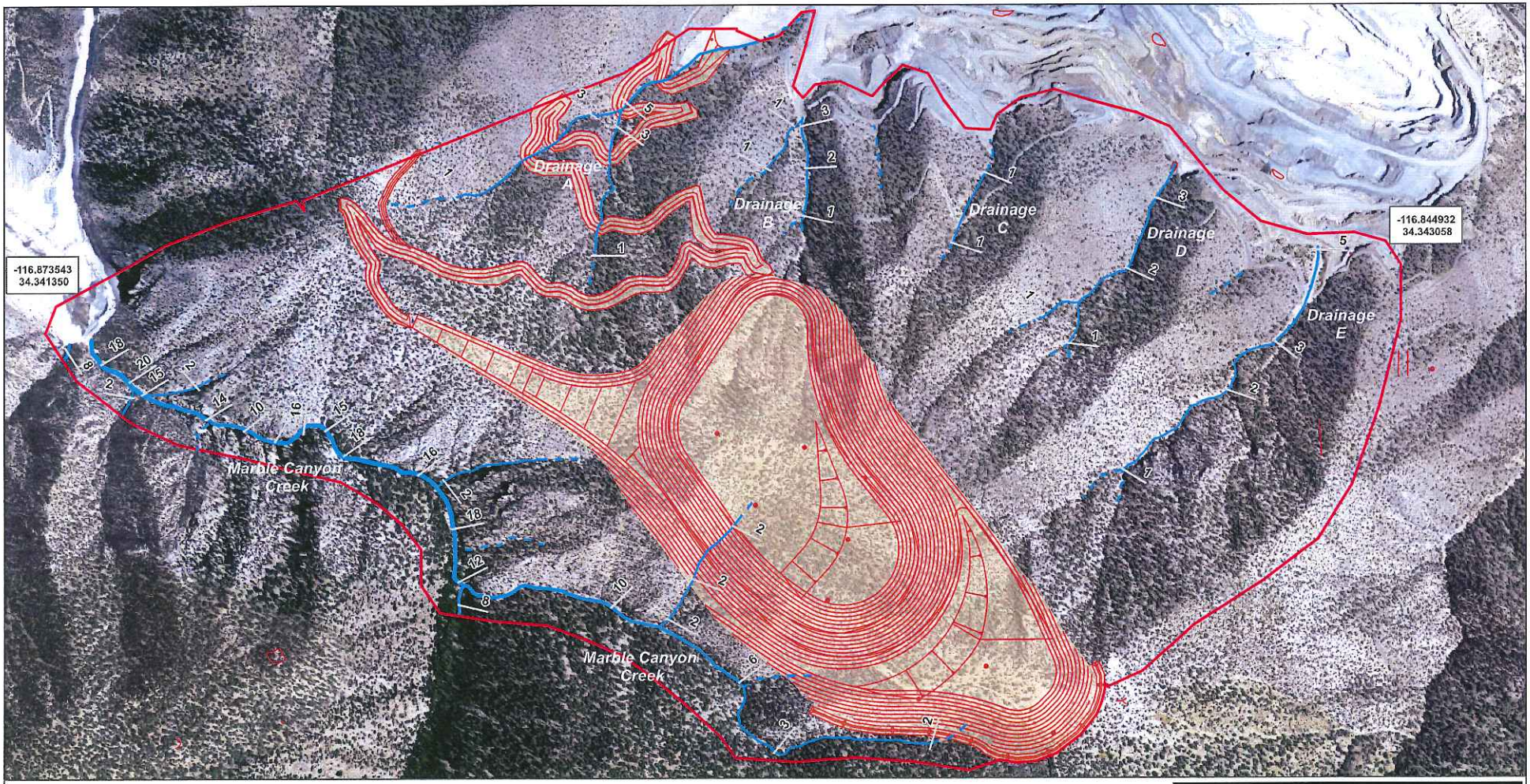

Legend

- Study Area
- Project Footprint
- Non-Corps/RWCQB/CDFG Jurisdiction
- No OHWM, Bed, Bank, or Channel
- 8 Width of Jurisdiction in Feet

N

0 300 600 1,200

Feet

1 inch = 600 feet

SOUTH QUARRY EXPANSION PROJECT

Jurisdictional Delineation Impact Map

GLENN LUKOS ASSOCIATES

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May 21, 2012

Appendix C

Curriculum Vitae for Martin Rasnick

MARTIN A. RASNICK

Senior Regulatory Specialist

Mr. Rasnick is an environmental planner, project manager, habitat restoration specialist, and regulatory specialist with 15 years of experience in environmental entitlements, mitigation monitoring, and mitigation design. Prior to joining Glenn Lukos Associates, Mr. Rasnick served as the Senior Environmental Planner for a Southern California environmental engineering firm, the environmental coordinator for a local Southern California real estate company, and a biological intern with the National Park Service, Santa Monica Mountains National Recreation Area Branch, preparing field maps and geographic information system (GIS) maps identifying the presence/absence of federally listed sensitive, threatened, or endangered plant species, such as Braunton's milk-vetch (*Astragalus brauntonii*), within Palo Comado and Chesebro Canyons. He has a Bachelor's Degree in Environmental Studies from the University of California, Los Angeles. He has led and assisted in numerous wetland delineations for projects throughout southern California, Nevada, Arizona, Washington, and New Mexico and has prepared and processed several regulatory permit applications through the various resource agencies, prepared several habitat mitigation plans and functional assessments, assisted in the preparation of several California Environmental Quality Act (CEQA) documents, and has conducted mitigation and construction monitoring on several projects throughout southern California.

Selected Professional Experience

- Conducted numerous wetland delineations in Los Angeles, Orange, Riverside, San Bernardino, San Diego, Kern, Imperial, and Ventura Counties as well as Clark County, Nevada, Bernalillo County, New Mexico, La Paz County, Arizona, and Thurston County, Washington. Prepared and processed numerous permit applications, permit modifications and permit amendments pursuant to Sections 404 and 401 of the Clean Water Act, Section 1602 of the California Fish and Game Code, and Section 13260 of the California Water Code.

- Produced, coordinated, processed, and obtained permit applications for numerous development projects through the California Coastal Commission.

- Processed regulatory permits and agreements for the City of Victorville for the Lead Track Line Project.

- Conducted biological and jurisdictional delineation assessments for the Southern California Logistics Airport Rail Line Project, known as SCLA, for the City of Victorville.

- Processed several regulatory permits and agreements for SunCal Companies within the City of Victorville, including the Westcreek Project, Vista del Valle Project, and the Calprop Project.

- Conducted regulatory and biological site review for the Joshua Ridge II Property in Victorville.

- Processed regulatory permits and agreements for Woodbridge Communities at the Palmdale 392 Project and the Victorville Assemblage Property (Tracts 17809 and 17810) in Victorville.

- Processed regulatory permits and agreements for The Crossings, Phases I and II, Projects in Victorville.

- Assisted with Section 7 consultations between the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service regarding take authorizations for Federally listed species in associated with a Section 404 permit.

- Prepared habitat restoration plans and assisted in the design and implementation of several other restoration projects. Conducted mitigation monitoring in freshwater marsh, riparian wetlands, vernal pools, coastal sage scrub, and oak woodland habitats.

- Assisted in the preparation of CEQA documents on behalf of several local development companies within southern California as well the Cities of Corona and Chino Hills for projects within the Santa Ana River Watershed.

Professional History

Glenn Lukos Associates, Inc., Regulatory Specialists
John M. Tettemer & Associates, Inc., Senior Environmental Planner
National Park Service, Biological Intern

Education

B.A. Environmental Studies, UCLA

Additional Training

Advanced training in wetland delineation
Storm Water Compliance, Management and Inspection (SWPPP) Training
American Law Institute-American Bar Association Advanced Regulatory Permitting Seminar

Professional Affiliations

Society of Wetland Scientists
National Association of Environmental Professionals Member
American Law Institute-American Bar Association Member
Environmental Law Institute Member
Association of American Geographers Member
Association of Pacific Coast Geographers Member
California Invasive Pest Plant Council