Otay Hills Construction Aggregate and Inert Debris Engineered Fill Operation Project

Appendix J

Vector Management Plan

for the

Public Review
Draft Environmental Impact Report

PDS2004-3300-04-004 (MUP);
PDS2004-3310-04-001 (RP);
PDS2010-3813-10-002 (SPA);
Log No. 04-190-04

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Prepared for:

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for the

Otay Hills Project

PDS2004-3300-04-004 (MUP), PDS2004-3310-04-001 (RP)
PDS2010-3813-10-002 (SPA)

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1.0 Introduction

This Vector Control Plan has been created in consultation with the San Diego County Department of Environmental Health, Vector Surveillance and Control Program (DEH-VCP). Implementation of this plan will insure the minimization of vectors, such as flies and mosquitoes that may breed in standing water. This plan is created to meet the vector control requirements for the Otay Hills Project.

The goals of this Vector Management Plan are to:

1. Protect public health
2. Control and reduce public exposure to vectors and human diseases
3. Reduce nuisance characteristics that are associated with vectors

2.0 Project Description

The project is a proposal to establish a mineral resource recovery operation and associated activities to create much needed construction aggregates and materials to serve the economy of San Diego County for an approximate 90+-year period. During and after mineral resource recovery operations, the open pit will serve as a receiver site for inert debris such as concrete, asphalt, rock, and soil. The project is located within a 431-acre ownership with a plant site and extractive operations proposed on 110 acres of the site. The balance of the 431-acre ownership would be placed in biological open space prior to aggregate recovery activities. Approximately 89.2-million tons of mineral resource would be extracted from the site and over 32 million cubic yards of inert debris would be received over a 120+-year period.

Anticipated operations at the site would include the following activities:

- Phased Recovery of Rock Resources
- Materials processing
- Concrete Batch Plant
- Cement Treated Base Plant
- Asphalt Batch Plant
- Recycle of Asphalt and Concrete Products
- Inert Debris Engineered Fill Operation (IDEFO)

Primary Processing Plant

The primary plant is loosely defined as the area required to process the raw material and crush it to a size suitable for further processing and screening. Typically, a primary plant will crush the rock, screen out unusable fines, and deposit the crushed rock in a surge pile for use by the secondary plant. The primary plant is independent of the secondary plant and can be used without operating the secondary plant. It is anticipated that the primary plant would consist of a jaw crusher, a screen, and a primary crusher. Depending upon distance from the processing plant,

it may be feasible to utilize a remote jaw crusher and overland conveyor to move materials to the secondary processing plant.

Secondary Processing Plant

The secondary plant would consist of 2-4 rock crushers to further reduce the size of the rock, 5-7 screens to sort the material by size, and a washer to clean dirt from certain types of material to meet end product specifications. Materials washing will require construction of a pond to recycle and store water. Front end loaders would be needed only to load trucks. Rock which has been processed for use in manufacturing other products, such as concrete or asphaltic concrete, is typically referred to as aggregate.

Finished aggregate would be stockpiled and/or stored in overhead loading bins. The stockpiles would be approximately 35' high. The aggregate would then be loaded onto trucks either with a front end loader or by gates on the bottom of the overhead loading bins. Prior to leaving the site, loaded trucks are top watered to prevent roadway dust. Then the trucks must pass across a scale to determine the total weight of the truck and to identify the type and weight of the aggregate.

Operation of the processing plant will require approval of permits from the San Diego Air Pollution Control District (APCD). Dust would be controlled by state-of-the-art dust control system using the best available control technology with full review and monitoring by the APCD.

Buildings associated with the aggregate plant at the Otay Hills Quarry would likely include an office building, a small scale office, and maintenance shop. These facilities would be located near the secondary plant. Site operations would likely employ approximately 10-15 persons. On-site parking will be required.

Concrete Batch Plant

A concrete batch plant would be located on site. The plant would be set up so that materials can be conveyed from the aggregate stockpiles for direct loading of the concrete batch plant. Within the concrete batch plant, appropriate quantities of aggregate of various types, cement, and water are weighed to make up a batch of concrete. These materials are then discharged into a mixer drum on a ready mix concrete truck. A concrete batch plant is relatively quiet and compliance with APCD permits, requiring best available control technology, will ensure a relatively emission and dust free operation.

Asphalt Batch Plant

An asphaltic concrete plant would also be located on site. The plant would be set up so that materials can be conveyed from the aggregate stockpiles for direct loading of the asphalt plant by conveyor. Material that is conveyed to the asphalt plant will include recycled asphalt. The asphalt plant would discharge the various types of aggregate into a large rotating drum, where the aggregate is heated to drive off water. The heated materials are then mixed with asphalt to make asphaltic concrete. An asphaltic concrete plant is relatively quiet and compliance with APCD permits,

requiring best available control technology, will ensure a relatively emission and dust free operation.

Cement Treated Base

A cement treated base plant will be located at the site. Cement treated base is a rock/sand mixture that has been mixed with cement powder to provide improved strength and stability for highway and foundation projects.

Recycle of Concrete and Asphalt Products

Efficient use of resources requires that all used concrete and asphalt products are recycled for beneficial use. This process involves the import of used concrete and asphalt materials, crushing, and then exporting for use as road base or as a foundation material. These materials may also be blended with rock originating from the site to improve performance characteristics.

3.0 Existing Conditions

The site is located at the extreme eastern end of Otay Mesa within the rising hills of the San Ysidro Mountains. In this area, resistant rocks of the Santiago Peak Volcanics rise above the gently sloping hills to the west (Figure 1). Currently the project site consists of natural terrain that slopes in a westerly and southerly direction which causes the existing on-and-off site runoff to flow in these paths.

This vector management plan is necessary to address collection of water within the proposed open pit and processing plant area ponds and detention basins that may result in breeding grounds for vectors. Water could potentially collect from direct precipitation, runoff from the contributing watershed, and/or groundwater inflow from sidewall seepage.

4.0 Vector Management

There are three primary outflow locations from the site. The proposed project will not increase the 100-year flow rate at two of the three outflow locations. However, the flow rate from the northwesterly outflow location will increase slightly. Therefore, a detention basin will be installed near the outflow to mitigate for the flow increase. Detention will also occur during the extraction phases of the project due to runoff that will be captured in the pit. The pit will temporarily alter the existing flow patterns until backfilling is complete. Runoff that currently flows offsite, from the pit footprint and land to the east at higher elevations, would be captured in the pit. Sediment basins and other BMPs (fiber rolls, hydroseeding, etc.) will be used to capture runoff and sediment. Therefore, water that collects in the the open pit, processing area ponds and detention basins will need to be monitored and managed to achieve proper vector management. This type of management is described in the conditions listed below. The project will also operate under an Industrial Storm Water Pollution Prevention Plan (SWPPP). Backfilling the pit will result in a post-reclamation land surface with generally the same flow volumes, flow rates, and flow directions as pre-project conditions.

Over the past 30 years of rainfall data, the wettest year (1997-1998) produced approximately 27.3 inches of rainfall. These numbers do not factor in evaporation, which is estimated to occur near the site at an annual rate of 4.4 feet (Limited Groundwater Investigation, Earth Tech, 2004). Evaporation would reduce the amount of cumulative runoff within the pit. Water that flows into the pit will be collected in a sump and pumped to the processing plant area ponds for use with materials processing and dust control. Rainwater would be collected over a period of 6 to 8 months and it would be unlikely that any single rain event would overwhelm the site. The proposed extraction and processing operation will require a projected 75 acre-feet per year (afy) of water to be utilized by project operations. This consists of 23 afy for materials washing, 22 afy for pit and haul road dust control, 19 afy for the concrete plant, and 11 afy for plant dust control. A water balance model and water quality analysis, taking into account the above factors, is included within the DEIR (AECOM, 2012).

AECOM's investigation relied on reported well yields from five known wells drilled in the vicinity of the proposed pit. The median and mean estimated well yields of the five wells are approximately 4 and 7-1/2 gallons per minute (gpm), respectively. Discounting Well 3 - due to a shallow, and possibly perched, water table - the mean of the remaining four wells is roughly 4 gpm. AECOM's water balance model predicts that the water in the pit may rise as much as 200 feet (300 feet msl) without mitigation. The model predicts that water will slowly enter the excavation and will rise approximately 25 to 100 feet per decade. Since the applicant has stipulated that excavation will not occur within the pit more than a few feet below standing water, the chance of significant accumulation in the pit is minimal.

The following is a list of conditions to ensure that water collected in the open pit, detention basin, and processing plant ponds does not propagate the breeding of vectors.

1. If water collects in the open pit, it will be collected in a sump and pumped to the processing plant area ponds for use with materials processing and dust control. Therefore, this water will be constantly circulating and will help to prevent propagation of vectors. If groundwater accumulates in the excavation area, excavation will halt at that elevation. Groundwater, if present, will be treated the same way as surface runoff.

2. During the wet season (October through March) the open pit, processing plant area ponds and detention basins will be visually inspected monthly, by the operations staff, for the presence of vectors and Mosquito Fish (Gambusia affinis). If necessary, corrective measures, described in this list of conditions, will be initiated.

3. During the dry season (April through September) the open pit, processing plant area ponds and detention basins will be visually inspected weekly, by the operations staff, for the presence of vectors and Mosquito Fish (Gambusia affinis). If necessary, corrective measures, described in this list of conditions, will be initiated.

4. Mosquitoes within the open pit, processing plant area ponds or detention basins, will be mitigated with the use of_Mosquito Fish (Gambusia affinis) so that they can control the presence of mosquitoes.

5.0 Long-Term Maintenance

Ongoing maintenance of the open pit, processing area ponds and detention basins shall be conducted in a manner that complies with DEH-VCP regulations. Ongoing maintenance shall include monitoring of the open pit, processing plant area ponds and detention basins for the existence of vector conditions and the continued presence of Mosquito Fish. Regardless of which phase, sub-phase, or intensity of mining is occurring during extraction or backfilling operations, the conditions listed above will still apply. Appropriate mitigation measures will be utilized. Maintenance shall continue until backfilling of the pit is complete. Once complete, the onsite conditions will result in a post-reclamation land surface with generally the same flow volumes, flow rates, and flow directions as pre-project conditions. Refer to section 4.0 Vector Management for specific ongoing maintenance requirements.

Any changes to the vector management plan shall be made in consultation with and approved by DEH-VCP Staff.

The measures identified herein are considered part of the proposed project design and will be carried out as part of project implementation. I understand the breeding of mosquitoes is unlawful under the State of California Health and Safety Code Section 2060-2067. I will permit the County of San Diego, Vector Surveillance and Control program to place adult mosquito monitors and to enforce this document as needed.

Property Owner _____

Project Applicant _____

Greg Slawson, DEH VCP _____

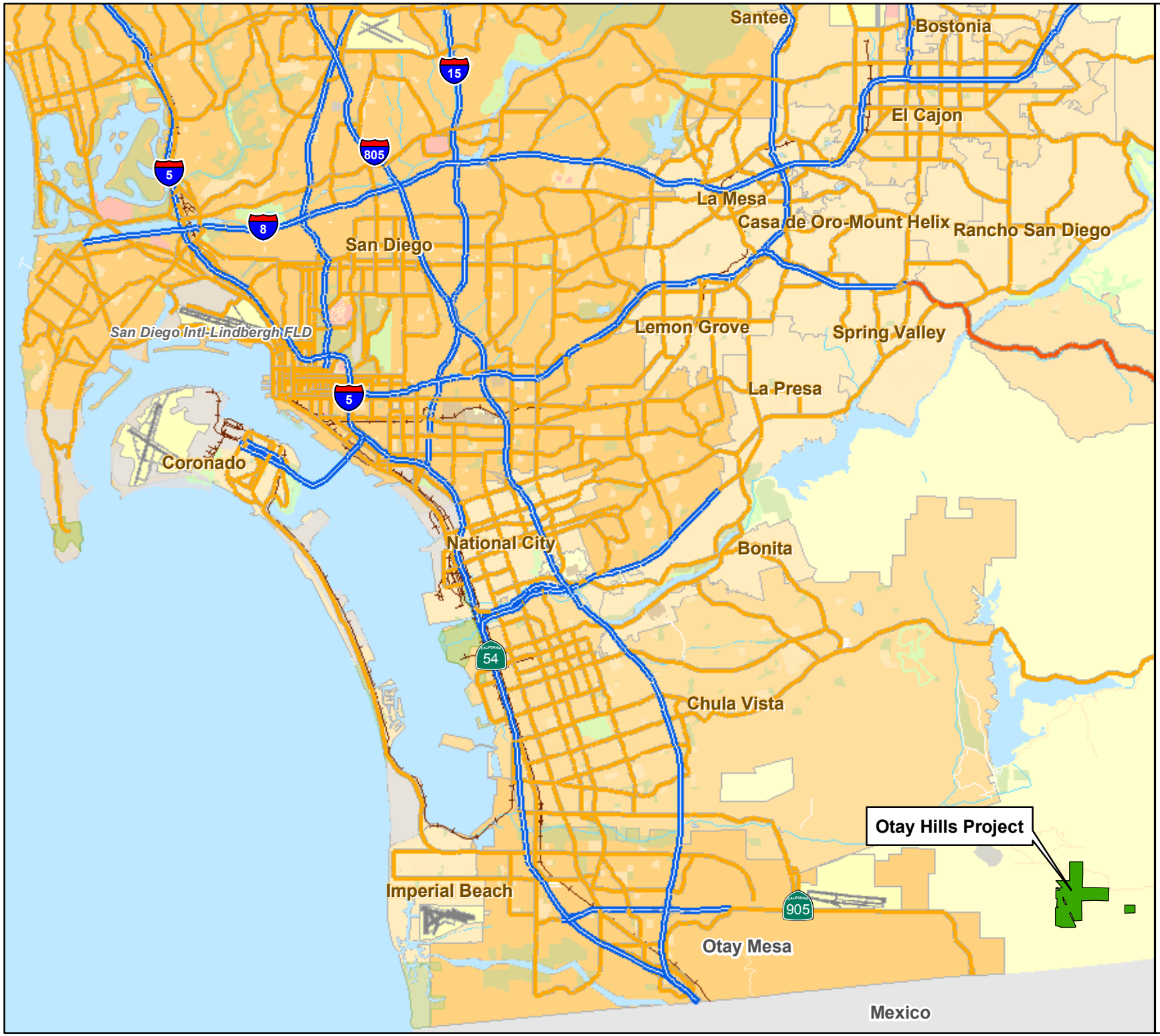

Figure 1 Otay Hills Project Regional Location Map

EnviroMINE Inc.

Basemap: ESRI