Attachment 3

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ATTACHMENT 3

Pacific Waste Services, Inc.
12925 Alcosta Blvd. Suite 1
San Ramon, Ca. 94583
Office: 925-244-0392
Fax: 925-244-0210

RECLAMATION PLAN
CARMEL STONE MINE
MONTEREY COUNTY, CALIFORNIA

JULY 28, 2009
(REVISED DEC. 11, 2009 & AUG. 31, 2010)
SUPPLEMENTAL ADDENDUM (NOVEMBER 30, 2011)

PREPARED FOR:

VANCE QUERFURTH

SUBMITTED TO:

TIM MOORE, GEOLOGIST
U.S. DEPT. OF INTERIOR, BLM
20 HAMILTON COURT
HOLLISTER, CA. 95023
T:831-630-5000/F:831-630-5055
Email:timothy_moore@ca.blm.gov
&
PAULA BRADLEY, ASSOCIATE PLANNER
MONTEREY COUNTY PLANNING DEPT.
168 W. ALISAL STREET, 2ND FLOOR
SALINAS, CA. 93901
T:831-755-5025/F:831-757-9516
Email: BradleyP@co.monterey.ca.us

PREPARED BY:
PACIFIC WASTE SERVICES, INC.
12925 ALCOSTA BLVD. #1
SAN RAMON, CA. 94583
T:925-244-0392/F:925-244-0210
Email:jimw@pacificwaste.com

Project No. 210-1.1

This updated Reclamation Plan has incorporated necessary changes and details to satisfy comments/questions raised by California Office of Mine Reclamation (OMR). This final Reclamation Plan, Carmel Stone Mine, incorporates required items from the Monterey County Planning Commission Hearing dated October 26, 2011. Resolution 11-035 – Exhibit C, Conditions 8 and 13 required updating of the August 31, 2010 Reclamation Plan, Carmel Stone Mine.

PROPOSAL

Vance Querfurth has the opportunity to develop a Monterey shale mine on U.S. Department of the Interior, Bureau of Land Management (BLM) property. Initially, Mr. Querfurth has requested a Non-Competitive Monterey Shale 5-year Sale Contract from the U.S. Department of the Interior, Bureau of Land Management (BLM) for a 12 ± acre area located in the Williams Hill Area of Monterey County. Mr. Querfurth is attempting to secure approval for the mine, named hereinafter "Carmel Stone Mine", that would propose to operate the mine for an initial 5-year Sale Contract starting upon appropriate BLM and other applicable approvals (SMARA Permitting by County of Monterey and California Office of Mine Reclamation. The mine is planned and designed to operate for a period of 25 years. The Reclamation Plan will be utilized as the plan to reclaim the mine during and after mining operations. The term of the Reclamation Plan shall be at least the duration of the mining operations, 25 years, and as long after mining stops to complete site reclamation to the satisfaction of the land owner, BLM. The mining operation will terminate by ~~December 31, 2035~~ October 26, 2036.

The specific location is described below with supporting location layouts shown on Figures 1, 2, 3 and 4. The site is referred to as "Carmel Stone Mine".

An Exploratory Permit had been issued in 2008 by BLM for a 50 ft. by 75 ft. area with up to 7 foot deep and 900 cubic yards, within the 12 acre area. Exploration has found the material meets the expectations and a full Non-Competitive Monterey Shale 5-Year Sale Contract is desired.

LOCATION

The Carmel Stone Mine is located between communities of San Ardo and Lockwood in Monterey County, California on BLM Land adjacent to San Ardo Lockwood Road. The site is located solely on BLM land and is at least 50 feet from private property boundary to the east at location represented by Monterey

County Assessors Map (See Figure 3, attached). The ~~majority of the~~ 12 ± acre mine site is located in the N ½ NW ¼ SW ¼ Section 28 and SW ¼ SW ¼ NW ¼ Section 28, T22S, R9E. The existing BLM access road to the Carmel Stone Mine is located in SE ¼ SE ¼ NE ¼ Section 29 T22S R9E and will be used for access off San Ardo Lockwood Road. A Monterey County Encroachment Permit will be secured from Monterey County Public Works Department in order conduct improvements to the site access road only within the County Easement as required by Condition 15 of Resolution 11-035 – Exhibit C (hereinafter referred to as County Permit). No mining activities will be performed in Section 29. The attached Figure 2 USGS Map (Williams Hill Quadrangle Base Map) shows the limits of the 12 ± acre Carmel Stone Mine site on a large scale. The Site Location is shown on Figure 2. The Site Location in comparison to private and BLM lands within Monterey County are shown on Figure 3.

The southern limits will encompass a portion of the slope located above the County Road - San Ardo Lockwood Road. The eastern limits are located 100 ft. from the private property as represented by the Monterey County Assessor's Map and BLM Map limits. Site surveying in May 2010 found a possible property line corner survey monument (rebar and stake with illegible markings) for this BLM/private property line based on spatial location on-site and plotting of the surveyed point on the site topographic map.

ADJACENT PRIVATE PROPERTY WITHIN 300 FT. OF SITE

There is only one private property owner within 300 feet of the proposed Carmel Stone Mine located on BLM land. The land owner of record is Leslie Aurignac as reported by Monterey County Assessor's office. This 200 acre Parcel No. 422-101-034-000 is shown on our Figure 3 which presents Assessors Map Book 422, Page 10 information.

SITE CONDITIONS

Site Access. To access the site from Highway 101, take the Paris Valley Road off ramp, proceed west on Paris Valley Road, proceed south on San Ardo Lockwood Road to the Carmel Stone Mine site. Travel distance from Highway 101 to the Carmel Stone Mine site is approximately 6.25 miles as shown on Figure 1. ~~Alternatively, access to the site would Highway 101, proceed west on the Jolon Road Exit (located N of King City), passing Fort Hunter Leggett to Lockwood. From Lockwood, take the San Ardo Lockwood Road to the Carmel Stone Mine site.~~ County Permit Condition 16 requires "truck access to and from the site is restricted to the portion of San Ardo-Lockwood Road east of the site towards Paris

Valley Road and State Highway 101. Use of the portion of the road west of the site for truck access and hauling of material is prohibited."

Topography. The site topography consists of a ridgeline located above the San Ardo Lockwood Road between Elevations 1940' and 2100' ± MSL. The San Ardo Lockwood Road cut slope generally forms the southern perimeter of the 12 acre mine area. We have set the mine limits approximately 20 to 25 feet above the top of the ½:1 San Ardo Lockwood Road cut slope. The USGS quadrangle map (Williams Hill) has been compared to actual site topographic conditions and are found to provide accurate representation of the site. A GPS survey of the site was conducted on May 4, 2010 to determine the accuracy of USGS quadrangle map. The GPS survey tied accurately into on-site/adjacent topographic features visible on the USGS map and also the USGS Benchmark located at Williams Hill. Detailed documentation of the GPS survey is presented in Appendix 6. A site specific ground or aerial topographic mapping is not necessary given the verified accuracy of the USGS mapping for the Carmel Stone Mine site. As a result, the USGS map has been determined to be accurate and will be used as the Carmel Stone Mine base map for the site drawings, Figures 4, 5 and 6, contained in this report. The contour intervals have been increased from 20 foot to 10 foot as requested by OMR. The drawing scale has been increased from 1 inch equals 200 feet to 1 inch equals 100 feet as requested by OMR.

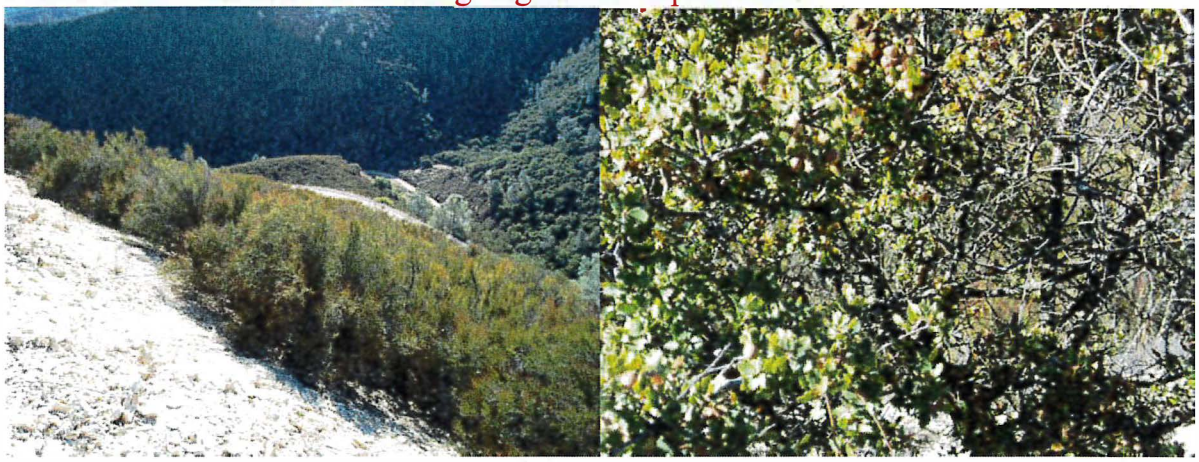
Climate. The site is located in a Mediterranean climate area which experience dry hot summers and mild light rainfall winters. Annual rainfall is in the 15 inch range. Recent rainfall levels have been below 10 inches per year.

Vegetation. There are five distinct vegetation species on-site: Pine trees; Manzanita bush, Scrub Oak bush/small tree, Chamise bush and Chaparrel pea bush. There are no known protected plants on-site or in close proximity. CNPS List 1B (Rare species) may grow in the grassy valleys below the site. A site vegetation assessment of the project site has considered the estimated number, size and type of trees to be removed and is provided in Appendix 1. A "Supplemental Biological Information" evaluation was conducted of the Carmel Stone Mine site and report dated May 31, 2011 was prepared by Nicole Nedeff. A copy of this document is also provided n Appendix 1.

Figure 4 provides a layout of existing areas of vegetation as required in SMARA Section 2773(a). Additionally, an estimate of the acres of shrubs proposed to be removed by project development is provided in Appendix 1. Samples of the plant species were collected during the site vegetation assessment and were

characterized by a BLM representative. BLM has provided an assessment of site vegetation at the proposed project site and finds no endangered or threatened species. As noted, a "Supplemental Biological Information" evaluation was conducted and findings presented in the May 31, 2011 report prepared by Nicole Nedeff.

Photo documentation of existing vegetation is provided.



Topsoil Resources. The topsoil resources were inspected at the same time the vegetation observations and recording was being accomplished. The topsoil was found to be variable throughout the site. Some areas had only an inch of topsoil before solid fractured rock was found. Other areas were found to have topsoil at depths of 6 inches to 12 inches.

Animals. There were a few birds observed during site visits. Other animals may include squirrels, snakes, lizards. It is reported there are no endangered or listed species for this area. BLM has provided an assessment of animals at the proposed project site and finds no endangered or threatened species.

Drainage. Given the site is on a ridgeline, drainage currently drains in all directions. The largest drainage topographic relief is to the north. Steep high cut (up to 20 feet) slopes exist along the north side of the San Ardo Lockwood Road with limited to no observed erosion. No creeks, rivers, ponds, lakes or any watercourses are identified for the site or immediately down gradient from the site.

Geology. A site and local geologic assessment of the Carmel Stone Mine has been conducted by RMC Geoscience, Inc. The findings of the geologic assessment is contained in Appendix 4 of this Reclamation Plan.

MINE DESIGN

Environmental Controls. The mine is designed to provide several environmental controls by leaving outside perimeter berms of soil vegetation higher than active operations located inside the perimeter berms. These perimeter berms provide visual screening, drainage control, sediment control, dust control, fire control and wind control. In essence, the mining design creates a bowl where there is always a

perimeter berm providing environmental controls. Side casting of mined material will not occur at the site and that any material inadvertently side casted will be brought back into the mine limits.

Mine Limits. The mine limits will remove none of the San Ardo Lockwood Road existing road cut slope located along the southern slope of the subject mine contract area. The mine grading plan represents a 20 to 25 foot buffer between the top slope hinge of the ½:1 H:V road cut and commencement of mine excavation. That buffer zone will result in maintaining existing vegetation within the buffer zone. Appropriate operations, excavation and procedures are established to avoid danger to vehicles traveling on San Ardo Lockwood Road. Such features include development of a southern perimeter soil/vegetation berm to avoid any opportunity for material moving past the perimeter berm and avoids impacts to the San Ardo Lockwood Road below. Other limits of the mine are shown on Figures 5 and 6 which are controlled by access road grading and associated topography and the mine limits include the access road. There is no earthfill as part of the Reclamation Plan as reflected on Figure 5. The Site Geotechnical Report has no recommendations for earthfill as the mine operation has been revised and designed without earthfill.

The mine limits depict the perimeter of the mining project. Within the mine limits, the final graded surfaces will be revegetated as described in the reclamation plan portion.

The mine vertical elevation excavation limits range from top of two existing ridge tops at El. 2100' and 2020' MSL to excavation base detention basins at El. 2000' and 1920' MSL, respectively. As a result, the maximum depth of mine excavation is 100 ft. below existing ground surface. The Final Grading Plan, Figure 5 presents the supporting topographic data. Such topographic data is tied to site topography and associated site survey controls (i.e. site specific benchmark).

Maximum Slopes. Maximum slopes will be maintained at no steeper than 2:1. The current cut slope above San Ardo Lockwood Road is at ½:1 slope. This road cut has existed for at least 30 years without any signs of instability, excessive erosion, etc. based on USGS mapping for the Williams Hill Quadrangle map, Photorevised in 1979 and recent site observations. The Site Geologic Report (Appendix 4) further confirms stability of a 2:1 slope for site grading upon completing a detailed slope stability analysis using site specific conditions and use of known location of the Rincon Fault. Furthermore, review of the native slopes on the site and below find slopes range from 1.3:1 to 2.5:1. No signs of instability were observed or

documented for this area based on site investigations, review of aerial photos, and review of area geologic reference material. The Geologic Report (Appendix 4) evaluated site and neighboring property conditions of native formations stability in several access road cuts. As a result, utilizing a maximum slope for the design of 2:1 is an acceptable slope. A Geotechnical Report which addresses slope stability prepared by a California registered Civil Engineer is provided in Appendix 2. Additional geotechnical information is provided in Appendix 4.

The Geologic Report (Appendix 4) also does not identify any potential instability of the final grading plan from earthquake induced ground shaking.

Mine Development. Typical mine development during the first 5-year operations is represented in the "5-Year Operations Plan" presented in Figure 6 and "Section" presented in Figure 7. Subsequent incremental 5-year operations sequencing is also presented in the referenced figures. The mine will commence development once all permits and approvals are issued. The mine has a projected completion date of December 31, 2035. County Permit has approved a closure date of October 26, 2036.

Mining Quantities. The estimated quantity of Monterey shale for which the surface mining operation will remove is ~~1.25 million~~ 639,800 cubic yards (equates to ~~1.25 million~~ 639,800 tons, 1 cubic yard = 1 ton). In addition, the mined material will have up to ~~125,000~~ 62,500 cubic yards of excess soil or undesirable rock that will be put to beneficial use at the mine site. An additional 20,000 cubic yards of surface topsoil, 12 inch thick, will be removed and stockpiled separately on-site for future use.

Future Mining. The mine design will be limited in the future should the perimeter limitations remain unchanged. Access roads limit any further lowering of the base of the Carmel Stone Mine as designed. However, should it be acceptable to remove the ridgeline buffer between the mine and San Ardo Lockwood Road, further mining could occur within that ridgeline. Such mining is not part of this proposed Mine Design or Reclamation Plan. This section address OMR comments and SMARA §2772(c)(9).

Drainage. During operations, drainage is retained on-site without discharge off-site. As final reclamation, drainage will be retained on-site in 2 detention basins with an overflow capability draining to the north in existing drainage corridors when rainfall exceeds the retention basin capacity. The receiving drainage corridors have historically handled drainage from the pre-development mine area.

The drainage from the north side of San Ardo Lockwood Road ultimately reaches the Salinas River. Appropriate erosion control will be implemented as described further in the erosion control plan, titled Surface Water Pollution Prevention Plan.

OMR referenced CCR Section 3706(d) requires; "*Surface runoff and drainage from surface mining activities shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gullying, sedimentation and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20 year/1 hour intensity storm event.*" Review of resources from Monterey County and NOAA (National Oceanic and Atmospheric Administration) provide estimated storm events of 2, 10, 25, 50, 100 year design storm events, but no 20 year storm event as required in CCR Section 3706(d). As a result, the 25-year storm event will be used for assuring erosion control methods handle more than regulatory required.

Review of the rainfall intensity reference source NOAA Atlas 2 "Precipitation-Frequency Atlas of the Western United States" finds the site location to have a 100-year recurrence interval, 24-hour design storm event of approximately 5.0 inches over a 24-hour period or 0.21 inches/hour. A 25-year recurrence interval, 24-hour design storm event from the same reference document results in approximately 4.5 inches over a 24-hour period 0.19 inches/hour. Review of the rainfall intensity reference source from Monterey County Public Works Department, "Monterey County Rainfall Intensity Chart for North & Central Monterey County 2 Year 1 Hour" shows rainfall intensity for the site of approximately 0.5 inches/hour. The Monterey County Rainfall Intensity Chart further provides recommended conversion factor from a 2 Year 1 Hour Rainfall Intensity, whereas a 25-year design storm equals the 2-year design storm times 1.73 or 0.865 inches/hour. Appendix 5 provides supporting design/documentation.

At the 25-Year, 1 Hour design storm of 0.865 inches/hour over the site watershed area of 12 +/- acres, an 80% runoff factor, we estimate the resulting runoff will be approximately 225,500 gallons. Two designed final detention ponds on-site have varying dimensions with total designed storage capacity of 3,214,000 gallons. Such detention pond capacity avoids any discharge from the regulatory 25-year/1-hour duration event and therefore, there is no discharge erosion issues. Evaluation of a 25 year 24 hour and 100 year 24 hour rainfall intensity finds that under both storm event conditions the resulting runoff of 1,173,000 gallons and 1,303,000 gallons are retained without runoff from the designed detention ponds.

Even though discharge off-site from the designed detention ponds is not anticipated due to detention pond capacity, a culvert overflow will be installed for discharge erosion control from Pond 2 detention basins into existing, historical, natural drainage corridors. A concreted, rip rap erosion and energy dissipation structure will be installed at the culvert outlet. Pond 1 discharge is to Pond 2 via a drainage ditch on-site. Pond 2 will be have the culvert installed for emergency discharges.

Additional best management practices for storm water control will be implemented including use of berms, silt fences, hay bales, sand bags, rock bags and straw wattles to protect the mine site and adjacent property from erosion, gullying, sedimentation, and contamination. The site will have a Storm Water Pollution Prevention Plan for the site storm water drainage controls and discharges supporting the site's Industrial Discharge NPDES Permit from the State Water Resources Control Board. Such is needed because there will be possible on-site runoff discharge from the Carmel Stone Mine area.

The existing, historic surface drainage pattern will not be altered by the mining operation, designed grading, detention ponds, and isolated overflow culverts. No earthfill is proposed outside the designed Carmel Stone Mine area. Therefore, there is no proposal to reroute, restrict or otherwise impact natural drainages. Additionally, there are no stream diversions required.

MINE OPERATION

The mine operations include the following components described below: Excavation Methods; Equipment; Dust Control Methods; Fire Control Methods; Drainage Control Methods; Access Roads/Ramps; Operating Hours; and Estimated Tonnage/Loads.

Monitoring. Prior to commencement of clearing of vegetation and topsoil, the area shall be mapped for vegetation type and density, topsoil resources (depths and soil type) as required by CCR §3711(b).

Clearing. Clearing of vegetation and topsoil will occur just in advance of the areas mining operation commencement. The cleared vegetation and topsoil will be stockpiled in dedicated topsoil on-site stockpiles for future reclamation use. Such topsoil stockpiles shall be clearly identified and protected from wind and water erosion (CCR §3711(d)). No other materials will be mixed with this dedicated

topsoil stockpile. Such stockpiles will be within the mining operations area for subsequent reclamation use. Wind and water erosion can be controlled with vegetative cover created by applying approximately 15 pounds per acre of an oat & fetch seed mix.

Excavation. Excavation methods will be employed to reduce adverse disturbance of the Monterey Shale materials being mined. The excavation methods will also be employed to avoid off-site/perimeter impacts and to keep intact the natural perimeter berm as the operation continues to be lowered. The planned Mining Sequence Operations Plan is presented in Figure 6 and Sections A-A', B-B', and C-C' is presented in Figure 7. In general, each 10 foot deep mining sequence area excavation by 100 foot length and 50 foot width should provide sufficient material depending on percentage of useable material for each year of anticipated mining material removal. Such dimensions may vary as the mine is developed following the operations sequence presented in the Figures. Side casting of mined material will not occur at the site and that any material inadvertently side casted will be brought back into the mine limits. Furthermore, there is no eartfilling allowed around the perimeter of the mine limits.

Figure 5 has also been corrected to show the proposed access road is within the mine limits boundary and that there is no earthfill proposed by the project.

The Monterey Shale stone material will be loaded onto pallets (or other containers) or directly to trailers, flat bed truck, or 10-wheel dump truck primarily by hand of by small loader type equipment for delivery to regional stone markets. The smaller Monterey Shale rock (½ to 3 inch size) material will be loaded into 10-wheel trucks, heavy duty storage bags for distribution as decorative rock or other similar use. A portion of the soil and fine rock will be removed from the site for distribution as general fill material. The remaining soil and fine rock material will be stockpiled separate from topsoil, for future site reclamation uses (subgrade fill under final topsoil. The mined and removed material is anticipated to be approximately 90% to 95% of total excavated material, using the mining operations methods planned, distributed uses, as described herein. At these anticipated mined and removal rates, approximately 62,500 to 125,000 cubic yards of soil/rock will be stockpiled on-site during the 25-year operations period and used for final site reclamation uses (access roads, subgrade for topsoil, drainage ditches, etc.).

Soil Stockpile. Soil/rock and topsoil will be placed in separate stockpiles as recommended by OMR and the locations will be documented during operations.

Mine reclamation section of this reclamation plan describes methods of revegetation and test plot evaluations. Soil/rock stockpiles will have material added on an as needed basis. The soil/rock stockpile will be built to allow outside, top surfaces to be vegetated or surfaces mulched to reduce erosion from wind and rain and to promote vegetation growth. The topsoil stockpile will be vegetated, if needed, with native site plants to reduce erosion from wind and rain. No soil/rock or topsoil stockpiles will remain after completion of final grading and reclamation activities as represented by Figure 5. Figure 6 presents a 5-year Operations Plan that shows separate stockpiles for topsoil and soil/rock. Such stockpiles will move as the mine is developed, slopes are brought to final grade and reclaimed, topsoil installed and vegetated. At all times, the stockpiles will be located within the mine limits. Further phased mine development and stockpile locations are presented in Figure 7.

Slopes. The mine will be graded at currently local stable maximum slopes of 2:1 (Horizontal:Vertical). Minimum slopes will be graded at 2%. Final slopes shall be track walked as described in the Site Geotechnical Report found in Appendix 2, attached. Such limited compaction will not hinder the growth of vegetation. No decompaction is planned or necessary before application of vegetation material.

Fencing and Signage. No fencing will be installed around the mine perimeter. Only a gate will be installed on the access road to the site. Signage will only be located at the main entrance to the mine access road at the intersection with San Ardo Lockwood Road. As required by County Permit Condition 17, portable sign will be located at the site entrance at San Ardo Lockwood Road during hours of operation that shall include the contact information for the operator or other staff including the name and phone number where the public can contact the operator during mining operations and transportation of materials for complaints concerning unsafe practices and/or unsafe driving. Any complaints shall be responded to and action taken to follow-up to resolve any problem within 24 hours. BLM has advised that the mine can only install fencing or a gate at the site's access road entrance and permanent signage on BLM property is not allowed. Therefore, there will be no perimeter fencing around the mine site, only a gate on the entrance road will be installed. Designed perimeter erosion control BMP will not only provide storm water erosion control, but also should limit access to the mine site around the site perimeter without installing a fence.

Equipment. Equipment used for the Carmel Stone Mine operations are expected to utilize the following equipment when needed, but not all at the same time:

- Excavator (CAT 320B or equal) for excavating the Monterey Shale material into large blocks, loading the material onto pallets, flat bed trucks, trailers or 10-wheel trucks. The excavator will always pull material into the Monterey Shale borrow pit in order to avoid sending rocks down the steep outside, perimeter slopes. Additionally, the excavator will be used to separate the excess topsoil and smaller Monterey Shale material and place into a separate stockpile areas.
- Water tank mounted on trailer to provide dust control and fire control.
- Skip Loader with forks for pallet maneuvering. The front loader bucket can be used for loading smaller pieces of Monterey Shale onto pallets or trailers, or placing small pieces of Monterey Shale into a small rock stockpile and placing topsoil into a separate stockpile. The Skip Loader would also be used to grade, smooth access roads.
- Backhoe/Loader with forks could be used for similar work efforts described for the Skip Loader above. In addition, the backhoe could be used to excavate larger pieces of Monterey Shale instead of the Excavator. The backhoe would also be used to carefully remove and stockpile the vegetation when the perimeter berms are lowered and as the borrow pit is lowered.
- Track or rubber tire loader may also be used during the operation.
- 10-wheel trucks used to transport product from the site (10 ton capacity)
- Flat Bed Trucks used to transport product from the site (7 ton capacity)
- Heavy Duty Trailer used to transport product from the site (5 ton capacity)

Dust Control. Dust is controlled by the equipment and associated operation methods. Dust control, when needed, for loading of the product into trucks or trailers will be accomplished by use of watering the material before and during loading: the Monterey Shale stone may be loaded onto pallets (other containers) or loaded into 10-wheel trucks; the loose surrounding small rock pieces may be loaded into 10-wheel trucks, containers, or bags; and soil/small rock may be loaded into 10-wheel trucks. The loading of material will have varying potential dust production. During the operation, the operator shall comply with MPUAPCD Rule 440. In general, water access roads twice per day during operations; a non-toxic binder may be used on access roads, excavated slopes, stockpiles; haul trucks to maintain a freeboard and shall be covered ; cover or protect inactive stockpiles.

Fire Protection. Fire protection is provided by making sure all equipment has appropriate spark controls and equipment is operated within manufacturers accepted engine temperature ranges. Appropriate perimeter fire break will be installed around the mine operations area. A water tank with pump will be

available on-site when mining operations are underway. All equipment will have operational fire extinguishers.

Surface Drainage. Drainage will be contained within the mine area. The mine design is intended to keep runoff drainage contained on-site without running off from the site. Two low lying permanent detention basins will be created from the active mining operation area will be constructed to retain storm water runoff from the mine site. Temporary detention basins will be constructed during the on-going operations until the mine reaches final grades. This water will be retained on-site with subsequent evaporation and/or use for dust control, watering of plants for future reclamation. As noted, these low lying areas will move as the mining operation proceeds to the final base grading plan.

As further site information/design, an erosion control plan, titled Storm Water Pollution Prevention Plan is contained in Appendix 3. This document describes the best management practices (BMP's) that will be implemented to control erosion, avoid eroded soils from entering any off-site drainage.

Access Roads. A BLM access road currently exists to the mine area. The access road currently has a "Y" intersection with San Ardo Lockwood Road. The access road intersection with San Ardo Lockwood Road will not be changed except within the County Easement where the road transition will be improved under a County Encroachment Permit as required by the County Permit Condition 15. This BLM access road in Section 29 is not part of the 12 ± acre Carmel Stone Mine area to be secured under contract. A gate will be installed on the mine access road at the Section 29 western boundary to limit access to the Carmel Stone mine area and signs with limitations for access will be posted. Access roads to the final graded areas of the mine will be constructed to widths of 25 to 40 feet including a perimeter drainage ditch and perimeter berm and at slopes of 12% maximum. All access roads will pitched to the mine area, minimizing off-site drainage. Compaction of access road rock surface will be tested as described in the Site Geotechnical Report found in Appendix 2, attached.

Operating Hours/Days. Operating Hours are planned to be 7 am to 6 pm Monday through Saturday during summer months and hours of daylight in winter months. The site will not be operated on major holidays. The majority of the material will be hauled from the mine site by Carmel Stone trucks or trailers. The material will have a weight ticket to track the material mined and being used off site in order to properly track and document the tons of material processed. These weight tickets and associated sales receipts will provide documentation for payment to BLM.

After a period of time, a typical load may be assigned a weight per load with BLM approval. This may be necessary if the scale is closed or if the customer is between the site and a scale.

Production/Operation Tons & Loads. The operation is expected to produce the following tonnages during the first 5-year period:

Year Period	Annual Tons (1 ton = 1 cu.yd.)	Avg. Summer (ton/mo)	Avg. Winter (ton/mo.)	Max. Tons Per Day	Max. Loads Per Day (5 ton avg)
2011	4000	500	170	50	10
2012	4800	600	200	60	12
2013	5800	725	240	70	14
2014	6900	860	285	80	16
2015	8300	1035	345	90	18
Total	29800				

Note: Majority of truck trips will use access roads through Lockwood/King City to Hwy. 101 and minimal use of access roads to/from Hwy. 101 near San Ardo.

The planned first 5-year operations period and operations grading plan presented in Figure 6 provides adequate material to meet the mined Monterey stone material requirements listed above.

The subsequent 20-year operations period would continue to develop the mine site to the final grading plan presented in Figure 5. Figure 7 Sections present the anticipated phased sequences of mining in 5-year increments as required by §2772(c)(6). We estimate that the 5-year mining operations sequence will result in the following mined material removal:

5- Year Period	Period Tons Removed (1 ton = 1 cu.yd.)	**Tons/Year (avg)**	**Max. Tons/Day**	**Max. Loads Per Day (20 Ton, Doubles)**
Phase 2: 2016-2020	~~230~~115,000	**23,000**	**175**	**9**
Phase 3: 2021-2025	~~290~~145,000	**29,000**	**220**	**11**
Phase 4: 2026-2030	~~330~~165,000	**33,000**	**250**	**13**
Phase 5: 2031-2035	~~370~~185,000	**37,000**	**280**	**14**
Total	~~1,220~~610,000			

Additionally Figure 7 Sections present the anticipated location for topsoil stockpiles and the anticipated located for equipment, supplies (pallets, stone bags,

containers), and other material for each of the 5 phases of mine development as required in CCR § 3709(a).

MINE RECLAMATION

The Carmel Stone Mine reclamation plan consists of revegetation (including tree planting), drainage control, access road, site maintenance and cost estimates. The planned operation of the mine will develop in 2-acre segments to accessible grades starting around the Exploration Area near El. 2000 ridgeline as shown in Figure 6 - "5-Year Operations Plan". As shown on this plan, excavation creates the initial development bowl. Review of the site conditions and development plans, finds that none of the initial development will be to final grade. In the future, as areas are brought to final grade, they will be reclaimed on a sequential basis. As worst case, there would be 2 acres of mined area that is open and would require reclamation if the mine were to cease operations at any given time. Mine Operation of this plan states, slopes will be 2:1 maximim and 2% minimum consistent with grading in the final grading plan. The mine reclamation efforts are described below.

As required by SMARA §2772(c)(9), we have assessed the effect of implementation of the reclamation plan on future mining in the area. The Carmel Stone Mine final grading plan design is controlled by access using existing BLM road from San Ardo Lockwood Road, avoiding any encroachment into the existing San Ardo Lockwood Road cut and providing a buffer to the adjacent private property. Encroachment into the County easement for the San Ardo Lockwood Road will require an Encroachment Permit as required by County Permit Condition 15. Unless either of those existing restrictions were to change, there can't be any further mining activities adjacent to the Carmel Stone Mine after final grading is achieved and reclamation completed.

Topsoil Application.

After completion subgrade material placement and grading is completed, the topsoil will be installed in thicknesses of 6 inches to 12 inches. Consistent with requirements of CCR §3711(e) the topsoil will be redistributed on the subgrade in a stable, consistent thickness during reclamation. Such distribution of topsoil will be by use of dozer or track loader equipment capable of accessing a 2:1 slope. The optimum thickness will be determined through pilot testing for revegetation. The topsoil will be placed as one layer and will one pass track walked with dozer

equipment. Such placement will not require any decompaction when vegetation is installed (CCR §3705(c)).

A soils analysis will be performed of the topsoil to determine the native soils fertility levels or soils constituents that are inadequate to successfully implement the revegetation program (CCR §3705(e)). It should be noted, when topsoil is removed, the small vegetation is removed with it and will be incorporated into the topsoil. Soils analysis will be of the topsoil stockpiled material, consisting of the topsoil and vegetation materials mixed. Such soils analysis may find it is necessary to amend the topsoil with on-site chipped vegetation material, fertilizer, compost or imported topsoil. If amendment of the topsoil is anticipated a pilot test program will be established to determine the proper amendment, amount, vegetation performance, weed control and success of topsoil amendment.

Revegetation

The area of complete revegetation during Reclamation for Carmel Stone Mine is shown on Figure 5, Final Grading Plan, within the limits of mining shown on the figure with the only exception being the rocked access road.

The surface of the excavated Monterey Shale has shown the ability to support varies vegetation growth. This existing surface topsoil material will be excavated along with the plants and placed in a separate topsoil stockpile. Such topsoil stockpile locations will vary during the phased development of the Carmel Stone Mine and anticipated locations are shown on Figure 7.

Pilot tests will be conducted where small, seedling trees/bushes are transplanted before mining operations remove the vegetation and topsoil. Such transplanted small, seedling trees/bushes will be put into pots (various sizes) provided with proper sunlight, water and fertilizer for growth and health of the plant. Testing will determine the viability of such small, seedling tree/bush transplanting and future installation in the final mine surface reclamation.

Test plots will be conducted simultaneously with mining activities to determine the most appropriate planting procedures including: no soil amendment; soil amendment; varying thickness of topsoil; and revegetation methods (CCR §3705(b)). There shall be at least 4 test plots, 20 ft. by 20 ft. in size, 3 located on 2:1 slopes with sun exposures consistent with final grading plan, 1 located on a flat area consistent with final grading plan. These 4 test plots planned variables listed

below should determine the best revegetation methods for successful site reclamation.

Test Plot #	Thickness of Topsoil (in.)	Location	Soil Amendment	Vegetation Rate	Irrigation
1	6	N Facing Slope	Fertilizer	25 lbs/acre	Yes
2	9	W Facing Slope	None	25 lbs/acre	None
3	12	NW Facing Slope	Organics	25 lbs/acre	Yes
4	6	2% Slope	None	25 lbs/acre	None

Plant/Shrub seed mix for the site has been selected based on current site plant/shrub species, growth factor, drought tolerance, and availability of genetic stock all consistent with existing plants currently on-site. We anticipate the vegetation to include all the same plants that currently exist on the site. Seed collection from on-site plants will be conducted at the site and success of such collection and application will be monitored. Other seeds will be stored as directed by experienced botanists for the selected plants and grasses. Use of non-native species for revegetation will not be permitted. We have combined OMR's suggested seed mix and other existing on-site plants to the recommended seed application for OMR consideration and approval as part of the Reclamation Plan approval. In addition to the following seeds, seedlings of native Foothill pine (*Pinus sabiniana*) and Knobcone pine (*Pinus attenuate*) will also be part of the reclamation vegetation.

Common Name	**Latin Name**	**Pounds (Pure Live Seed) Per Acre**
Chamise	Adenostoma fasciculaturn	6
Buck brush	*Ceanothus cuneatus*	3
Toyon	*Heteromeles arbutifolia*	2
Bush monkeyflower	*Mimulus aurantiacus*	2
Deerweed	*Lotus scoparius*	4
Manzanita	*Arctostaphylos*	4
Chaparrel pea	*Pickeringia Montana*	4
Total		25

The operator will replace trees at equal numbers removed during mine site operations using either seeds or containerized trees. Such planting depends on the results of pilot tests for transplanting of trees.

Appropriate exotic weed control of the revegetated areas will be accomplished while the mine is in operation and during final reclamation. As described previously, the mine will be reclaimed in increments as development progresses. Test sections for vegetation application methods will provide the basis for further mine reclamation vegetation and organic material/soil use installation. No decompaction of cover is needed.

Performance standards for revegetation are required by CCR §3705 *"(a) Vegetative cover suitable for end use proposed and capable of self-regeneration (self-reseeding) without need for irrigation, fertilizer, or soil amendments on mine disturbed lands is consistent with this reclamation plans, revegetation plan. Vegetative cover and density shall be consistent with existing vegetative cover of the mine site. As an example the steep road cut above the San Ardo Lockwood Road has poor to limited vegetative cover which is not acceptable under this reclamation plan. The existing vegetative density, cover and species richness has been photo documented and species locations identified on Figure 4. Further baseline vegetation documentation will be gathered prior to removal of existing vegetation and topsoil. (b) Test plots are to be conducted simultaneously with mining operations to determine the most appropriate planting procedures to be followed to ensure successful implementation of the proposed revegetation plan. Appropriate professional advise will be used for their experience with the species to be planted. Once the revegetation plan implementation is successful in the initial phased reclamation of the mine site, the test plots will be discontinued. (c) If surface mining activities and/or placement of topsoil result in compaction of final graded surfaces to be reclaimed, the surface to the anticipated rooting zone shall be ripped or disked before vegetation planting. (d) Rocked access road from San Ardo Lockwood Road to the bottom of the mine site will remain to provide access to the detention basins and other areas of the mine for possible future maintenance or repair if needed. Such rocked access road is necessary to be able to access the reclaimed mine site and as a result is an exception to the reclamation standards to provide appropriate end use and appropriate ability to provide maintenance and benefits to the designed end use. Such exceptions are allowed by CCR §3700(b). (e) As part of the test plots planting procedures, the native topsoil stockpiles will have soils analysis conducted to determine the fertility levels and*

soil constituents for determining potential successful revegetation implementation. The test plots may find it necessary to add slow-release fertilizers, mineral and/or organic material that mimic natural sources to the native topsoil material to assure successful revegetation implementation. The test plots revegetation may also find that no materials may be needed. (f) Since the mine site is on public lands owned by BLM, barriers may not be installed to prevent vehicular traffic access. (g) Native plant species will be used for the revegetation of the mine site as identified herein, reclamation plan. (h) Planting for revegetation of completed, final graded surfaces, will occur at the most favorable period of the year for plant establishment, in October or November. During this period, light rainfall may occur and days temperatures will promote seed germination and growth. (i) Soil stabilization practices during reclamation will include use of straw wattles, other storm water control best management practices depending on location of new reclamation. If needed, irrigation of the newly planted vegetation may be applied in order to assist in plant growth. The test plots will try various planting methods to determine the best planting practice to establish new vegetation growth and also provide soil stabilization. (j) The operator understands that the financial assurance may be held if irrigation is used to sustain vegetation growth. When vegetation is self-sustaining without irrigation, the financial assurance associated with revegetation should be released by the lead agency. (k) Any non-native plants or weeds are observed in the revegetation, they shall be managed whey threatening the success of the proposed vegetation, prevent spreading to nearby areas, and to eliminate fire hazard. (l) Fencing for protection of new vegetation or plants is not allowed by BLM. There are no cattle or other animal grazing on BLM lands in the area of the mining site. There are no other animals known in the area that should threaten the new vegetation planting. The test plots will provide tested experience on potential impacts from animals to the newly planted vegetation. (m) Revegetation success shall be evaluated based on a baseline of existing vegetation before commencing mining. A quantitative standard for success of the revegetation on final graded and reclaimed surfaces shall include the following:After 6-months from time of planting – 50% of baseline coverage; After 1-year from time of planting – 60% of baseline coverage; After 2-years from time of planting – 80% of baseline coverage."

The quantitative standard evaluations will take place over randomly selected multiple 200 by 200 foot areas whose corners are staked or flagged over 5% of the final graded and reclaimed surfaces. Such quantitative standard for success of the revegetation on the final graded and reclaimed surfaces shall include the following timing listed in CCR §3705(m). Observations will be made by an independent party other than the operator for impartial observation and comparison to the

baseline. ~~Comparisons shall be made until the revegetation is at least 80% of the baseline vegetation.~~ OMR's recommended performance standards are as follows;

Percent cover of native perennials per 50 meter transect	50%
Species of richness of native perennials 50 meter transect	3 pounds/acre
Density of native perennials per 50 meter transect	12 pounds/acre

In order to guarantee the success of vegetation planting, the planting will be conducted during the most favorable period of the year which is typically late fall-early winter for the Carmel Stone Site (CCR §3705(h)). Our experience finds planting performs best when application occurs after the 1st or 2nd rains. Such planting period will take advantage of seasonal rainfall.

Drainage

During operations and phased reclamation the majority of the drainage will be retained in interim and permanent detention ponds within the mine area. There are no storm water drainage releases from the phased and final reclaimed mine areas. The Mine Design includes 2 Detention Ponds with capacity to retain without discharge, a 100 year, 24 hour storm as described earlier. All drainage ditches and detention ponds will be vegetated with same species as listed earlier. Further drainage design descriptions are provided in Mine Design section of this Reclamation Plan.

Access Road

An access road will continue to be provided to the reclaimed mine area. The access road will be surfaced with gravel for all-weather access. All access road rock will be compacted and tested as described in the Site Geotechnical Report found in Appendix B, attached. The access road will have cross grading to a perimeter drainage ditch that will convey runoff to the site detention basins. Such grading will avoid off-site runoff from the access roads. The access road slopes will range from 6 to 12%. The lowest portion of the access road and turnaround area is located at El. 1940' MSL. Such access road rock surface will not be removed after mining operations and reclamation is completed so that post reclamation repair or maintenance can be performed. After the reclamation has

been determined to be successful, the access road rock will be removed from the site, topsoil installed and surface revegetated (CCR §3705(d) and §3705(g)).

End Use

The planned end use as recommended by BLM and Monterey County will be open space/recreation. The planned end use is consistent with current use of the area. Reclamation measures are consistent with current vegetation and adequate for the proposed end use. Additionally, the open space end use will also establish wildlife habitat.

The reclamation of the Carmel Stone Mine is designed to adequately provide the planned end use of open space/recreation (SMARA §2772(c)(8)). The final graded and final reclaimed mine site will leave no stockpiles of mined materials, structures or equipment. The surface reclamation of use of extra soil, native topsoil material, and native plant species will result in the reclamation of the mine site to its original condition with only the grading having been altered. As described in the Revegetation Section (above), appropriate native plant species will be grown on the final reclaimed surface and the vegetation special layout will be consistent with original vegetation conditions of the mine site. The mine site as final graded and final reclaimed will have two detention basins for detention of surface runoff from the mine site. The detention basins will provide appropriate drainage control of sedimentation, erosion and runoff. Additional control for sedimentation, erosion and runoff will be provided by detention basin outlet channel controls.

Site Maintenance

Site maintenance will include weed abatement, revegetation of surfaces, drainage control and erosion control until the reclamation efforts have been installed and take hold for at least a one-year period.

Reclamation Cost Estimate

The reclamation costs include: import of fertilizer/organic materials, initial hydroseeding, re-vegetation installation, final surface grading, drainage controls, and access road rock surfacing. The estimated reclamation costs for the maximum open mine site is a 2 acre area. The associated costs for reclamation of a 2-acre maximum area requiring reclamation is presented below. This Financial Assurance Cost Estimate for Mine Reclamation has been presented to Monterey County and OMR. Added OMR comments have been addressed. Documents are

attached in Appendix 7. A November 30, 2011 Memorandum has been added to Appendix 7 along with revised Financial Assurance Cost Estimate which only changed the Lead Agency Administration cost to 10%. Such a change was required by County Permit Condition 13 (subitem 6). Reclamation Assurance will be fully in compliance with County Permit Condition 8.

Description	Unit	Quantity	Unit Price	Total Cost
Import Organics	Cu.Yd.	1,600	$20	$32,000
Hydroseed/Plant Trees	Acre	2	$5,000	$10,000
Re-Vegetation	Acre	2	$500	$1,000
Final Surface Grading	Acre	2	$5,000	$10,000
Drainage Controls	LS	1	$15,000	$15,000
Access Road Rock	LF	200	$8	$1,600
Adj. Lead Agency Admin. Cost to 10%				$4,306
Total				~~$69,600~~ $73,906

Completing this Reclamation Plan are the following:

Figure 1 – Location Map
Figure 2 – U.S.G.S. Vicinity Map
Figure 3 – Monterey County Parcel Map, Site Location
Figure 4 – Site Conditions
Figure 5 – Final Grading Plan
Figure 6 – 5-Year Operations Plan
Figure 7 – Sections

Appendix 1 – Site Vegetation Assessment
Appendix 2 – Geotechnical Site Report
Appendix 3 - Erosion Control Plan (Surface Water Pollution Control Plan)
Appendix 4 – Geologic Site Report
Appendix 5 – Drainage Design
Appendix 6 – Site Surveying
Appendix 7 – Financial Assurance Cost Estimate & OMR Approval/Comments

This document was prepared by a registered Professional Civil Engineer in the State of California. I attest that this document provides information that is true and correct for the proposed project.

James A Wyse, President
Pacific Waste Services, Inc.
California P.E. #29853

11-30-2011
Date

Reclamation Plan Implementation

Mr. Vance Querfurth, the applicant/operator, accepts responsibility for reclamation per this Reclamation Plan once permitted for operation by BLM. By his signature below, Mr. Querfurth accepts full responsibility for reclamation plan implementation and completion. Furthermore, as required by County Permit Condition 13 (subitem 7), the signature below attests to "Statement Accepting Responsibility for the inspection services, including related administrative costs required pursuant to the Act and Payment of the County annual inspection fee is required within 60 days of the invoice date."

Vance Querfurth

11-30-2011
Date

Pacific Waste Services, Inc.
12925 Alcosta Blvd. Suite 1
San Ramon, Ca. 94583
Office: 925-244-0392
Fax: 925-244-0210

RECLAMATION PLAN
CARMEL STONE MINE
MONTEREY COUNTY, CALIFORNIA

JULY 28, 2009
(REVISED DECEMBER 11, 2009)

PREPARED FOR:

VANCE QUERFURTH

SUBMITTED TO:

TIM MOORE, GEOLOGIST
U.S. DEPT. OF INTERIOR, BLM
20 HAMILTON COURT
HOLLISTER, CA. 95023
T:831-630-5000/F:831-630-5055
Email:timothy_moore@ca.blm.gov
&
PAULA BRADLEY, ASSOCIATE PLANNER
MONTEREY COUNTY PLANNING DEPT.
168 W. ALISAL STREET, 2ND FLOOR
SALINAS, CA. 93901
T:831-755-5025/F:831-757-9516
Email: BradleyP@co.monterey.ca.us

PREPARED BY:
PACIFIC WASTE SERVICES, INC.
12925 ALCOSTA BLVD. #1
SAN RAMON, CA. 94583
T:925-244-0392/F:925-244-0210
Email:jwyse4@aol.com

Project No. 210-1.1

PROPOSAL

Vance Querfurth is the opportunity to develop a Monterey shale mine on U.S. Department of the Interior, Bureau of Land Management (BLM) property. Initially, Mr. Querfurth **has requested** ~~is requesting~~ a Non-Competitive Monterey Shale 5-year Sale Contract from the U.S. Department of the Interior, Bureau of Land Management (BLM) for a 12 ± acre area located in the Williams Hill Area of Monterey County. Mr. Querfurth is attempting to secure approval for the Carmel Stone Mine that would propose to operate the mine **for an** ~~well after the~~ initial 5-year Sale Contract **starting upon** ~~with~~ appropriate BLM **and other applicable** approvals. **The mine is planned and designed to operate for a period of 25 years.** ***The Reclamation Plan will be utilized as the plan to reclaim the mine during and after mining operations. The term of the Reclamation Plan shall be at least the duration of the mining operations, 25 years, and as long after mining stops to complete site reclamation to the satisfaction of the land owner, BLM.***

The specific location is described below with supporting location layouts shown on Figures 1, 2, 3 and 4. The site is referred to as "Carmel Stone Mine".

An Exploratory Permit had been issued in 2008 by BLM for a 50 ft. by 75 ft. area with up to 7 foot deep and 900 cubic yards, within the 12 acre area. Exploration has found the material meets the expectations and a full Non-Competitive Monterey Shale 5-Year Sale Contract is desired.

LOCATION

The Carmel Stone Mine is located between communities of San Ardo and Lockwood in Monterey County, California on BLM Land adjacent to San Ardo Lockwood Road. The site is located solely on BLM land and is at least 50 feet from private property boundary to the east as location represented by Monterey County Assessors Map. The majority of the 12 ± acre mine site is located in the N ½ NW ¼ SW ¼ Section 28 and SW ¼ SW ¼ NW ¼ Section 28, T22S, R9E. The existing BLM access road located in SE ¼ SE ¼ NE ¼ Section 29 T22S R9E will be used for access off San Ardo Lockwood Road. The attached Figure 2 USGS Map (Williams Hill Quadrangle Base Map) shows the limits of the 12 ± acre Carmel Stone Mine site on a large scale. The Site Location is shown on Figure 2. The Site Location in comparison to private and BLM lands within Monterey County are shown on Figure 3.

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The southern limits will encompass a portion of the slope located above the County Road - San Ardo Lockwood Road. The eastern limits are located 100 ft. from the private property as represented by the Monterey County Assessor's Map and 250 ft from the private property as represented by BLM.

ADJACENT PRIVATE PROPERTY WITHIN 300 FT. OF SITE

There is only one private property owner within 300 feet of the proposed Carmel Stone Mine located on BLM land. The land owner is Leslie Aurignac. This 200 acre Parcel No. 422-101-034-000 is shown on our Figure 3 which presents Assessors Map Book 422, Page 10.

SITE CONDITIONS

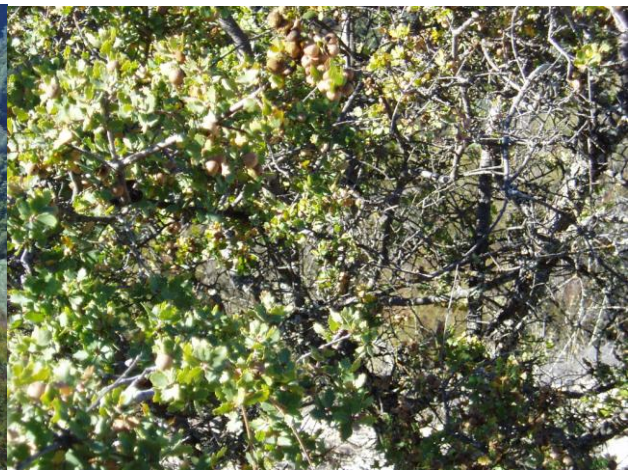
Site Access. To access the site from Highway 101, take the Paris Valley Road off ramp, proceed west on Paris Valley Road, proceed south on San Ardo Lockwood Road to the Carmel Stone Mine site. Travel distance from Highway 101 to the Carmel Stone Mine site is approximately 6.25 miles as shown on Figure 1. Alternatively, access to the site would take Highway 101, proceed west on the Jolon Road Exit (located N of King City), passing Fort Hunter Leggett to Lockwood. From Lockwood, take the San Ardo Lockwood Road to the Carmel Stone Mine site.

Topography. The site topography consists of a ridgeline located above the San Ardo Lockwood Road between Elevations 1940' and 2100' $\pm$ MSL. The San Ardo Lockwood Road cut slope forms the southern perimeter of the 12 acre area approximately 20 to 25 feet above the top hinge ½:1 cut slope at road edge to the commencement of the proposed Carmel Stone Mine excavation. The USGS quadrangle map (Williams Hill) has been compared to actual site topographic conditions and are found to provide reasonably accurate representation of the site. The USGS map has been used as the base map, combined with site observations, for the site drawings, Figures 4, 5 and 6, contained in this report.

Climate. The site is located in a Mediterranean climate area which experience dry hot summers and mild light rainfall winters. Annual rainfall is in the 15 inch range. Recent rainfall levels have been below 10 inches per year.

Vegetation. There are five distinct vegetation species on-site: Pine trees; Manzanita bush, Scrub Oak bush/small tree, Chamise bush and Chaparrel pea

bush. There are no known protected plants on-site or in close proximity. CNPS List 1B (Rare species) may grow in the grassy valleys below the site. A site vegetation assessment of the project site has considered the estimated number, size and type of trees to be removed and is provided in Appendix A. Additionally, an estimate of the acres of shrubs proposed to be removed by project development is provided in Appendix A. Samples of the plant species were collected during the site vegetation assessment and were characterized by a BLM representative.



Animals. There were a few birds observed during site visits. Other animals may include squirrels, snakes, lizards. It is reported there are no endangered or listed species for this area. BLM is responsible for providing an assessment of animals at the proposed project site.

Drainage. Given the site is on a ridgeline, drainage currently drains in all directions. The largest drainage topographic relief is to the north. Steep high cut (up to 20 feet) slopes exist along the north side of the San Ardo Lockwood Road with limited to no observed erosion. No creeks, rivers, ponds, lakes or any watercourses were identified for the site or immediately down gradient from the site.

MINE DESIGN

Environmental Controls. The mine is designed to provide several environmental controls by leaving outside perimeter berms of soil and vegetation higher than active operations located inside the perimeter berms. These perimeter berms provide visual screening, drainage control, sediment control, dust control, fire control and wind control. In essence, the mining design creates a bowl where there is always a perimeter berm providing environmental controls.

Mine Limits. The mine limits will remove none of the San Ardo Lockwood Road existing excavation slope located along the southern slope of the subject mine contract area. The mine grading plan represents a 20 to 25 foot buffer between the top slope hinge of the ½:1 H:V road cut and commencement of mine excavation. That buffer zone will result in maintained/no disturbance of existing vegetation within the buffer zone. Appropriate operations, excavation and procedures are

established to avoid danger to vehicles traveling on San Ardo Lockwood Road. Such features include development of a southern perimeter soil/vegetation berm to avoid any opportunity for material moving past the perimeter berm and avoids impacts to the San Ardo Lockwood Road below.

Maximum Slopes. Maximum slopes will be maintained at no steeper than 2:1. The current cut slope above San Ardo Lockwood Road is at ½:1 slope. This road cut has existed for at least 30 years without any signs of instability, excessive erosion, etc. based on USGS mapping for the Williams Hill Quadrangle map, Photorevised in 1979 and recent site observations. Furthermore, review of the natural slopes on the site and below, we find slopes range from 1.3:1 to 1.45:1 to 2.5:1. In fact, 2.5:1 is the flattest slope observed except for the top of ridgelines. No signs of instability were observed or documented for this area. As a result, utilizing a maximum slope for the design of 2:1 is a very conservative slope. A Geotechnical Report which addresses slope stability prepared by a California registered Civil Engineer is provided in Appendix B.

Mine Development. Typical mine development during the first 5-year operations is represented in the "5-Year Operations Plan" presented in Figure 6 and "Section" presented in Figure 7.

MINE OPERATION

The mine operations include the following components described below: Excavation Methods; Equipment; Dust Control Methods; Fire Control Methods; Drainage Control Methods; Access Roads/Ramps; Operating Hours; and Estimated Tonnage/Loads.

Clearing. Clearing of vegetation and topsoil will occur just in advance of the areas mining operation commencement. The cleared vegetation and topsoil will be stockpiled in on-site stockpiles for future reclamation use. Such stockpiles will be within the mining operations area for subsequent reclamation use.

Excavation. Excavation methods will be employed to reduce adverse disturbance of the Monterey Shale materials being mined. The excavation methods will also be employed to avoid off-site/perimeter impacts and to keep intact the natural perimeter berm as the operation continues to be lowered. An example Mining Sequence Operations Plan in Figure 6 and Section is presented in Figure 7. In general, each 10 foot deep mining sequence area excavation by 100 foot length and

50 foot width should provide sufficient material depending on percentage of useable material for each year of anticipated mining material removal. The Monterey Shale material will be loaded onto pallets or directly to trailers, flat bed truck, or 10-wheel dump truck primarily by hand of by small loader type equipment for delivery to regional stone markets. The soil and topsoil material will be stockpiled for future site reclamation uses. The smaller Monterey Shale material will be stockpiled separately for possible use as decorative rock in the ½ to 1 inch size. The mined and usable material is anticipated to be approximately 50 to 80% using the mining operations methods planned and depending on the excavation area rock component.

Soil Stockpile. Soil and topsoil will be placed in one or more mixed stockpiles and the locations recorded. Reclamation section describes import of organic material to mix with the site soil stockpile(s) before application on final reclaimed slopes and surfaces. Soil stockpiles will have material added on a regular basis. The soil stockpile will be built to allow outside, top surfaces to be vegetated or surfaces mulched to reduce erosion from wind and rain and to promote vegetation growth.

Slopes. The mine will be graded at currently local stable maximum slopes of 2:1 (Horizontal:Vertical). Minimum slopes will be graded at 2%. **Final slopes shall be track walked as described in the Site Geotechnical Report found in Appendix B, attached.**

Fencing and Signage. Fencing and signage will only be located at the main entrance to the mine access road at the intersection with San Ardo Lockwood Road.

Equipment. Equipment used for the Carmel Stone Mine operations are expected to utilize the following equipment:

- Excavator (CAT 320B or equal) for excavating the Monterey Shale material into large blocks, loading the material onto pallets, flat bed trucks, trailers or 10-wheel trucks. The excavator will always pull material into the Monterey Shale borrow pit in order to avoid sending rocks down the steep outside, perimeter slopes. Additionally, the excavator will be used to separate the excess topsoil and smaller Monterey Shale material and place into a separate stockpile areas.
- Water tank mounted on trailer to provide dust control and fire control.

- Skip Loader with forks for pallet maneuvering. The front loader bucket can be used for loading smaller pieces of Monterey Shale onto pallets or trailers, or placing small pieces of Monterey Shale into a small rock stockpile and placing topsoil into a separate stockpile. The Skip Loader would also be used to grade, smooth access roads.
- Backhoe/Loader with forks could be used for similar work efforts described for the Skip Loader above. In addition, the backhoe could be used to excavate larger pieces of Monterey Shale instead of the Excavator. The backhoe would also be used to carefully remove and stockpile the vegetation when the perimeter berms are lowered as the borrow pit is lowered.
- Track or rubber tire loader may also be used during the operation.
- 10-wheel trucks used to transport product from the site (10 ton capacity)
- Flat Bed Trucks used to transport product from the site (7 ton capacity)
- Heavy Duty Trailer used to transport product from the site (5 ton capacity)

Dust Control. Dust is controlled by the equipment and associated operation methods. Loading of the product into trucks or trailers will be the Monterey Shale stone, not the loose surrounding soil and small rock pieces. This loading of material will have limited dust production with such loading method. The soil and small rock pieces will ~~be~~ have water applied as needed to keep any fugitive dust from being produced.

Fire Protection. Fire protection is provided by making sure all equipment has appropriate spark controls and equipment is operated within manufacturers accepted engine temperature ranges. Appropriate perimeter fire break will be installed around the mine operations area. A water tank with pump will be available on-site when mining operations are underway. All equipment will have operational fire extinguishers.

Surface Drainage. Drainage will generally be contained within the mine area. The mine design is intended to keep the majority of the drainage contained on-site without running off from the site. Two low lying permanent detention basins will be created from the active mining operation area will be constructed to retain storm water runoff from the mine site. Temporary detention basins will be constructed during the on-going operations until the mine reaches final grades. This water will be retained on-site with subsequent evaporation and/or use for dust control, watering of plants for future reclamation. As noted, these low lying areas will move as the mining operation proceeds to the final base grading plan.

As further site information/design, an erosion control plan, titled Storm Water Pollution Prevention Plan is contained in Appendix C. This document describes the best management practices (BMP's) that will be implemented to control erosion, avoid eroded soils from entering any off-site drainage.

Access Roads. A BLM access road currently exists to the mine area. The access road currently has a "Y" intersection with San Ardo Lockwood Road. The access road intersection with San Ardo Lockwood Road will not be changed. This BLM access road in Section 29 is not part of the 12 ± acre Carmel Stone mine area to be secured under contract. A gate will be installed on the mine access road at the Section 29 western boundary to limit access to the Carmel Stone mine area and signs with limitations for access will be posted. Access roads to the final graded areas of the mine will be constructed to widths of 30 to 40 feet including a perimeter drainage ditch and perimeter berm and at slopes of 12% maximum. All access roads will pitched to the mine area, minimizing off-site drainage. **Compaction of access road earthfill and rock surface will be tested as described in the Site Geotechnical Report found in Appendix B, attached.**

Operating Hours/Days. Operating Hours are planned to be 7 am to 6 pm Monday through Saturday during summer months and hours of daylight in winter months. The site will not be operated on major holidays. The majority of the material will be hauled from the mine site by Carmel Stone trucks or trailers. The material will have a weight ticket to track the material mined and being used off site in order to properly track and document the tons of material processed. These weight tickets and associated sales receipts will provide documentation for payment to BLM. After a period of time, a typical load may be assigned a weight per load with BLM approval. This may be necessary if the scale is closed or if the customer is between the site and a scale.

Production/Operation Tons & Loads. The operation is expected to produce the following tonnages during the 5-year contract period:

Year Period	Annual Tons	Avg. Summer (ton/mo)	Avg. Winter (ton/mo.)	Max. Tons Per Day	Max. Loads Per Day (5 ton avg)
2010/2011	4000	500	170	50	10
2011/2012	4800	600	200	60	12
2012/2013	5800	725	240	70	14
2013/2014	6900	860	285	80	16
2014.2015	8300	1035	345	90	18
Total	29800				

The planned 5-year operations period and operations grading plan presented in Figure 6 provides adequate material to meet the mined Monterey stone material requirements listed above.

MINE RECLAMATION

The Carmel Stone Mine reclamation plan consists of revegetation (including tree planting), drainage control, access road, site maintenance and cost estimates. The planned operation of the mine will develop in 2-acre segments to accessible grades starting around the Exploration Area near El. 2000 ridgeline as shown in Figure 6 - "5-Year Operations Plan". As shown on this plan, excavation creates the initial development bowl. Review of the site conditions and development plans, finds that none of the initial development will be to final grade. In the future, as areas are brought to final grade, they will be reclaimed on a sequential basis. As worst case, there would be 2 acres of mined area that is open and would require reclamation if the mine were to cease operations at any given time. ***Mine Operation of this plan states, slopes will be 2:1 maximim and 2% minimum consistent with grading in the final grading plan.*** The mine reclamation efforts are described below.

Revegetation

The surface of the excavated Monterey Shale has very limited to no organics to support future vegetation growth. There are several options to improve the surface organics to support vegetation growth: mix excavated vegetation at the site with stockpiled soil and us this on-site stockpiled topsoil (topsoil containing seed bank and will be stockpiled for reapplication); Import organic material for surface amendment (composted agriculture, wood, green waste, similar to Z-Best compost free of weed seed) to at least 1 inch depth, and preferably 10% by volume; Apply hydroseed with fertilizer or organic material for vegetation support mixed with seed mix, tackifier to bind the hydroseed slurry, and mulch or flexible growth medium (Flexterra) for protection of slopes. If on-site stockpiled topsoil is not adequate for final use and application, additional topsoil may require import.

Plant/Shrub seed mix for the site will be selected based on current site plant/shrub species, growth factor, drought tolerance, and availability of genetic stock all consistent with existing plants currently on-site. The plant/shrub selection will be reviewed and approved by BLM staff prior to installation. In general, we anticipate the vegetation to include all the same plants that currently exist on the site. Seed collection from on-site plants will progress at the site. No grasses

currently exist on-site or neighboring areas and no grasses will be included in the seed mix. Collected seed from plants will be planted in pots for on-site growth for future installation. Other seeds will be stored as directed by experienced botanists for the selected plants and grasses. Use of non-native species for revegetation will not be permitted.

Tree species matching current site trees that will be removed during mine operations will be planted on the final graded site surfaces. During the vegetation removal process, smaller trees will be excavated, salvaged and replanted into containers for future use in the reclamation process. The operator will replace trees at equal numbers removed during mine site operations.

Appropriate exotic weed control of the revegetated areas will be accomplished while the mine is in operation. As described previously, the mine will be reclaimed in increments as development progresses. Test sections for vegetation application methods will provide the basis for further mine reclamation vegetation and organic material/soil use installation. ***No decompaction of cover is needed.***

Drainage

During operations, drainage is retained on-site without discharge off-site. As final reclamation, drainage will be retained on-site in 2 detention basins with an overflow capability draining to the north in existing drainage corridors when rainfall exceeds the retention basin capacity. The receiving drainage corridors have historically handled drainage from the pre-development mine area. The drainage from the north side of San Ardo Lockwood Road ultimately reaches the Salinas River. Appropriate erosion control will be implemented as described further in the erosion control plan, titled Surface Water Pollution Prevention Plan.

Review of site locations and conditions finds that a 100-year recurrence interval, 24-hour design storm event will result in between 3 and 6 inches over the 24-hour period. At an assumed worst case site watershed area of 12 +/- acres, 80% runoff factor, and the range of 100-year storm rainfall, we estimate the resulting runoff will range from 1.3 and 2.6 million gallons. Two final detention pond on-site will have approximate dimensions of: 20 foot deep, ½:1 Horizontal:Vertical Side Slopes, 10 foot base width, and 100 foot total length. Each detention pond will have a capacity of approximately 600,000 gallons. A spillway/culvert overflow will be installed for discharge into natural historical drainage corridors. Appropriate rip rap erosion controlled discharge will be provided for overflow drainage. The site will have a Storm Water Pollution Prevention Plan for the site

storm water drainage controls and discharges supporting the site's Industrial Discharge NPDES Permit from the State Water Resources Control Board. Such is needed because there will be possible on-site runoff discharge from the Carmel Stone Mine area.

Access Road

An access road will continue to be provided to the reclaimed mine area. The access road will be surfaced with gravel for all-weather access. **All access road earthfill and rock will be compacted and tested as described in the Site Geotechnical Report found in Appendix B, attached.** The access road will have cross grading to a perimeter drainage ditch that will convey runoff to the site detention basins. Such grading will avoid off-site runoff from the access roads. The access road slopes will range from 6 to 12%. The lowest portion of the access road and turnaround area is located at El. 1940' MSL. .

End Use

The planned end use as recommended by BLM and Monterey County will be open space/recreation. The planned end use is consistent with current use of the area. Reclamation measures are consistent with current vegetation and adequate for the proposed end use.

Site Maintenance

Site maintenance will include weed abatement, revegetation of surfaces, drainage control and erosion control until the reclamation efforts have been installed and take hold for at least a one-year period.

Reclamation Cost Estimate

The reclamation costs include: import of organic materials, initial hydroseeding, re-vegetation installation, final surface grading, drainage controls, and access road rock surfacing. The estimated reclamation costs for the maximum open mine site is a 2 acre area. The associated costs for reclamation of a 2-acre maximum area requiring reclamation is presented below.

Description	Unit	Quantity	Unit Price	Total Cost
Import Organics	Cu.Yd.	1,600	$20	$32,000
Hydroseed/Plant Trees	Acre	2	$5,000	$10,000
Re-Vegetation	Acre	2	$500	$1,000
Final Surface Grading	Acre	2	$5,000	$10,000
Drainage Controls	LS	1	$15,000	$15,000
Access Road Rock	LF	200	$8	$1,600
Total				$69,600

Reclamation Plan Implementation

Mr. Vance Querfurth, the applicant/operator, accepts responsibility for reclamation per this Reclamation Plan once permitted for operation by BLM.

Completing this Reclamation Plan are the following:

Figure 1 – Location Map
Figure 2 – U.S.G.S. Vicinity Map
Figure 3 – Monterey County Parcel Map, Site Location
Figure 4 – Site Conditions
Figure 5 – Final Grading Plan
Figure 6 – 5-Year Operations Plan
Figure 7 – Section

Appendix A – Site Vegetation Assessment
Appendix B – Geotechnical Site Report
Appendix C - Erosion Control Plan (Surface Water Pollution Control Plan)

This document was prepared by a registered Professional Civil Engineer in the State of California. I attest that this document provides information that is true and correct for the proposed project.

James A Wyse, President
Pacific Waste Services, Inc.
California P.E. #29853

1-29-2010
Date

REGISTERED PROFESSIONAL ENGINEER
JAMES A. WYSE
No. C 29853
Exp. 3/31/2011
CIVIL
STATE OF CALIFORNIA

Page Revised 1-29-2010

VICINITY MAP

LOCATION MAP

FIGURE 1

PROJECT NO. 210-1.1

Carmel Stone Mine

LOCATION MAP

PWS Pacific Waste Services, Inc.

ERIOR

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
1756 II SE
(ESPINOSA CANYON)

WILLIAMS HILL QUADRANGLE
CALIFORNIA-MONTEREY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 BRYSON 15' QUADRANGLE

1755 IV SW
(SAN ARDO)

CARMEL STONE MINE LIMITS
APPROXIMATELY (ELEV.=2060 TO 1960'
MSL @ APPROXIMATELY 14.4 AC.)

SAN ARDO LOCKWOOD ROAD

FIRE SERVICE
ROAD
(UNIMPROVED)

TO SAN ARDO

TO LOCKWOOD

R. 8 E. R. 9 E. 2'30"

121°00'
36°00'

35°52'30"
121°00'

57'30"

1 400 000 FEET

240 000 FEET

T. 22 S.
T. 23 S.

1 380 000 FEET

25 MI. TO U.S. 101

BRYSON
1755 I SE

R. 8 E. R. 9 E. 2'30"

INTERIOR - GEOLOGICAL SURVEY, RESTON, VIRGINIA - 1979

SCALE 1:24000

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1979 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Revisions shown in purple and woodland compiled by the Geological Survey from aerial photographs taken 1976 and other source data. This information not field checked. Map edited 1979

ROAD CLASSIFICATION

Heavy-duty — 4 LANE | 6 LANE
Medium-duty — 4 LANE | 6 LANE
Light-duty
Unimproved dirt
U. S. Route
State Route

WILLIAMS HILL, CALIF.
NE/4 BRYSON 15' QUADRANGLE
N3552.5—W12100/7.5

1949
PHOTOREVISED 1979
AMS 1755 I NE—SERIES V885

(TIERRA REDONDA MTN)
1855 IV SW

FIGURE 2

PROJECT NO. 210-1.1

Carmel Stone Mine

U.S.G.S. VICINITY MAP

PWS
Pacific Waste Services, Inc.

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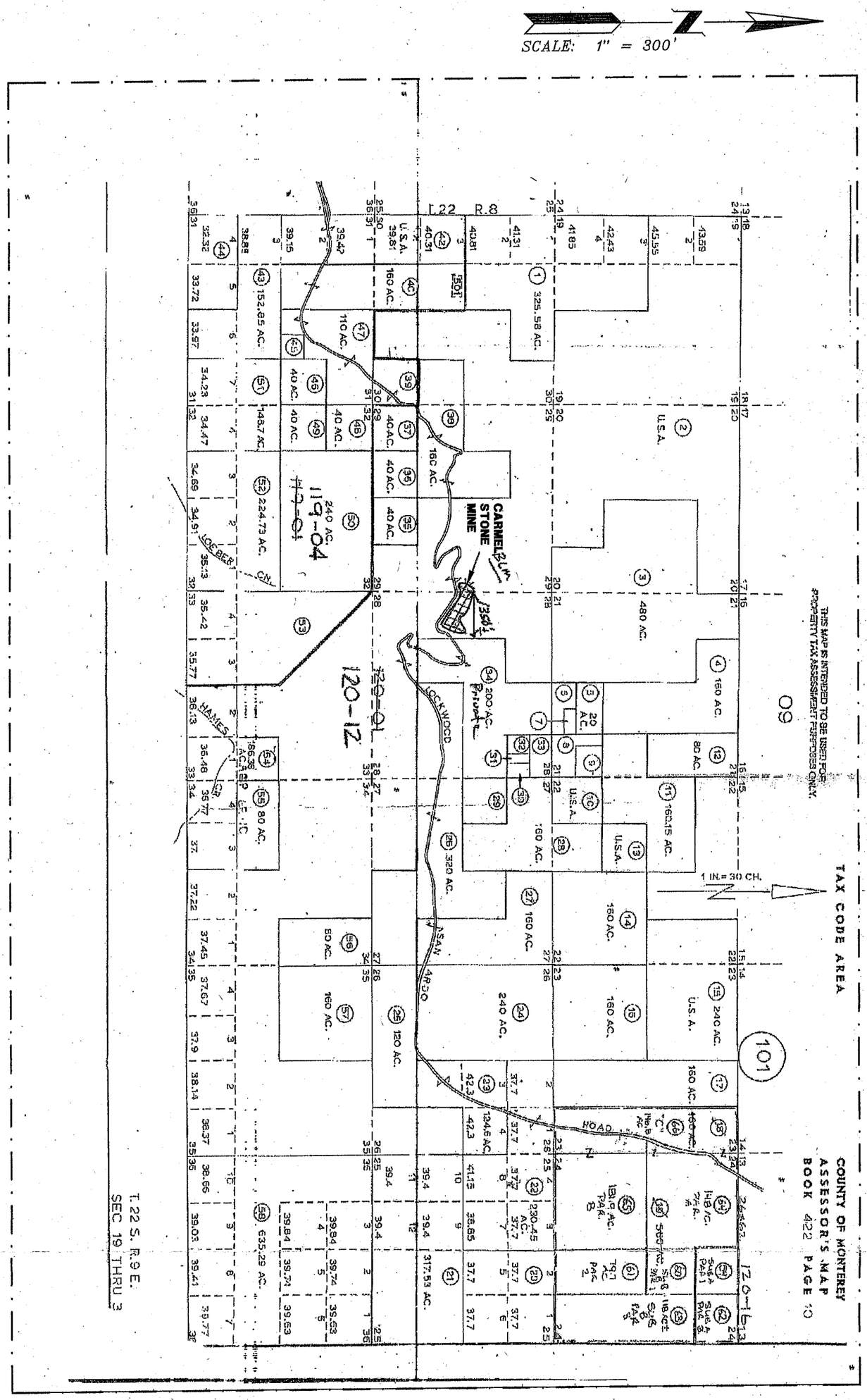
S:\DWG\Carmel-Stone\Carmel Stone Mine-R1.dwg 8/3/2009 2:45:44 PM PDT



PWS
Pacific Waste Services, Inc.

Non-Competitive 5 Year Sale Contract
Carmel Stone Mine

Monterey County Assessors Map

FIGURE
3
PROJECT NO.
210-1.1

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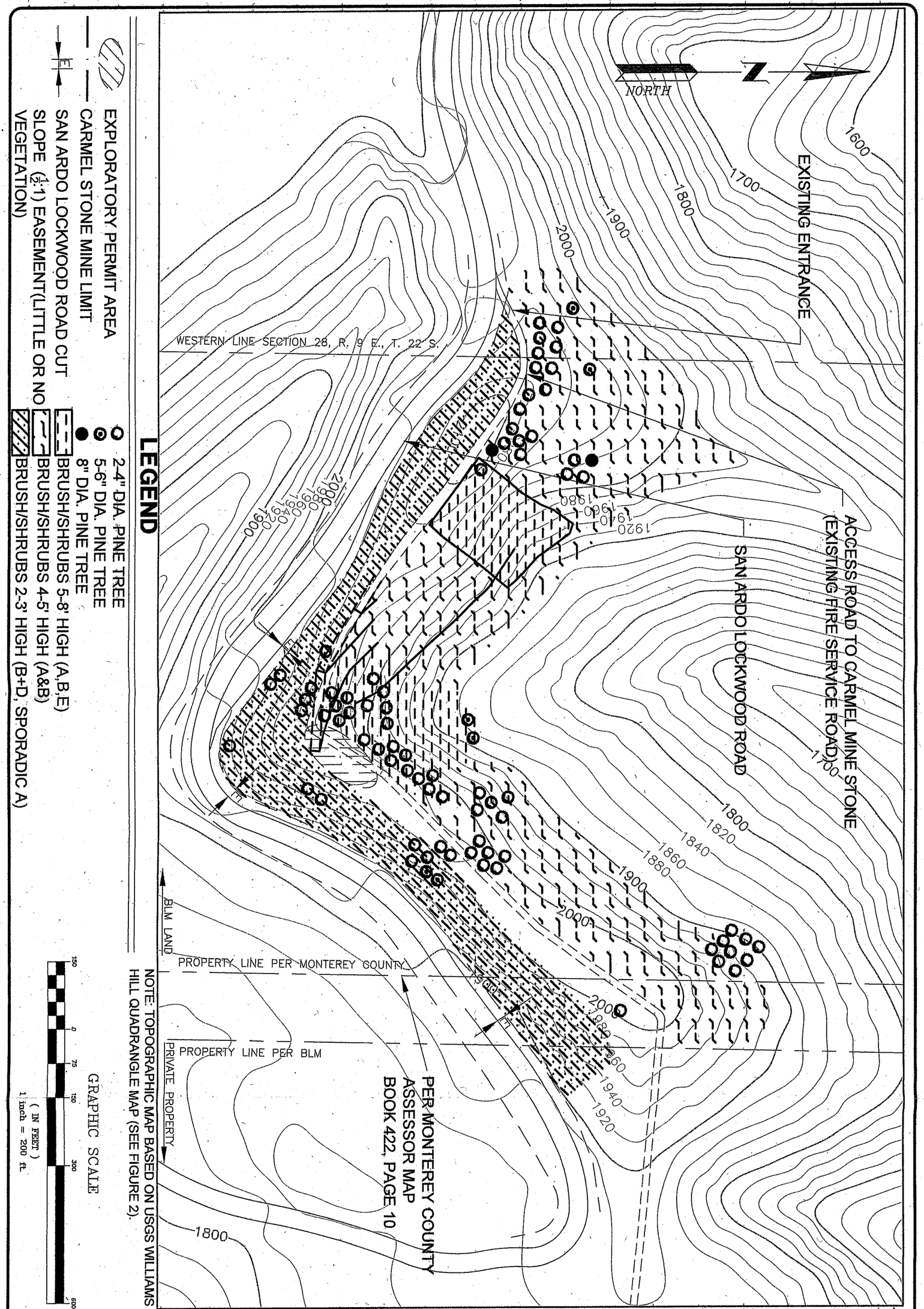
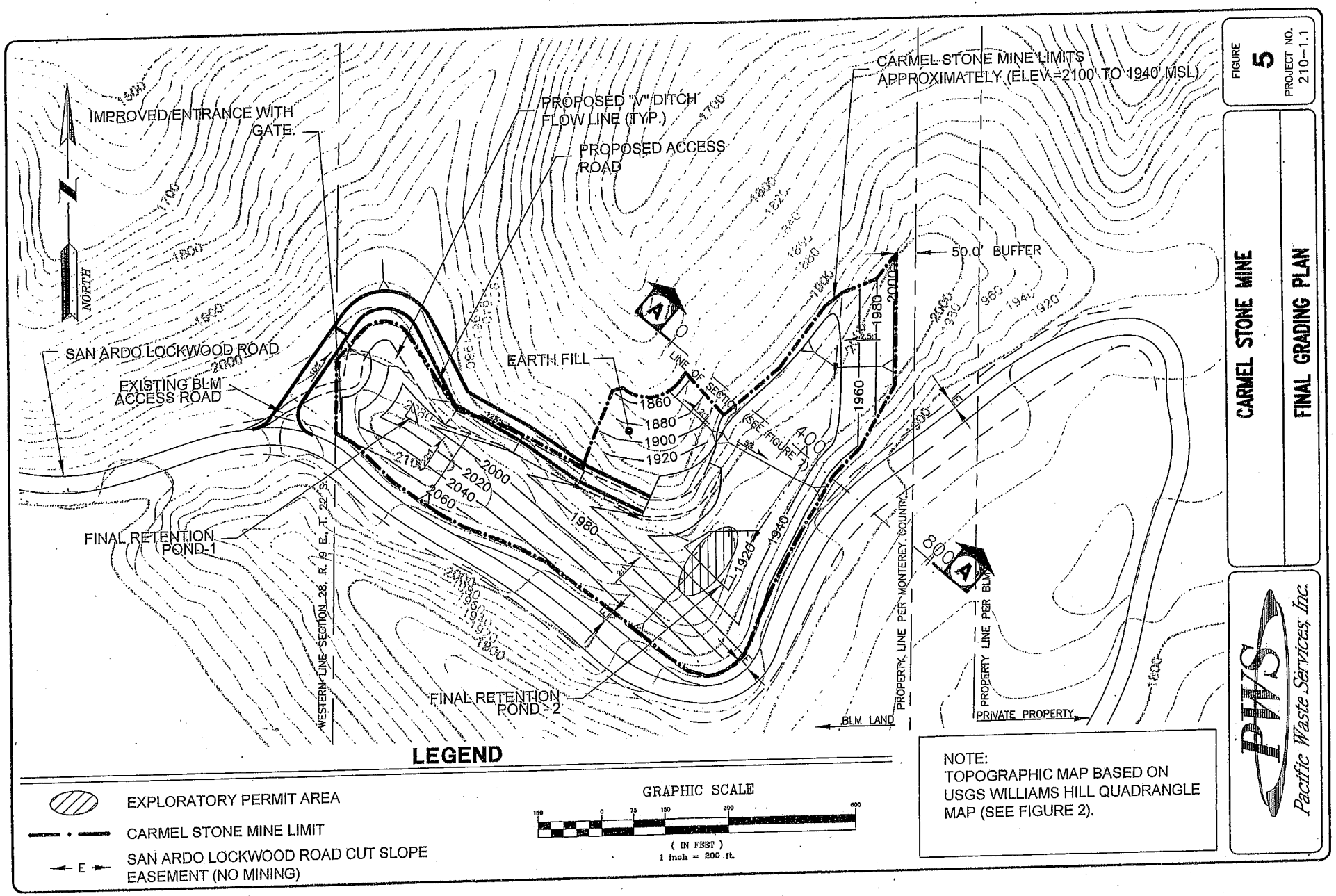


PWS
Pacific Waste Services, Inc.

Carmel Stone Mine

Existing Site Conditions

FIGURE
4
PROJECT NO.
210-1.1



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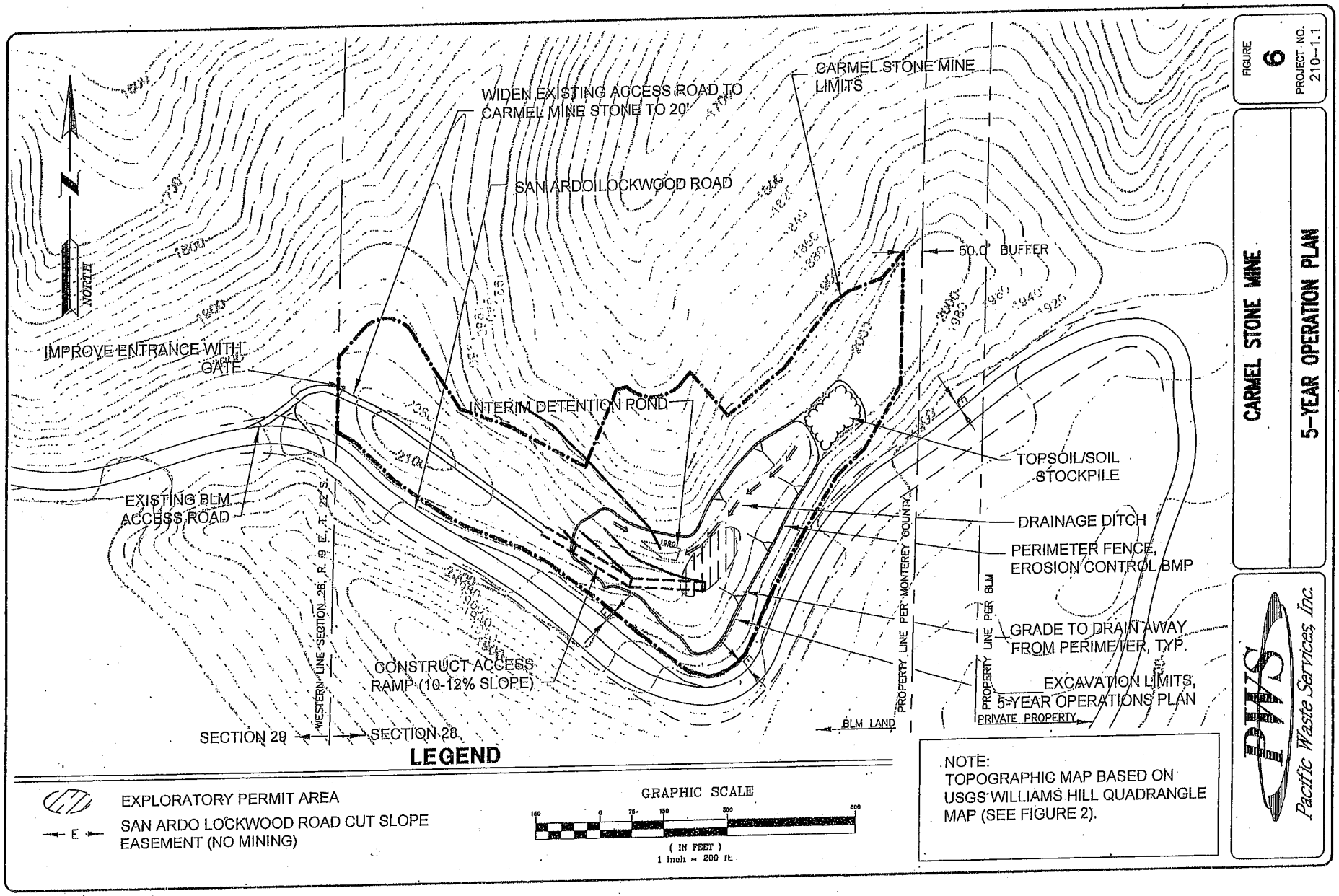

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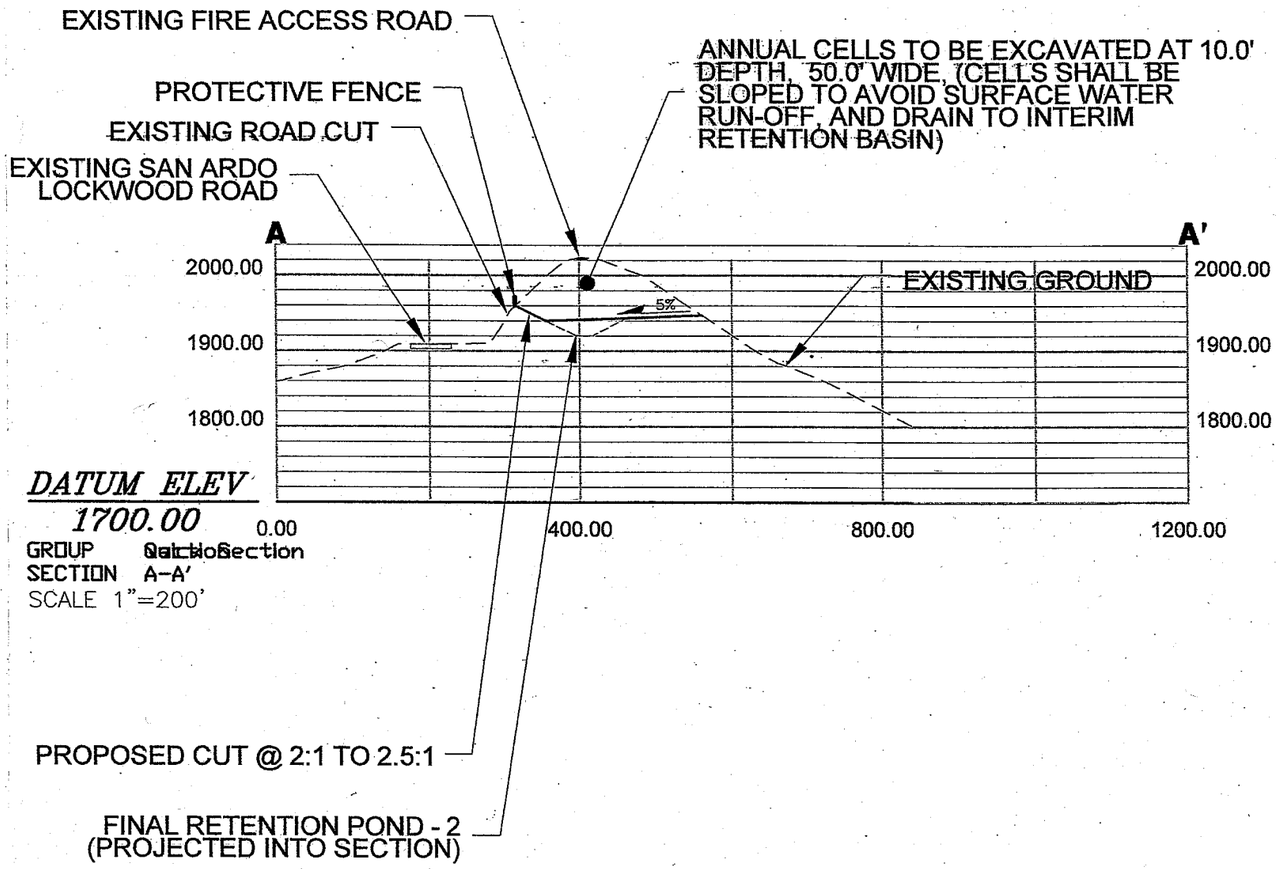


FIGURE 7

PROJECT NO. 100-1.1

Carmel Stone Mine

SECTION VIEW A-A'

PWS Pacific Waste Services, Inc.

S:\DWG\Carmel-Stone\Carmel Stone Mine-R1.dwg 8/3/2009 2:45:44 PM PDT

Pacific Waste Services, Inc.
12925 Alcosta Blvd. Suite 1
San Ramon, Ca. 94583
Office: 925-244-0392
Fax: 925-244-0210

SITE VEGETATION ASSESSMENT
CARMEL STONE MINE
MONTEREY COUNTY, CALIFORNIA

JULY 28, 2009

PREPARED FOR:
VANCE QUERFURTH
P.O. BOX 1435
CARMEL VALLEY, CA. 93924
T:831-277-7726

SUBMITTED TO:
TIM MOORE, GEOLOGIST
U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
20 HAMILTON COURT
HOLLISTER, CA. 95023
T:831-630-5000/F:831-630-5055
Email:Timothy_moore@ca.blm.gov
&
PAULA BRADLEY, ASSOCIATE PLANNER
MONTEREY COUNTY PLANNING DEPT.
168 W. ALISAL STREET, 2ND FLOOR
SALINAS, CA. 93901
T:831-755-5025/F:831-757-9516
Email: BradleyP@co.monterey.ca.us

PREPARED BY:
PACIFIC WASTE SERVICES, INC.
12925 ALCOSTA BLVD. #1
SAN RAMON, CA. 94583
T:925-244-0392/F:925-244-0210
Email:jwyse4@aol.com

SITE VEGETATION ASSESSMENT

This site vegetation assessment has been prepared following several site observations including the most recent observation on July 17, 2009. During the site observations on July17, 2009, samples of the 5 observed plant species were collected and delivered to BLM for plant categorization. Those species include:

Species A = Arctostaphylos species (Manzanita)
Species B = Adenostoma fasciculatum (chamise)
Species C = Foothill pine, knobcone pine or Pinus sabiniana or Pinus attenuate
Species D = Chaparrel pea (pickeringia Montana)
Species E = Scrub oak (quercus berberidifolia)

Photo documentation of the site from several visits is included in this report.

As an overview, the site consists primarily of shrubs, no ground cover or grasses and periodic areas of pine trees. The existing plants generally appeared to be healthy even though there has been an extended drought period. There are periodic signs of dead shrubs and trees.

The proposed Carmel Stone Mine development will result in tree removal consisting of:

- Approximately 68 - 2 to 4 inch diameter trees
- Approximately 8 – 5 to 6 inch diameter trees
- Approximately 2 – 8 inch diameter trees

The proposed Carmel Stone Mine development will result in almost 10 acres of shrub plant removal.

None of the proposed tree or shrubs being removed are endangered or special plants/trees.

Reclamation should include incorporation of removed brush into soil stockpiles, careful excavation of smaller trees and replanting into containers for future site use, and where possible collection of seeds from shrubs and trees for future reclamation use.

Respectfully submitted:
Pacific Waste Services, Inc.

James A. Wyse, P.E.
President

PHOTO'S OF PROPOSED CARMEL STONE MINE SITE CONDITIONS

Vegetation Species A

Vegetation Species B

Vegetation Species C

Vegetation Species D

Vegetation Species E

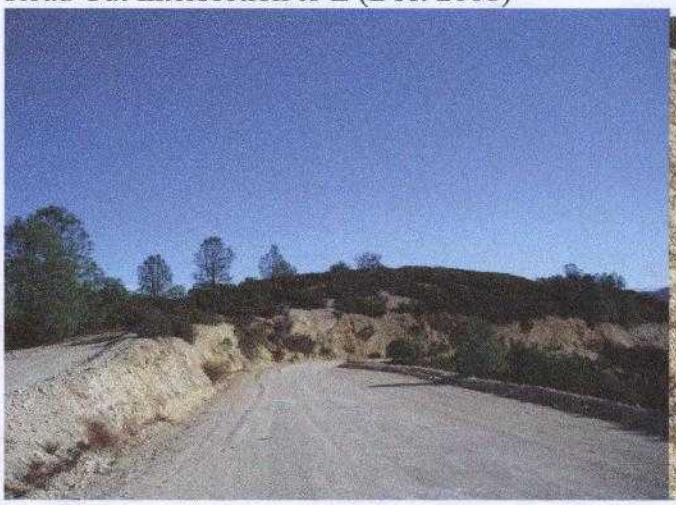
San Ardo Lockwood Road at Intersection

Road Cut starting at Intersection to the East

Road Cut Proceeding E from Intersection (7/09)

Road Cut W to E (El. 2040 to El. 1960)

Road Cut Intersection to E (Dec. 2008)



Typical Road Cut (Slope ~ 0.5:1 H:V)

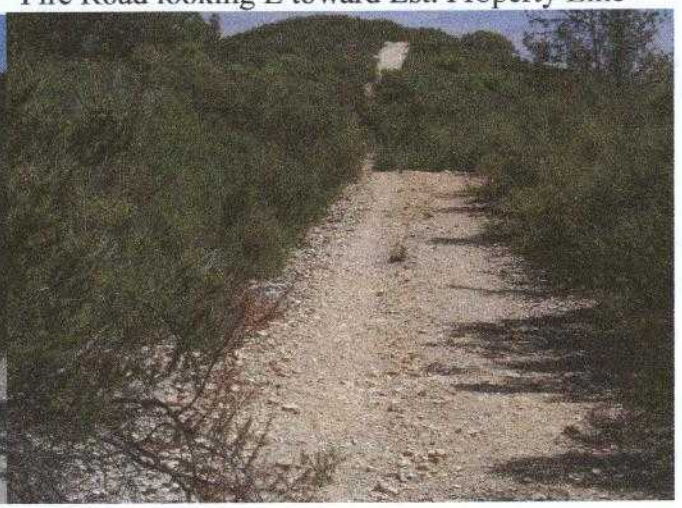
Typical Road Cut (~ 0.5:1)

Road Cut View SE Before the Curve (20' Vertical)

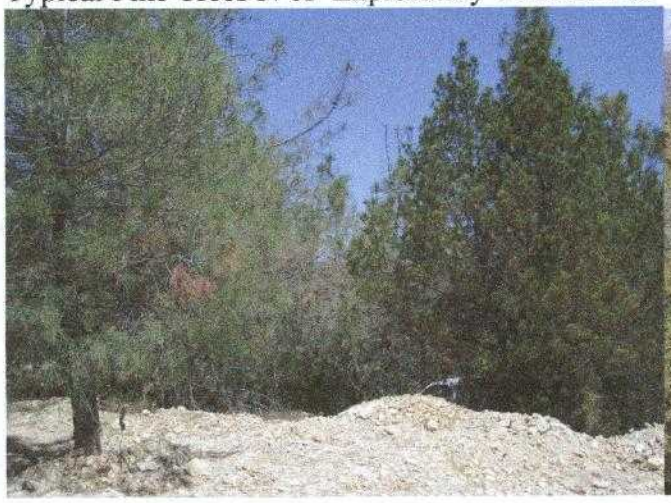
Fire Road Looking E on El. 2100' Knoll

Fire Road looking W from El. 2100' Knoll

Fire Road looking E toward Est. Property Line



Typical Pine Trees N of Exploratory Permit Area

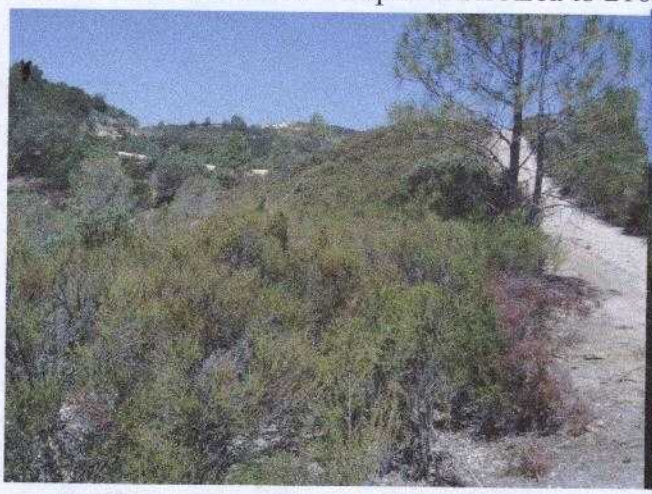


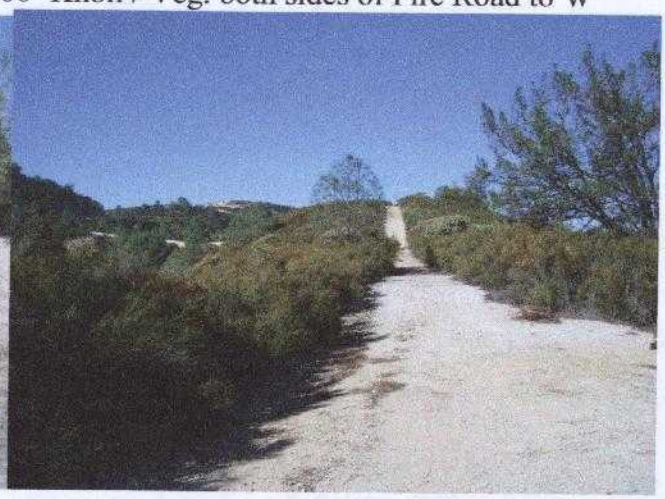
View of N Slope E of Exploratory Permit Area

N Side of Exploratory Permit Area

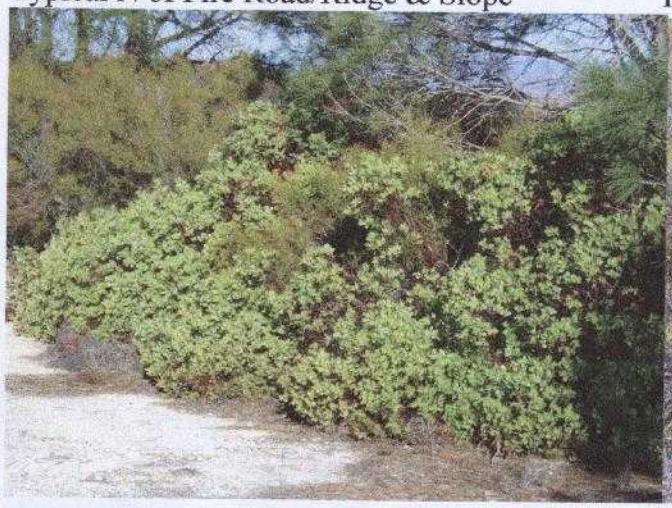
Fire Road viewing W up to El. 2100' Knoll

S side of Fire Road from Exploration Area to 2100' Knoll / Veg. both sides of Fire Road to W

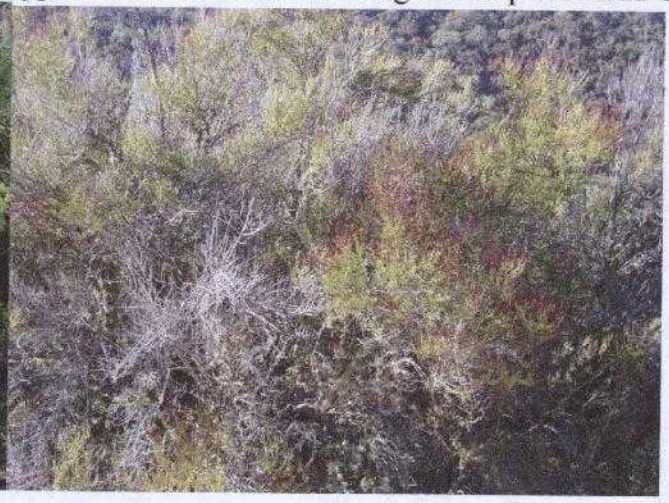




Typical N of Fire Road/Ridge & Slope



Typical on S of Fire Road/Ridge & Slope to Road Cut



S Slope from ExploratoryArea to Road near Curve

Typical ground below Pine Trees

Some shrubs, trees have moss growth

Mix Pine Trees, Shrubs on N side of Fire Road

Pacific Waste Services, Inc.
12925 Alcosta Blvd. Suite 1
San Ramon, Ca. 94583
Office: 925-244-0392
Fax: 925-244-0210

SITE GEOTECHNICAL REPORT
CARMEL STONE MINE
MONTEREY COUNTY, CALIFORNIA

JULY 28, 2009
(REVISED DECEMBER 11, 2009)

PREPARED FOR:
VANCE QUERFURTH
P.O. BOX 1435
CARMEL VALLEY, CA. 93924
T:831-277-7726

SUBMITTED TO:
TIM MOORE, GEOLOGIST
U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
20 HAMILTON COURT
HOLLISTER, CA. 95023
T:831-630-5000/F:831-630-5055
Email:timothy_moore@ca.blm.gov
&
PAULA BRADLEY, ASSOCIATE PLANNER
MONTEREY COUNTY PLANNING DEPT.
168 W. ALISAL STREET, 2ND FLOOR
SALINAS, CA. 93901
T:831-755-5025/F:831-757-9516
Email: BradleyP@co.monterey.ca.us

PREPARED BY:
PACIFIC WASTE SERVICES, INC.
12925 ALCOSTA BLVD. #1
SAN RAMON, CA. 94583
T:925-244-0392/F:925-244-0210
Email:jwyse4@aol.com

SITE GEOTECHNICAL REPORT

On several occasions, site conditions were observed with the most recent inspection occurring on July 17, 2009. I also inspected area access road cuts and area slopes.

In addition to site and adjacent area observations, I reviewed USGS Map and Google Aerial Photo's.

I found existing site slopes ranged from the ½:1 (horizontal:vertical) San Ardo Lockwood Road cut to 1.3 to 1.45:1. At the top of ridgelines, we found the slopes to be flatter, at 3:1 to 2.5:1 and then progressively getting steeper moving away from the ridgelines.

None of the existing steep road cuts or existing slopes have shown any signs of instability. Further review of additional area steep road cuts and an existing area mine where slopes are cut near vertical, there is no instability.

The Monterey Shale material is very strong and hard material that is not subject to instability. The bedding of the Monterey Shale is predominantly flat which reduces any potential instability created by sloped bedding planes. Review of regional faults and history of seismic activity for the region finds that the site is not expected to experience any potential slope instability from seismic events.

Review of all site information finds that excavation in the area of the proposed Carmel Stone Mine would be stable to 1.5:1. However, we recommend for conservatism that slopes be excavated no steeper than 2:1. Any permanent compacted earthfills are recommended to also be no steeper than 2:1 as well.

All earthfills and access road earthfill base should be compacted to 90% relative compaction (dry density). Laboratory testing of earthfill, access road earthfill, and access road rock should have a compaction curve run using ASTM D1557. Verification field testing of the earthfill and access road compaction should be performed by nuclear moisture/density gauge (ASTM D2922) or acceptable alternative at a frequency of 1 test every 500 cubic yards and 1 test every 1000 cubic yards for access road earthfill and road rock.

All final slopes will have mixed topsoil and vegetative material applied to the surface. The subgrade should first be track walked using 2 passes with some moisture addition. The mixed topsoil and vegetative material will be applied to a minimum thickness of 12 inches to provide a good rooting zone. The mixed topsoil and topsoil material shall be moisture conditioned and compacted by track walking using 2 passes. Compaction should not be greater than 85% relative compaction using the same laboratory and field testing of the earthfill described above.

This report with its observations and recommendations is based on over 30 years of civil engineering experience with many different site conditions, excavations and earthfills.

Respectfully submitted:
Pacific Waste Services, Inc.

James A. Wyse, P.E.
President

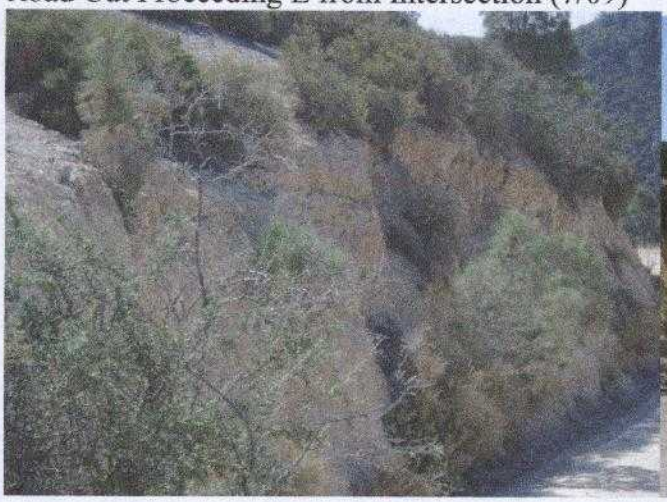
Dated: 12/11/2009

PHOTO'S OF PROPOSED CARMEL STONE MINE SITE CONDITIONS

San Ardo Lockwood Road at Intersection

Road Cut starting at Intersection to the East

Road Cut Proceeding E from Intersection (7/09)



Road Cut W to E (El. 2040 to El. 1960)

Road Cut Intersection to E (Dec. 2008)

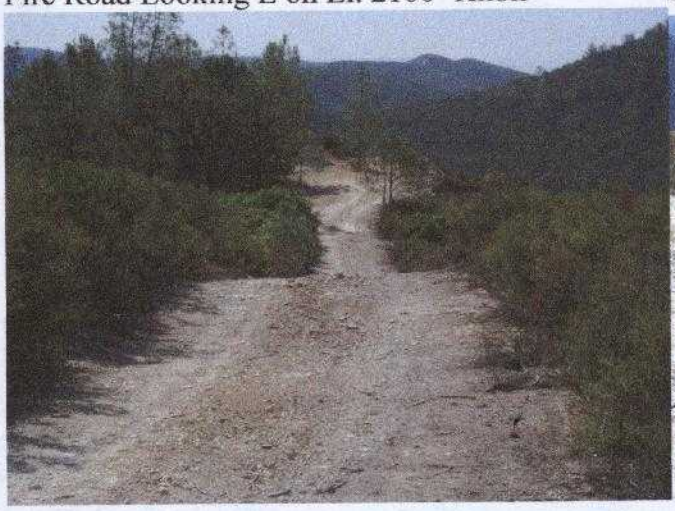
Typical Road Cut (Slope ~ 0.5:1 H:V)

Typical Road Cut (~ 0.5:1)

Road Cut View SE Before the Curve (20' Vertical)

Fire Road Looking E on El. 2100' Knoll

S Slope from ExploratoryArea to Road near Curve



S side of Fire Road from Exploration Area to 2100' Knoll / Veg. both sides of Fire Road to W

Pacific Waste Services, Inc.
12925 Alcosta Blvd. Suite 1
San Ramon, Ca. 94583
Office: 925-244-0392
Fax: 925-244-0210

EROSION CONTROL PLAN (SURFACE WATER POLLUTION PREVENTION PLAN, SWPPP)

CARMEL STONE MINE
MONTEREY COUNTY, CALIFORNIA

JULY 28, 2009
(REVISED DECEMBER 11, 2009)

PREPARED FOR:

VANCE QUERFURTH

SUBMITTED TO:

TIM MOORE, GEOLOGIST
U.S. DEPT. OF INTERIOR, BLM
20 HAMILTON COURT
HOLLISTER, CA. 95023
T:831-630-5000/F:831-630-5055
Email:timothy_moore@ca.blm.gov
&
PAULA BRADLEY, ASSOCIATE PLANNER
MONTEREY COUNTY PLANNING DEPT.
168 W. ALISAL STREET, 2ND FLOOR
SALINAS, CA. 93901
T:831-755-5025/F:831-757-9516
Email: BradleyP@co.monterey.ca.us

PREPARED BY:
PACIFIC WASTE SERVICES, INC.
12925 ALCOSTA BLVD. #1
SAN RAMON, CA. 94583
T:925-244-0392/F:925-244-0210
Email:jwyse4@aol.com
Project No. 210-1.1

STATEMENT OF PREPARATION

This Erosion Control Plan, Surface Water Pollution Prevention Plan for the Carmel Stone Mine was prepared by James A. Wyse, a state of California Registered Civil Engineer. The information presented in this plan is consistent with guidelines established by the California State Water Resources Control Board for NPDES General Permits for Storm Water Discharges with Industrial Activities and furthermore this document provides recommended methods and procedures for erosion control. To my knowledge this document's information is true and correct.

12/11/2009
Date

James A. Wyse
President
PACIFIC WASTE SERVICES, INC.
RCE 29835

CONTENTS

1.0 INTRODUCTION

This document presents the Erosion Control Plan, also named the Surface Water Pollution Prevention Plan (SWPPP) for the Carmel Stone Mine, located in the Williams Hill area of Monterey County between San Ardo and Lockwood, on San Ardo Lockwood Road.
The Carmel Stone Mine is located between communities of San Ardo and Lockwood in Monterey County, California on BLM Land adjacent to San Ardo Lockwood Road. The site is located solely on BLM land and is at least 50 feet from the private property boundary to the east as location represented by Monterey County Assessors Map. The majority of the 12 ± acre mine site is located in the N ½ NW ¼ SW ¼ Section 28, T22S, R9E. A portion of the 12 ± acre mine site is located in the SW ¼ SW ¼ NW ¼ Section 28, T22S, R9E and SE ¼ SE ¼ NE ¼ Section 29 T22S R9E.

The Erosion Control Plan/SWPPP provides compliance with the Monterey County Planning Department's required documents supporting "Development Project Application". The same document will also provide compliance with the State Water Resources Control Board adopted NPDES General Permit requirements for industrial storm water discharges such as Carmel Stone Mine even though the majority of surface water drainage is designed to be contained on-site in detention basins.

Erosion control from mined and developed surfaces is important to successfully reclaim the final mine slopes and surfaces. Erosion control is also important to assure drainage facilities (ditches, detention basins) operations are functioning without interruption.

On November 19, 1991, the State Water Resources Control Board adopted a general industrial storm water permit program. The general permit requires **all** industrial storm water dischargers to:

1. Eliminate non-storm water discharges (including illicit connections) to storm water systems;
2. Develop and implement a storm water pollution prevention plan; and
3. Perform monitoring of discharges to storm water systems.

The Permit requires that industrial storm water dischargers utilize Best Management Practices (BMP's) to control pollutants in storm water. The guidance document to achieve storm water BMP's is the SWPPP. The SWPPP has two major objectives:

1. To identify the sources of pollution that affect the quality of industrial storm water discharges; and
2. To describe the practices to reduce pollutants in industrial storm water discharges.

On April 17, 1997 the State Water Resources Control Board adopted a new set of more stringent regulations governing Industrial Activities Storm Water General Permits which resulted in the expiration of existing General Permits. The new regulations require that all facility owners and/or submit a new Notice of Intent (NOI) to comply with the regulations. The regulations also require that the operator revise and modify as necessary the facilities Storm Water Pollution Prevention Plan (SWPPP), by August 1, 1997.

The Carmel Stone Mine operator will file a Notice of Intent (NOI) once the facility permitting process is in progress with BLM and Monterey County Planning Department.

2.0 MINE INFORMATION

The Carmel Stone Mine is proposed to remove Monterey shale material from the site for commercial use. A detailed operations plan and reclamation plan describes the proposed operations.

A 12+ acre Monterey shale mine site is proposed by Carmel Stone. Permitting of the site requires Monterey County Planning Department approval of the Mine Reclamation Plan for issuance of a Surface Mining and Reclamation Act Permit (SMARA) and U.S. Department of Interior, Bureau of Land Management approval of a mining contract. BLM is the federal land manager of public lands. Along with these permits, even though the design intends to fully detain all site surface water drainage on-site, a Notice of Intent will be filed with the State Water Resources Control Board for potential industrial site storm water runoff discharges to adjacent drainage ways.

Future excavation/development sequence plan will be provided in 5-year increments in order to match the BLM 5-year contract periods. The first 5-year excavation/development sequence plan is presented in Reclamation Plan Figure 6. The excavation/development sequence plans have all surfaces graded away from the site perimeter, to on-site drainage ditches or directly to on-site detention basins.

All equipment maintenance is performed either where the equipment is being used or at a designated maintenance area. All equipment fluids and lubricants are still stored inside ~~enclosed portable trailer sheds or~~ **service truck**. There is no permanent or portable fuel tank located on-site. All fuel will be contained in the mobile service truck or in the equipment. **After the mine ceases operations, any portable trailer sheds of storage containers *(non-hazardous materials)* shall be removed and cleaned during site reclamation efforts.** ***No hazardous materials storage on-site is planned.***

A soil and vegetative material stockpile will be located on-site. Such soil and vegetative soil will be mixed for use in reclamation of mined surfaces. The site's reclamation plan projects that a maximum of 2 acres of mine surface will be in the development stage at any given time. When the operation continues to expand, those slopes/surfaces that are to final grade will be reclaimed.

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3.0 DESCRIPTION OF POTENTIAL SURFACE WATER POLLUTANT SOURCES FROM MINE OPERATIONS

Within a mine facility, there are several sources of pollutants which potentially could impact storm water run-off. In this section of the SWPPP, those areas of potential storm water pollutants at CARMEL STONE MINE are identified and discussed.

3.1 MINE EXCAVATION/DEVELOPMENT AREA

A potential storm water pollutant from the mine area is the excavation/development itself. Contact of storm water with the mined materials can contaminate the run-off, although the potential for significant contamination from this source is slight. The greater potential for storm water run-off contamination is from erosion of the soil cover that can also result in contamination of the storm water run-off through introduction of suspended solids.

3.2 EQUIPMENT MAINTENANCE FACILITY

Sources of potential storm water pollutants from the maintenance facility include oil and grease, solvents, and surfactants. This potential for occurrence is only where the equipment maintenance operations are performed outside of the covered areas. Such areas will need to be appropriately cleaned and material removed from the site for proper disposal.

3.3 DIESEL FUEL/MISCELLANEOUS MATERIALS

Diesel fuel is stored in the mobile service truck for fueling the mine equipment. All mine equipment is normally fueled and maintained near the active mine area. A small supply of mechanics solvents, lubricants, and ant-freeze use for equipment maintenance is maintained on-site. These materials are stored within an enclosed storage trailer near the equipment maintenance area. Use of these materials occur in a controlled area which is cleaned up regularly.

3.4 EROSION CONTROL

Erosion Control methods typically will include:

- Perimeter vegetation storage and wattle installation,

- Straw wattles installed on final slopes every 20 vertical feet,
- Maintenance of drainage ditches & detention basins including grading, silt removal, pipe cleaning,
- Surface vegetation installation on interim and final surfaces not actively being used over wet weather months,
- Use of detained water for dust control even during dry period in wet weather months.

3.5 DUST CONTROL

Mining activities at the CARMEL STONE MINE consist mainly of excavation of stone, small equipment stone separation from topsoil and small rock, hand placing masonry grade stone on pallets, loading pallets onto trucks and trailers, stockpiling of small rock, stockpiling of topsoil/soil with excavated vegetation materials. The operator has a water truck/water pull on-site during mine operations which is used solely of controlling on-site dust. Areas supported by the water truck include all on-site access roads, the stone processing and loading area, soil/topsoil stockpiling, and the main mine entrance road. In addition, the mine entrance road and the main access road to the mine area will be rock surfaced. .

3.6 SIGNIFICANT LEAKS AND SPILLS

To our knowledge, there should be no spills of pollutants into the surface water drainage systems at the site.

3.7 NON-STORM WATER DISCHARGES

There are no known or possible non-storm water discharges locations.

3.8 SOIL/TOPSOIL STOCKPILES

Soil and topsoil materials removed from the mine surface as part of the clearing & grubbing process as the mine continues to develop and this material will be placed in a designated stockpile. Added soil surrounding the subsurface Monterey shale material will be added to the soil/topsoil stockpile. These soil/topsoil stockpiles will vary in size and location during the operation of the mine because reclamation efforts will occur during the mine operation, when final graded surfaces are achieved. These stockpiles will be provided with appropriate BMP for surface erosion from wind and rain. Such BMP's are expected to include surface vegetation,

application of wood mulch or other organic material, use of straw wattles at the toe and on the slopes, spread straw on the surface.

4.0 EXISTING STORM WATER CONTROLS

At the CARMEL STONE MINE there will be storm water management controls to prevent storm water run-on to the mine disposal area and to reduce the amount of contaminates in the storm water run-off. Descriptions of these existing controls are as follows.

4.1 MINE STORM WATER CONTROLS

Storm water controls will be in-place within the mine area to reduce the potential for contaminants to commingle with storm water runoff:

- Final slopes – Install straw wattles every 20 vertical feet, install topsoil, vegetation (seed, fertilizer, mulch).
- Interim slopes/surfaces with no planned mining over wet weather months shall be vegetated and straw mulched
- Annual silt/soil buildup cleaning of all ditches, interim/permanent detention basins.
- Regrade road surfaces, perimeters to make sure they are graded to drain into the mine area.
- Install perimeter BMP's, straw wattles, straw bales, vegetated soil diversion berms.

4.2 DRAINAGE CONTROLS

Within the mine area and surrounding inactive areas, make sure storm water drainage ditches have been installed to: 1) convey storm water runoff from the active mine areas to the interim detention basins; and 2) prevent run-on to the waste fill areas by diverting and conveying surrounding area storm water drainage around the waste fill areas to the existing site discharge points.

Interim drainage ditches & detention basins planned in the 5-year operations plan will be located. As the mine is developed, additional storm water drainage controls will be installed.

4.3 MAINTENANCE FACILITY

The location of the mobile maintenance facility will vary with the operations **and may be a service truck**. This area is used for the performance of mechanical repair work on the mine equipment, for the storage of equipment parts, and various equipment lubricants and cleaners.

Note that some bulk supplies of motor oil are stored in enclosed storage trailers located adjacent to the maintenance facility **or in a mobile service truck**.

The personnel servicing equipment make every effort to control the spillage of equipment fluids onto the ground surface. However, if a spill occurs, the ground surface in the maintenance will be cleaned. Any spilled material is promptly cleaned up with an absorbent material.

The method of indoor storage of materials and the efforts to promptly clean-up spills of equipment fluids reduces the potential for contamination of the storm water at and adjacent to the maintenance facility.

Upon ceasing mining operations, any maintenance equipment, containers, storage units, service truck shall be cleaned and removed from the site as part of the final site reclamation efforts. ***No hazardous materials are planned for storage at the site.***

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5.0 STORM WATER POLLUTION PREVENTION PLAN

The Storm Water Pollution Prevention Plan presents those Best Management Practices (BMP's) which are designed to reduce and/or eliminate the contamination of storm water at an industrial site. With respect to CARMEL STONE MINE, the BMP's for storm water contamination control include good housekeeping procedures, preventative maintenance,, spill prevention and response, storm water management practices, employee training, waste handling and recycling, recordkeeping and internal reporting, sedimentation and erosion prevention, inspections, and monitoring.

Carmel Stone is implementing the best management practices as contained in the August 2002 Erosion and Sediment Control Field Manual prepared by the California Regional Water Quality Control Board. Discussion of the BMP's are presented in the following sections.

5.1 STORM WATER POLLUTION PREVENTION PERSONNEL

Implementation of the SWPPP at CARMEL STONE MINE is the responsibility of Mr. Vance Querfurth. Mr. Querfurth will be assisted in the implementation by mine operations staff. Mr. Querfurth will direct and supervise the mine staff in performing the practices and activities to reduce and/or eliminate contaminates from storm water. Additionally, Pacific Waste Services, Inc. (PWS) will assist Mr. Querfurth with technical situations and problems which may arise periodically, as well as providing periodic monitoring of site conditions when requested.

5.2 GOOD HOUSEKEEPING

The maintenance of a clean and orderly facility can significantly reduce the potential for pollution of storm water discharges. At CARMEL STONE MINE, the following specific areas will be given attention:

- Control of dust;
- Maintenance of soil cover over interim/final slopes of the mine area;
- Maintenance of mine equipment to avoid fluid leaks;
- Proper storage of equipment oils, solvents, and detergents;
- Prompt clean-up of fluid spills and proper off-site disposal; and
- Careful procedures during equipment fueling.

5.3 PREVENTATIVE MAINTENANCE

Activities at CARMEL STONE MINE to control pollutants from contaminating storm water include mine operations control, mine stone segregation/loading control, equipment maintenance, access road rock surface maintenance, and maintenance of the storm water conveyance and storage systems.

All waste oil generated by on-site equipment maintenance is placed inside barrels with appropriate secondary containment. A certified oil recycler picks up the oil on a regular basis.

The storm water conveyance systems (drainage ditches, diversion berms, and culverts) must also be maintained. Activities here include maintaining the grade and flowline of the conveyance systems and keeping the storm water systems free of debris, sediment, and excessive vegetative growth.

5.4 SPILL PREVENTION AND RESPONSE

Spills of potential storm water pollutants at CARMEL STONE MINE can occur in several areas: portable diesel fuel truck (from a leak in the tank and during equipment fueling); and the maintenance facility where equipment fluids are stored and equipment maintenance and repair are performed.

If a potential pollutant spill occurs at CARMEL STONE MINE, the following should be done:

- The size and type of pollutant spill should be determined;
- If the spill is identifiable as immediately dangerous to health and safety, the proper authorities should be contacted by calling 911 for emergency response;
- If safe to perform, the spill should be contained by berming the drainage path with soil through the use of hand tools or mine equipment;
- If the spill is small enough, the fluid should be controlled by absorbing either with rags or mechanics absorbing material;
- If the spill is too large to absorb, Mr. Querfurth and PWS should be contacted to discuss the possible response by a hazardous waste response team.

5.5 STORM WATER MANAGEMENT PRACTICES

Practices of storm water management beyond controlling the source of pollutants include those measures which reduce the amount of pollutants from the storm water discharge. At CARMEL STONE MINE, two detention basin, in which all mine site storm water is diverted to, allows suspended solids to settle out before the storm water is reused on-site for dust control. In the unlikely event of successive design storms, a discharge of surface water may be necessary into the canyons to the east. Such discharge points will be overflow culverts that discharge onto rip rapped surfaces for erosion control.

5.6 EMPLOYEE TRAINING

Training of mine personnel shall be the responsibility of Mr. Vance Querfurth, Manager of Carmel Stone Mine and periodically by the site engineer, Pacific Waste Services, Inc. As a formal commencement of employee training, key employees shall be required to read and gain comprehension of this Erosion Control Plan/Surface Water Pollution Prevention Plan.

Further training of the mine employees will be an on-going program, rather than having mine staff meetings conducted on a specific timetable. It is the belief of Carmel Stone, that the goals of the SWPPP can best be achieved by continuously providing the mine employees with the best management practices to reduce and/or eliminate pollutants from storm water runoff. Important BMP's to be stressed with the mine employees include:

- Control of excavation, stone loading, grading, and soil reclamation;
- Control of erosion and sediment using field manual described methods;
- Elimination of all illicit connections with storm water discharge systems; and
- Maintenance of proper and safe procedures when using potential storm water pollutants and good housekeeping techniques around the mine maintenance building

5.7 WASTE HANDLING AND RECYCLING

Any spill cleanup materials must be properly stored and disposed at permitted off-site facility. Equipment waste oil and fluids will be properly stored for pickup by a certified waste oil recycler.

5.8 RECORDKEEPING AND INTERNAL REPORTING

A copy of this SWPPP should be maintained at the storage container at all times. A minimum of 12 months of monthly site inspection forms should be maintained the site documentation for review. All historic report data forms should be maintained by the mine office for as long as the site is operational. The site is also required to perform annual storm water monitoring under the General Industrial Storm Water Permit. Copies of these reports can be found in the operating record for the mine at the mine office and RWQCB in San Luis Obispo.

5.9 SEDIMENT AND EROSION PREVENTION

The United States EPA and California State Water Resources Control Board has identified suspended solids as a major component of storm water runoff contamination. Suspended solids are introduced into storm water through the erosion of soil particles. Therefore, prevention of soil erosion is a basic need of storm water management. The site's efforts to detain all or most of the surface water runoff will further reduce suspended solids in storm water runoff discharges.

At Carmel Stone Mine, the potential for soil erosion is greatest in areas of interim/final cut slopes. Soil erosion can be reduced by: avoiding steep slopes (where possible); installing drainage control wattles to reduce storm water runoff velocity; and grading the slope as smooth as possible. Additionally, all slopes that are not scheduled to receive a mine final slope reclamation should be seeded with a vegetative mix specially designed to match removed vegetation from the mine site. Seed installation can be by hand or by machine and may include hydroseeding with fiber, water, tackifier, fertilizer and seed. Hand or machine strawing of seeded slopes followed by equipment crimping is an accepted practice. Other best management practices for erosion and sediment control include: track walking slopes up and down to allow the grooves to catch seed and rainfall to reduce runoff; where possible, keep the vertical distance between benches consistent with the final design; provide a stabilized outlet for concentrated runoff using concrete or rock lined spillways; improve road drainage to divert drainage into the ditch using water bars or speed bumps or dips; use of erosion control blankets or geotextiles might be used in areas experiencing excessive, unacceptable erosion; fiber rolls for sediment control might be placed along the base of newly constructed slope that only recently had seed placed; check dams using rock filled bags, sand bags, or rocks may be used to dissipate flow velocity and is a temporary control until drainage ditch is lined with vegetation or concrete, as designed.

The use of straw bales or silt fencing is no longer an accepted best management practice for temporary control of silt in drainage ditches. However, silt fences are acceptable BMP for temporary control of sediment laden sheet flow runoff such as along the perimeter of an exposed soil area (finished, newly seeded slopes, soil stockpiles). Hay or straw bales can be used as a backing for the silt fence filter fabric to strengthen the silt fence.

Once areas of the mine are brought to final grade, the final cover system should be placed over the completed mine area as soon as possible. The vegetative layer in the final cover profile

will reduce the soil erosion potential, as well as reduce the amount of storm water infiltration.

5.10 INSPECTIONS

Inspection of the storm water control system and related facilities shall be performed at least annually by Pacific Waste Services, Inc.. Prior to the rainy season (usually in September), the site manager or site engineer will review all storm water conveyance systems, the equipment maintenance area, and all other facilities and/or potential pollutant sources that are related to storm water pollution control.

To facilitate the annual inspection, the RWQCB provides annual storm water report including forms for the annual inspection. The forms should be used to document the results of the inspection and to describe the scope and schedule to correct any storm water management deficiencies that may be revealed during the annual inspection. All inspection documentation should remain on file for a minimum of five years.

5.11 MONITORING

Monitoring of the storm water discharge, as described herein, is consistent with the intent of the August 17, 1992 (Revised April 17, 1997) version of the proposed modifications to the General Industrial Storm Water Permit, as prepared by the California State Water Resources Control Board. If changes to the monitoring requirements are promulgated by the Board, an addendum to this section will be prepared.

The objectives of the monitoring program are to determine the quality of the storm water discharge and to aid in the evaluation of SWPPP modifications if pollution of the receiving waters occurs.

Monitoring of the storm water discharge will consist of collecting samples of the discharged storm water, submitting the samples to a State of California certified water laboratory, and conducting analysis of the sample by testing for specific water quality constituents and parameters. The storm water discharge samples will be collected at least twice during the rainy season at the outlet of the detention basins if there is a discharge. The first storm water sample will be obtained during the first "significant" storm water discharge of the rainy season that occur during operating hours of the facility and that are preceded by at least 3 working days without storm water discharge. A significant event is defined as a continuous discharge

of storm water for a minimum duration of one hour. The second storm water sample will be obtained sometime later during the rainy season.

The sample will be collected in bottles supplied by the Laboratory. All preservatives necessary for proper chemical analysis of the sample will be provided by the laboratory. The storm water samples will be tested for the following water quality constituents and parameters:

- pH
- Total Suspended Solids
- Specific Conductance
- Oil and Grease
- Total Organic Carbon

This list of water quality constituents and parameters is appropriate for the potential storm water pollutants that are present at CARMEL STONE MINE. The forms to be used to describe information obtained during the storm water sampling and the laboratory test results are provided annually and submitted each July 1 to the California Regional Water Quality Board, Central Coast Region office.

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