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DRAFT
ASBS POLLUTION PREVENTION PLAN

ASBS 28-SUBAREA IV
Santa Catalina Island

Prepared in Accordance with:

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2012-0012

Prepared for:

Connolly-Pacific Company
901 Pebbly Beach Road
Avalon, CA 90704

Project No.: CNLP-12-12367
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ATTACHMENTS

I. INTRODUCTION

The Connolly-Pacific Company (Connolly) quarry has been in operation since 1934 and is located at 901 Pebbly Beach Road, Avalon, CA 90704. This facility is a quarry located on Santa Catalina Island (Catalina) within the designated Area of Biological Significance (ASBS) Number 28, Subarea IV (Figure 1).

A. Facility Operations

The Connolly Quarry (Quarry) is an active mining operation. The site is improved with offices, parking areas for trucks and equipment, maintenance shops, aggregate stockpiles, aggregate transfer equipment, petroleum storage tanks and parts warehouses.

Material is mined from hillside areas using the shot method. Shot holes are drilled into the hillside and loaded with explosives. After detonation the released material is loaded into front end loaders and taken to the separator plants. The separator plants consist of belt conveyors, screens and other sorting equipment. The mined product is separated according to customer needs. The operation also includes a crushing operation to reduce the size of the product depending on the customer order. The separated product is then stockpiled using front end loaders and subsequently loaded onto barges for off-site delivery.

Tugboats are used to tow barges to the quarry from the Connolly maintenance facility located in the Port of Long Beach at 1925 West Pier D Street. Upon arrival at the quarry, tugboats operated by a certified crew, position the barge on moorings located adjacent to the shore in front of a Derrick Crane. Certified crane operators transfer the loaded skip box from the shore to the barge. The barge is slowly loaded from bow to stern. Crane operators carefully dump the skip box to mitigate potential aggregate loss overboard. Barge loading operations usually take about 4 hours. Tugboats tie off at the mooring and wait while the barges are being loaded. Once the barge is full, the tugboats return to the loaded barge to tow it to the job site where the aggregate is used for a construction project.

The Processing Area encompasses the waterfront and is subject to The Waterfront Plan developed in accordance with the Special Protections dated September 20, 2012. Those activities include barge loading using derrick cranes, aggregate transfers using mobile equipment, offshore mooring repair, offshore tugboat operations, vehicle maintenance, and equipment maintenance. Potential pollutants associated with these operations include but are not limited to: dust, petroleum products, paints, cleaning products, metals, sanitary waste, bilge water waste, trash, solvents, and acids. These non-storm water discharges have been addressed and mitigated within the context of the Water Front Plan implementation.

B. Special Protections: Regulatory Background

On October 18, 2004, the State Water Resources Control Board (State Water Board) notified Connolly, as a responsible party, to cease storm water and nonpoint source waste discharges into Areas of Special Biological Significance (ASBS) or to request an

exception from the California Ocean Plan ASBS waste discharge prohibition. On December 20, 2004, Connolly requested an exception. On March 20, 2012, the State Water Board adopted Resolution No. 2012-0012, approving an exception to the California Ocean Plan for the ASBS Waste Discharge Prohibition for Storm Water and Nonpoint Source Discharges, with Special Protections for beneficial uses (General Exception).

Connolly received notice in a letter dated May 30, 2012 of the State Water Quality Control Board's (SWRCB) adoption of the General Exception to the California Ocean Plan of Waste Discharge Prohibition for selected Storm Water and Nonpoint Source Discharges into Areas of Special Biological Significance (ASBS). In addition to the notification of adoption, the letter detailed information that must be submitted to the SWRCB as well as monitoring requirements.

The General Exception requires that Connolly submit to the State Water Board an ASBS Pollution Prevention Plan which is equivalent in contents to an ASBS Compliance Plan. The Pollution Prevention Plan contained herein has been prepared in accordance with the Special Protections for Areas of Special Biological Significance as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f).

The ASBS Pollution Prevention Plan is subject to approval by the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

C. Special Protections: Pollution Prevention Plan Requirements

The ASBS Pollution Prevention Plan must address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff that are necessary to comply with the special conditions, will be achieved through Management Measures and associated Management Practices (Management Measures/Practices).

The ASBS Pollution Prevention Plan requires that the Management Measures to control storm water runoff during a design storm shall achieve on average the following target levels:

- Set as the Table 1 (Formerly Table B) Instantaneous Maximum Water Quality Objectives in Chapter II of the 2012 California Ocean Plan; or
- A 90% reduction in pollutant loading during storm events, for the applicant's total discharges,

In Addition, the Pollution Prevention Plan must:

1. Include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. (Figure 2)

2. Describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

3. Address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs, and

4. Describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule.

5. Address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

6. The ASBS Pollution Prevention Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule.

7. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

8. If the results of the receiving water monitoring described in the special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS the discharger must evaluate the results as defined in the *Flowchart to Determine Compliance with Natural Water Quality* which is included as Attachment 1 of the Special Protections. The special protections require that the discharger submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.

(a) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents;

(b) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

(c) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(d) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

These requirements are derived from The Public Resources Code which states that "waste discharges shall be prohibited or limited by the imposition of special conditions" in accordance with the California Water Code and implementing regulations, including, but not limited to, the California Ocean Plan (Ocean Plan). The Ocean Plan states "Waste shall not be discharged to areas designated as being of special biological significance," unless an “exception” is granted and Special Protections, as determined by the SWRCB and California Ocean Plan, are implemented. Stringent terms, prohibitions, and special conditions have been adopted by the SWRCB that comprise the limitations on point source storm water and nonpoint source discharges, providing Special Protections for marine aquatic life and natural water quality in ASBS.

D. Compliance Schedule

1. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

2. Within eighteen (18) months from the effective date of the Exception, the discharger shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits).

3. The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.

3. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.

4. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.

5. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. (Figure 3)

II. SITE CHARACTERISTICS

Santa Catalina Island is located at 33°22' north latitude, 118°25' west longitude and lies approximately 20 miles offshore of the Palos Verdes Peninsula. The island is 22 miles (35.4 km) long, 8 miles (12.9 km) across at its widest point, and is oriented in a general northwest to southeast direction. Santa Catalina Island is part of Los Angeles County. Avalon is the only city on the island, however there is a community located between Catalina Harbor and Isthmus Cove, known as Two Harbors. Approximately, 100 permanent residents of Two Harbors maintain this local recreational facility utilized by vacationers, the area's primary industry (SWRCB 1979).

ASBS No. 28, Subarea IV encompasses a portion of eastern Santa Catalina Island between Jewfish Point and Binnacle Rock. The seaward boundary extends from the intertidal zone to a depth of 300 feet or a distance of 1 nautical mile offshore, whichever is greatest. The ASBS contains approximately 2,756 acres of land, with approximately 2.7 miles of shoreline (SWRCB 1981). The Connolly quarry is located within to ASBS No. 28, Subarea IV, on Pebbly Beach Road, Avalon, CA 90704. Connolly Pacific Company operates the Quarry and Santa Catalina Island Company owns the surface and mineral rights.

The Pebbly Beach Quarry produces rock construction materials which range in size from sand-sized grains to boulders which measure several feet across and weigh upwards of several tons. The large products are used primarily in the construction of marine facilities (e.g. breakwaters and artificial islands), and the smaller materials can be used for a number of construction projects. The materials consist of volcanic breccias and sandstone conglomerates. The product is mined by tunneling into the cliff face, setting numerous explosive charges and blasting the material from the cliff. As the material falls, it breaks into varying sized boulders which may be broken down further during processing. A crusher and sorter are set up in the materials processing area located onsite, and these machines crush the rocks to ordered specifications. The finished products are stored onsite in stockpiles.

The quarry encompasses about 248 acres of sea cliff between Pebbly Beach and Seal Rocks. Private roadways from Avalon provide land access to the site and mooring buoys lying directly offshore permit barges to receive quarried materials from the site. Two large cranes operate at the loading areas near Jewfish Point. The materials processing area covers a graded bench just behind the primary loading area.

Surface drainage within the quarry is directed to the central processing area where low intensity rainfall percolates into the soil. Stormwater from medium intensity rain events will collect in the central location and sheet flow to on-site sediment basins. Each outfall is equipped with a sedimentation basin, which serves to reduce velocity of sheet flow and allow settling of particulates. Water from medium intensity rain events is detained in the basin and no discharge of storm water will occur. The basins will reduce velocity and particulate content from the first flush of rain from high intensity rain events that may result in storm water discharge.

The facility has prepared a Waterfront Plan (Attachment C) and a Storm Water Pollution Prevention Plan (SWPPP) that was prepared in accordance with the State of California General Permit Number CAS00001 for storm water discharges associated with industrial activities. The WDID number for the facility is 419I011729. Refer to Attachment "E" for a copy of the SWPPP. Connolly maintains a Spill Prevention Countermeasure and Control (SPCC) plan in accordance with 40 CFR subpart 112 to ensure proper containment and storage of petroleum products

(Attachment F). Facility personnel are trained in the appropriate response to spills or leaks in accordance with policies and procedures defined in the plans.

In addition, the Quarry must maintain a Reclamation Plan in accordance with the Surface Mining and Reclamation Act (SMARA) of 1975. Refer to Attachment "G" to review the Reclamation Plan. Connolly has a permit for their septic tank system through the Los Angeles County Department of Public Works (Permit No. SE 0301170004). This permit requires that the facility maintain the system to eliminate unauthorized non-stormwater discharges.

Land uses surrounding the quarry include industrial operations and open space areas. Properties to the north, near Pebbly Beach and outside the coverage of this plan, support several industrial uses, including the Southern California Edison power plant, the Avalon sewage treatment plant, a sanitary landfill and a freight barge loading terminal. The town of Avalon lies approximately one-half mile farther north. Lands to the south and west are within an Open Space and Conservation easement. The Pacific Ocean (San Pedro Channel) lies to the east.

A. Physical Description

The Waterfront Processing Area which is subject to the Waterfront Plan is composed of a relatively flat, pervious surface (See Figure 2). The waterfront area is equipped with a completely enclosed steel maintenance shop and office along the northern perimeter. The shop is used for equipment repairs, parts storage, and battery storage. Utility truck parking, loader parking and dump truck parking is located west of the main shop. The parking area is graded so that discharge flows easterly back toward the shop. There is a 3 foot aggregate/gravel berm along the shoreline to ensure that no materials are released to the ocean. A small wooden shed is located south of the main shop. The shed is used to store tires, anti-freeze and thinners. The CAT shop is a stainless steel building with a concrete floor located south of the wooden shed along the waterfront. The CAT shop is equipped with two roll-up doors on each end to allow for the easy movement of large quarry equipment. There are 8 portable horizontal oil tanks just east of the CAT shop. Each tank is within its own secondary containment. There are eight 55-gallon drums containing used oil filters along with one 500-gallon tank containing waste oil located south of the CAT shop. Twelve 55-gallon drums of oil are stored just north of the CAT shop. There is a 14,500-gallon diesel aboveground storage tank and a 4,000-gallon aboveground fuel transfer tank located along the shoreline south of the CAT shop. Both tanks are equipped with secondary containment and overfill protection. Two Derrick cranes used for loading aggregate onto barges are located further south along the shoreline. The cranes are electric and the motors for the cranes are housed within a brick building. The brick building contains hydraulic fluid for the cranes as well as eyewash stations and small amounts of other chemicals.

B. Geology

The geology of Santa Catalina Island consists of Mesozoic metamorphic basement rocks intruded by Miocene igneous rocks. Tertiary sedimentary rocks are scattered across the island. The island generally is regarded as a southward extension of the Franciscan formation, although the schist lithologies found on Catalina differ slightly from the typical Franciscan schists. A variety of schists, breccias and sedimentary marine layers form the complex geologic structure of Catalina.

Extensive thrust and reverse faulting has occurred on the island, and evidence of this faulting is revealed along the exposed cliffs of the Pebbly Beach Quarry. Fault activity has obscured the true stratigraphic columns, therefore the continuity of individual beds cannot be discerned readily and neither can a regional strike trend be discovered. The exposed inter-bedded sequence of rocks consists primarily of sandstones and massive conglomerates. More specifically, three sedimentary units have been intruded by Miocene dacitic and gabbroic dikes and sills, and overlying these disrupted marine sediments is a sequence of non-marine sandstones, pebble-cobble conglomerates and minor mudstones. The intruded sedimentary layers consist of interbedded siltstone, quartzofeldspathic sandstone and conglomerate. Individual lithic fragments include rocks of granitic, volcanic and metamorphic origin. The graywackes are fine grained and massive bedded, and the conglomerates consist of a fine-grained matrix surrounding irregular (1/2 inch to 18 inches) chunks of the abovementioned lithic fragments.

C. Vegetation

The quarry site lies in the coastal plant community known as Coastal Sage Scrub. Coastal Sage Scrub occurs on dry rocks and gravelly slopes in the coastal range, and these areas receive ten to twenty inches of rainfall per year.

A variety of plant species comprise the Coastal Sage Scrub community, including California sagebrush, buckwheat brush, lemonade sumac and goldenweeds. These plants grow from one to six feet tall, and the brush is less dense than true chaparral. Additionally, several other similar plant species thrive within the Coastal Sage Scrub community, and some of these species can be found only on Santa Catalina Island and other islands within the Channel Islands chain. The Santa Catalina Island Local Coastal Plan lists several rare species found on the island.

Quarrying operations have removed most of the on-site vegetation. Those slopes within the lease boundaries which have yet to be mined still contain native plant materials and in fact, quarry areas which have been mined previously or presently support quarry related land uses show signs of natural revegetation processes. The active quarry site can be classified into four distinct zones, and some of these zones reveal plant growth. The four zones are:

1. Production work areas or benches (unconsolidated crushed rock subbase)
2. Unconsolidated bench slope faces
3. Shoreline slope face comprised of armor rock sea walls
4. Production high wall and slump pile at base

Grass type plant growth has occurred at the upper production areas and at the base of the slump pile. The toes of muck piles and the bases of undisturbed stockpiles exhibit woody plant growth. This revegation results from deposition of windborn seeds and seeds deposited in animal fecal matter. Further revegetation of bare slopes and abandoned areas will occur via the quarry reclamation process. These revegetation strategies are discussed in the section of the Reclamation Plan titled "Revegetation".

D. Climate

Santa Catalina Island is characterized by a semi-arid Mediterranean climate with mild, wet winters and warm, dry summers. Skies are generally clear, however heavy

cloudiness occurs primarily in the early spring months when stratus clouds drifting in from the sea may cause low ceilings or fog (SWRCB 1981). Weather in this area is largely controlled by the Eastern Pacific high, which is located off the coast of Northern California during the spring and summer months; this high pressure cell prevents low pressure systems from moving down the coast into Southern California (SWRCB 1979).

ASBS No. 28, Subarea IV consist of both leeward and windward aspects and each can experience different climates. Summer and winter temperatures in the southwestern portion are usually around 80ºF and 50ºF, respectively. Weather for the northeastern portion can be estimated from the City of Avalon data, however slight differences may occur as Avalon is semi-protected in a canyon.

E. Physiography/Geomorphology

Santa Catalina Island is located on the coastal borderland of the Southern California Bight (SCB), a wide continental shelf characterized by ridges (the Channel Islands are ridges that extend above sea level) and basins. The SCB is a marine province stretching from Point Conception in central California to the area between Punta Colnett and Punta Eugenia in Baja California. It is part of a gently sloping southeasterly facing shelf extending for an average distance of approximately 5 miles from the east end of Santa Catalina Island.

The land mass within ASBS 28, Subarea IV is extremely rugged and mountainous, and is intersected by five narrow and steep-sided canyons leading to the sea. The canyons discharge only 3% of all surface drainage on Catalina. Intertidal and subtidal geomorphology ranges from fine sand to variable densities of concentrations of boulders and occasional bedrock outcrops or pinnacles. Sandy sediments and rocky substrates account for approximately 40 and 60% of the intertidal zone, and, 80 and 20% of the subtidal zone, respectively. Subtidal areas near headlands are characterized by exposed bedrock, either with interspersed pockets of coarse sand or covered by variable quantities and sizes of gravity-transported boulders. Most boulders are medium-sized, (2-5 feet, 0.6-1.5 m), resulting in areas of medium physical relief. Exposed bedrock and boulders become less common with increasing depth as the substrate changes to fine sand beyond a depth of 35-40 feet (10-12 m). Sediments in subtidal areas offshore of the beaches grade from coarse to fine as depth increases. Most of the subtidal substrate is sand, therefore forests of giant kelp are not present. Within the quarry region, the subtidal area has been modified by quarry operations. Large intertidal boulders occasionally are dislodged by storm swells, and roll down the subtidal slopes. Similar-sized boulders then are placed in the intertidal zone to preserve the original coastline as required by their Mining and Reclamation Plan developed in accordance with the Surface Mining And Reclamation Act (SMARA). (SWRCB 1981).

F. Hydrology

Oceanic seasonal changes in wind direction commonly create seasonal patterns for the currents off of the California Coastline. For much of the year, the California current brings colder northern waters southward along the shore as far as Southern California (MLPA 2006). The California current is the eastern leg of the North Pacific Gyre, a massive, clockwise moving current system which encompasses the entire North Pacific Ocean (SWRCB 1979).

The Southern California Bight is the 300 km of recessed coastline between Point Conception in Santa Barbara County and Cabo Colnett, south of Ensenada, Mexico. The dramatic change in the angle of the mainland coastline creates a large backwater eddy in which equatorial waters flow north near shore and subartic waters flow south offshore. This unique oceanographic circulation pattern creates a biological transition zone between warm and cold waters that contains approximately 500 marine fish species and more than 5,000 invertebrate species (SWRCB 1979). The hydrological variation resulting from winds and currents create a wide range of ecological environments.

G. Biology

Quantifying the chemical components of an effluent only partially assesses the potential of waste discharge to ASBS. Ultimately, the biological integrity of marine communities residing in ASBS also need to be assessed to determine if the human influence on water quality is hindering the ability of marine life to respond to natural cycles and processes. Biological surveys were conducted and reported in the State Water Board's California Marine Waters, Areas of Biological Significance Reconnaissance Survey Reports (1979-1981). The results indicate that 44 different species of flora, 260 invertebrate species, and 27 fish species ASBS 28.

During the Southern California Bight '08 rocky intertidal survey, Twenty-one rocky intertidal sites were quantitatively sampled for habitat quality, invertebrate and algal abundance and composition by Raimondi's UC Santa Cruz Coastal Biodiversity research team. The monitoring focused on differences between reference and ASBS discharge sites. Preliminary results indicated that: 1) there were no significant differences in macro-invertebrate or algal species richness based on geographic grouping or type of site (discharge vs. reference); 2) there were large geographic differences in algal and sessile invertebrate species composition, likely reflecting natural biogeography, but no statistically significant differences between reference sites and ASBS discharge sites; and 3) there were large geographic differences in mobile invertebrate species composition, once again reflecting natural biogeography, but no statistically significant differences between reference sites and ASBS discharge sites.

The sample locations for The Bight '13 Rocky Intertidal study are the same locations for the quarry as the Bight '08 study. The data has not been compiled as of the preparation of this document, therefore any impacts on the biological integrity of the marine communities cannot be evaluated at this time. Results from the study shall be incorporated as addenda to this plan when required to meet compliance requirements of the special protections.

The Bight '13 study includes another study to determine if there is an impact on the biological integrity of the ASBS as a result of stormwater discharge into the ASBS. The standard for protection is that discharges "shall not alter natural ocean water quality in an ASBS" [1]. As part of assessing if the water quality is protected, the SWRCB has requested a study to determine the concentration of bioaccumulating metals and synthetic organic contaminants at representative discharge and reference sites. The discharge sites receive NPDES permitted point source discharge. The reference sites receive drainage from a watershed that has been determined to represent natural water

quality. The goal is to determine if the water quality at each discharge station is equivalent to that at the reference stations. In the Bight'13 study, water quality is defined as the concentrations of bioaccumulative contaminants in mussel (Mytilus californianus) tissue. The data has not been compiled as of the preparation of this document, therefore any impacts on the biological integrity of the marine communities cannot be evaluated at this time. Results from the study shall be incorporated as addenda to this plan when required to meet compliance requirements of the special protections.

H. Natural Water Quality

In response to the regulatory concerns about Areas of Special Biological Significance (ASBS), the California State Water Resources Control Board (State Water Board) empanelled eight experts from different scientific disciplines to develop a functional definition of "natural water quality." The findings of this group are summarized below and excerpted from the report titled "Summation of Findings, Natural Water Quality Committee, 2006-2009", Technical Report 625, September 2010.

Natural ocean water quality: That water quality (based on selected physical chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, i.e., an absence of significant amounts of:

a) man-made constituents (e.g., DDT),
b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial) and biological (e.g., bacteria) constituents at levels that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and
c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man.

Natural ocean water would be expected to vary noticeably both from place to place, and from time to time. For example, there are significant variations in the composition of minor constituents of seawater (e.g., nutrients, oxygen, trace metals) with depth in the ocean, as well as with distance from land and even between ocean basins. Furthermore, significant ocean properties such as salinity, temperature, and pH vary appreciably with location, season, and year to year due to natural oceanographic processes. Even within California's coastal ocean, spatial differences exist as a result of regional differences in solar radiation, precipitation, and naturally occurring fresh water. Coastal seawater will differ measurably in trace element composition as a consequence of local watershed geology. Various places on the California shelf have naturally occurring hydrocarbon and groundwater seepage. In near-shore seawater, temporal and seasonal differences in suspended sediments result from variations in wave action. Naturally occurring marine life itself also alters water quality by various processes. For example, seawater near a sea lion haul-out may be high in fecal bacteria levels. In addition, there are naturally occurring large-scale ocean cycles that dramatically influence the physical, chemical and biological components that support marine life along the California coast. For example, El Niño and La Niña oceanographic events can significantly alter the surface water

temperature along the California coast thus extending or diminishing the range and abundance of cold versus warm water species. Rainfall during such El Niño events can also exert large influences on coastal water quality due to significant flood events that deliver (natural) sediments from undeveloped watersheds. Turbidity events associated with California river systems during large flood events have been observed from space.

According to the expert committee, truly natural water quality probably does not now exist in California's coastal ocean, and may be rare throughout the world. For example, plastic debris can be found in remote areas of the ocean thousands of miles from continents, and persistent organic pollutants may be found in marine life inhabiting equally remote regions. Even if anthropogenic land-based waste discharges were to be completely eliminated from a section of coastline, there is no guarantee that natural water quality would be reestablished there. Aerial deposition, pollutants carried by oceanic currents from distant sources, and vessel discharges may influence water quality conditions.

As a result, it is not practical to identify a unique seawater composition as exhibiting natural water quality. Nevertheless, the committee believes that it is practical to define an operational natural water quality for an ASBS, and that such a definition must satisfy the following criteria:

- It should be possible to define a reference area or areas for each ASBS that currently approximate natural water quality and that are expected to exhibit the likely natural variability that would be found in that ASBS,
- any detectable human influence on the water quality must not hinder the ability of marine life to respond to natural cycles and processes.

Such criteria will ensure that the beneficial uses identified by the Ocean Plan are protected. The reference drainage sites are used to for establishing natural water quality thresholds.
The 85th percentile of the reference site distribution was selected as a primary threshold that the discharge receiving water must meet to ensure there are no anthropogenic impacts.

I. Water Chemistry

Bight '08

Receiving water samples were collected during storm events and analyzed for Ocean Plan water quality parameters as part of the Bight '08 survey and the Exception application. Two Ocean Plan parameters; copper and nickel, exceeded the Ocean Plan Objectives.

California Ocean Plan water quality objectives for copper include an instantaneous maximum of 30 ug/l, a daily max of 12 ug/l and a six month median of 3 ug/l. California Ocean Plan water quality objectives for nickel include an instantaneous maximum of 50 ug/l, a daily max of 20 ug/l and a six month median of 5 ug/l. ASBS 28 reported levels of copper above the Table B limits in three locations, the highest reported copper level was

40.5 ug/l, and an elevated level of nickel from storm water run-off at one location at 54 ug/l.

Reference site results indicated no detectable trace synthetic organic compounds (i.e., DDT, PCB) or toxicity, and generally low concentrations of naturally occurring constituents (trace metals, PAH). With one minor exception, all of the constituents had median values below the strictest Ocean Plan objectives. However, there were times at reference stations when maximum concentrations of several naturally occurring constituents exceeded Ocean Plan Table B thresholds. Values for many constituents in the reference data set exceeded Table C ("Background Seawater Concentrations") in the Ocean Plan. Most southern California ASBS discharge sites and monitored parameters behaved similarly to reference site conditions. (NWQC summation findings)

Bight '13

Receiving water samples and stormwater samples were collected and analyzed as part of the receiving water, Two separate storm events were captured during the 2012-2013 storm season. Chemistry analytical results for core samples and receiving water samples are below the California ocean Plan Table 1 limits. Receiving water samples collected for chronic toxicity testing indicate that the sample water is toxic for Mytilus Development. The samples also exhibited toxicity for Kelp gemerination & growth. The receiving water sample did not demonstrate toxicity for sea urchin fertilization. Rain water sample collected for chronic toxicity testing results indicate that the rain water is toxic for sea urchin fertilization.

At the time of plan preparation, no comparison can be made for the Bight '13 results and natural water quality because sampling has not been completed. The sampling will continue through the 2013-2014 rainy season to develop comparison data.

Bight '08 reference point sampling results indicated no detectable trace synthetic organic compounds (i.e., DDT, PCB) or toxicity, and generally low concentrations of naturally occurring constituents (trace metals, PAH). With one minor exception, all of the constituents had median values below the strictest Ocean Plan objectives. However, there were times at reference stations when maximum concentrations of several naturally occurring constituents exceeded current Ocean Plan Table 1 thresholds. Most southern California ASBS discharge sites and monitored parameters behaved similarly to reference site conditions.

J. Land Use

The Pebbly Beach Quarry produces rock construction materials which range in size from sand-size grains to boulders which measure several feet across and weigh upwards of several tons. The City of Avalon is located on Santa Catalina Island and is relatively close to but not immediately adjacent to the ASBS. The facility is approximately 248 acres and is completely pervious (i.e., no paved roads or parking areas). The watershed has two direct discharges and three natural streams draining to the ASBS. The facility is located in the Pebbly Beach Extractive Use Zone of the Santa Catalina Island Local Coastal Plan. Connolly must maintain the natural shoreline contours, therefore rocks

are added periodically to areas where storms have caused slippage. There is a jetty and a pier constructed at the quarry. Connolly is also required to reconstruct a "natural" hillside topography upon reclamation.

III. RECLAMATION PLAN

The nature of the quarry operation is such that the site will not be reclaimed until the source materials are depleted or until the landowner chooses not to lease the property for quarrying purposes. Source materials are extracted directly from the cliff face, and quarrying proceeds into and along the cliff face. Therefore, final grading and revegetation will not occur until quarrying activities cease altogether. The method of reclamation via final grading and revegetation is described, in detail in this section. In general, reclamation will occur in four zones as follows:

Zone 1: Production Areas Production areas will be graded to direct surface water runoff toward swales along the inner edge of the beach. The swales will serve to slow surface flow and thereby minimize surface runoff into the ocean.

Zone 2: Unconsolidated Bench Faces The outer edges of slope faces will be graded at a 1:1 slope and planted with native vegetation. Slopes steeper than 2:1 will be bordered at the tops and toes by armor rocks and thorny barrier plants, and the slopes themselves will be revegetated.

Zone 3: Shoreline Slopes will be protected from erosion and unwarranted trespass by larger armor rocks.

Zone 4: Production High Walls

Upon cessation of mining, a final blast will be taken to loosen debris, and the high wall will be scaled to remove any loose rocks or overhangs. The resultant muck pile will be left at the base of the high wall at its natural angle of repose. Both the high wall and muck pile will be revegetated, and thorny barrier plants may be used along the muck pile base to discourage access.

The Santa Catalina Island Local Coastal Plan, a Los Angeles County document which guides island development, calls for quarry operations to continue on the site. This plan has no specific target date, but it could be amended at any time.

The reclamation plan has been designed to return the site to its original condition and to incorporate the site into the adjacent Open Space and Conservation Easement area. Any other land uses proposed in the future would need to conform to land use policies and restrictions in effect at that future date.

Hydroseeding is the proposed method of revegetation. The hydroseeding process mixes fertilizers and legumes with plant seed material so that new plants on infertile areas are provided with vital nutrients. These nutrients enable the plants to establish themselves more rapidly and thereby begin the process of soil reconstruction.

The standard method of operation is to create benches or shelves as the quarrying operation progresses inland. This results in a stair-step effect which can be utilized in the ultimate reclamation of the land at the termination of the quarry operation. Nominal

grading of these benches or shelves will be required to establish a more natural appearance and to control runoff from the slopes and benches.

Stabilization of the site will be undertaken in two basic ways. First, the production high walls will be subjected to a final blast at the termination of the operation. This final blast will result in a natural rockfall which can be anticipated to have an angle of repose of approximately 1.5:1. This action will remove any overhangs and will create a face somewhat akin to that found in the natural terrain adjacent to the site. Other areas will be stabilized through grading to accomplish basic slopes no steeper than 2:1 . Where slopes of necessity may exceed 2:1, special armor rock barriers will be positioned to discourage access and reduce hazard.

The quarry will be reclaimed as undeveloped open space to make it topographically and vegetatively compatible with the surrounding natural sea coast environment of this portion of Santa Catalina Island.

Revegetation

Several factors must be taken into consideration in the selection of plant materials and planting methods for the five zones described above. The climate exposure zones, soils characteristics and planting objectives all help to determine the revegetation strategies to be used.

Climate Exposure Zones

The site can be separated into two distinct plant climates. These plant climates include:

- The Thermal Belt Coastal Line lies inland of the coast, above the seacliffs, and it is influenced by inland conditions 15 percent of the time.
- The Marine Influence Coastal Climate ranges from tide line to the base of the high wall, and this area is subject to ocean breezes and high winds.

The Plant climates are divided into three exposure zones which are defined as follows:

- First Zone: This is the shoreline zone . Plants within this zone must be able to adapt in salty soil and must be able to withstand salty driven spray.
- Second Zone: This zone lies inland from the surf line and is protected from ocean spray. Both soil and air, however, contain considerable salt.
- Third Zone: This zone lies above the surf yet still contains alkaline soils. Humidity prevails.

Soil Characteristics

The quarrying activities and final grading operations will leave a variety of soil types which individually will be able to support only certain plant materials. Alkaline soils will prevail along the coastal zone. The unconsolidated benches, production areas and muck piles will consist of gravelly materials. These new soils will be sterile and in need of balanced nutrients.

Planting Objectives

Certain plant materials will be needed to bind gravelly soils and prevent erosion. Other plants will be planted to discourage trespass. In all cases plants will be chosen for their ability to grow quickly and to blend in with the surrounding native vegetation.

Method Proposed

Hydroseeding would be the most efficient and cost-effective means of revegetating the various slope areas. Hydroseeding is a process in which plant seeds, hormones, fertilizers, wood fiber and water are combined into a slurry which is sprayed onto the benches and slopes, thereby insuring even distribution of seeds, available plant nutrients and some protection from eroston. Hydroseeding could be ' supplemented with some planting. It should be noted that the potential life of the quarry and the projected date for reclamation prevent precise hydroseeding procedures from being detailed at this point in time. Replanting techniques may become more sophisticated over time. It may be stated, however, that the best method of hydroseeding will be used at the time of reclamation.

IV. POLLUTION PREVENTION PLAN DEVELOPMENT AND IMPLEMENTATION

Mitigation of unauthorized non-stormwater discharges

Quarrying activity is performed above the high tide elevation to prevent the discharge of quarried material directly into the ocean. Unauthorized non-strormwater discharges have been eliminated through the implementation of the SPCC plan, Waterfront Plan, SCAQMD Rule 403 plan (Attachment D) and vessel management plan. In addition, the interface between land and water is protected through the placement of heavy revetment stone. Production areas are graded to direct surface water runoff back from the outer edges of the benches into swale areas constructed along the inner edge of the benches. The swale areas are depressed about 12 inches and filled with a layer of graded (3 inch to 12 inch) crushed rock.(See Figure 3) Surface runoff flowing through the swales will be slowed. This will result in longer detention time with correspondingly greater downward percolation into the unconsolidated material of the benches, thereby minimizing surface runoff.

Stormwater Best Management Practices

Facility operations cease during rain events. Equipment is stored under cover as appropriate and specific rain event best management practices are implemented. In order to further control the conduct of sediment into the ocean during storm events, special check dams will be constructed using low-level rock berms within the active processing areas. Rock weir structures are placed along the flow lines of surface drainage to slow the velocity of surface runoff as well as increasing the downward percolation of stormwater (see Figure 2). The structures are constructed when the NOAA website predicts a 50% chance of rain for the City of Avalon.

During unusually high intensity rain events greater than the 25 year 24 hour storm event, stormwater will reach the waterfront area. This area is equipped with three sediment detention basins. Sediment Basin #1 is located to capture discharge from the southern

portion of the active mining area. This sediment basin has a capacity of 1.54 acre feet. The watershed draining to this basin is approximately 31 acres and is composed of pervious haul roads, unconsolidated rock and areas of with slight vegetation. Using the TC-Calculator from the LA County 2006 Hydrology and Sedimentation Manual the calculated peak runoff rate and 24 hour volume of the 25 year 24 hour rain event is 5.56 cubic feet per second and 1.43 acre-feet respectively. Therefore, it is unlikely that there will be discharge from this sediment basin until the rain intensity exceeds the 25 year 24 hour event.

The northern portion of the quarry is not being actively mined. Discharge from the 250 foot elevation is directed down the benches to the catch basin located near the Cat repair shop. The area of this portion of the quarry from the waterfront up to the 250 foot elevation is approximately 2 acres. The catch basin located in this area has a capacity of 0.19 acre-feet. The calculated peak flow rate is 5.86 cubic feet per second and the 24 hour runoff volume is 0.09 acre-feet. Based on these calculations, the sediment basins are sized to approximately three times the 85th percentile rain event. Stormwater will not overflow from this basin to the ocean until the rain intensity exceeds the 25 year 24 hour event.

The basic purpose of the basins is to allow sediment contained in the water to drop out of suspension and control runoff from the slopes and benches. Water retained in the basins will eventually percolate down into the pond linings and discharge through the revetment to the ocean days after the storm event is over. The velocity of flow of the runoff on the benches will be controlled through the gradient or through the creation of cross berms on the benches designed to reduce the velocity of water running down these benches. Where the gradient of the bench will permit, swales will be installed on the 'inner edge of the bench. Since these swales will be filled with a layer of 3 to 12 inches of crushed rock as described above, little sediment is expected to reach the lower benches. However, any sediment which does reach the lower benches will be contained within the basins described above and the sediment allowed to settle before the water is overflowed into the ocean. A typical basin cross-section is shown in Figure 4.

Plan Implementation Team and Schedule

David Scott – Director of Safety and Compliance (562) 437-2831 Ext. 223
Cell (562) 577-0725
Robert Machado – Plant Manager (310) 510-0626

Laura Machado – Administrative (310) 510-0626

Paul Romo – Superintendant (310) 510-0626 Cell (562) 577-0721

Responsibility	Team Member
Plan Responsible Person	David Scott
Best Management Practices	Robert Machado/Paul Romo
Inspection/Observation	Robert Machado/Paul Romo
Training	David Scott
Reporting	David Scott/Laura Machado
Recordkeeping	Laura Machado

Unauthorized non-stormwater Best management Practice Implementation Schedule: All BMPs have been instituted and are inspected monthly during the rainy season and quarterly during the dry season. All BMP inspection protocols and procedures shall be revised as required by the new permit or other legislation.

Stormwater Best Management Practices have been implemented. Upon receipt of final analytical results from the 2013-2014 additional storm water BMPs may be required if the sample results indicate that concentrations exceed the 85% natural water quality target.

ATTACHMENT A –

TABLES

Table 1 - 2012 California Ocean Plan Water Quality Objectives

TABLE 1 (formerly TABLE B)
WATER QUALITY OBJECTIVES

	Units of Measurement	Limiting Concentrations: 6-Month Median	Daily Maximum	Instantaneous Maximum
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic	µg/L	8.	32.	80.
Cadmium	µg/L	1.	4.	10.
Chromium (Hexavalent) (see below, a)	µg/L	2.	8.	20.
Copper	µg/L	3.	12.	30.
Lead	µg/L	2.	8.	20.
Mercury	µg/L	0.04	0.16	0.4
Nickel	µg/L	5.	20.	50.
Selenium	µg/L	15.	60.	150.
Silver	µg/L	0.7	2.8	7.
Zinc	µg/L	20.	80.	200.
Cyanide (see below, b)	µg/L	1.	4.	10.
Total Chlorine Residual (For intermittent chlorine sources see below, c)	µg/L	2.	8.	60.
Ammonia (expressed as nitrogen)	µg/L	600.	2400.	6000.
Acute* Toxicity	TUa	N/A	0.3	N/A
Chronic* Toxicity	TUc	N/A	1.	N/A
Phenolic Compounds (non-chlorinated)	µg/L	30.	120.	300.
Chlorinated Phenolics	µg/L	1.	4.	10.
Endosulfan	µg/L	0.009	0.018	0.027
Endrin	µg/L	0.002	0.004	0.006
HCH*	µg/L	0.004	0.008	0.012
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			

* See Appendix I for definition of terms.

TABLE 1 (formerly TABLE B) Continued

Chemical	30-day Average (µg/L) Decimal Notation	Scientific Notation
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS		
acrolein	220.	2.2×10^{2}
antimony	1,200.	1.2×10^{3}
bis(2-chloroethoxy) methane	4.4	4.4×10^{0}
bis(2-chloroisopropyl) ether	1,200.	1.2×10^{3}
chlorobenzene	570.	5.7×10^{2}
chromium (III)	190,000.	1.9×10^{5}
di-n-butyl phthalate	3,500.	3.5×10^{3}
dichlorobenzenes*	5,100.	5.1×10^{3}
diethyl phthalate	33,000.	3.3×10^{4}
dimethyl phthalate	820,000.	8.2×10^{5}
4,6-dinitro-2-methylphenol	220.	2.2×10^{2}
2,4-dinitrophenol	4.0	4.0×10^{0}
ethylbenzene	4,100.	4.1×10^{3}
fluoranthene	15.	1.5×10^{1}
hexachlorocyclopentadiene	58.	5.8×10^{1}
nitrobenzene	4.9	4.9×10^{0}
thallium	2.	$2. \times 10^{0}$
toluene	85,000.	8.5×10^{4}
tributyltin	0.0014	1.4×10^{-3}
1,1,1-trichloroethane	540,000.	5.4×10^{5}
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS		
acrylonitrile	0.10	1.0×10^{-1}
aldrin	0.000022	2.2×10^{-5}
benzene	5.9	5.9×10^{0}
benzidine	0.000069	6.9×10^{-5}
beryllium	0.033	3.3×10^{-2}
bis(2-chloroethyl) ether	0.045	4.5×10^{-2}
bis(2-ethylhexyl) phthalate	3.5	3.5×10^{0}
carbon tetrachloride	0.90	9.0×10^{-1}
chlordane*	0.000023	2.3×10^{-5}
chlorodibromomethane	8.6	8.6×10^{0}

* See Appendix I for definition of terms.

TABLE 1 (formerly TABLE B) Continued

Chemical	30-day Average (µg/L) Decimal Notation	Scientific Notation
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS		
chloroform	130.	1.3×10^{2}
DDT*	0.00017	1.7×10^{-4}
1,4-dichlorobenzene	18.	1.8×10^{1}
3,3'-dichlorobenzidine	0.0081	8.1×10^{-3}
1,2-dichloroethane	28.	2.8×10^{1}
1,1-dichloroethylene	0.9	9×10^{-1}
dichlorobromomethane	6.2	6.2×10^{0}
dichloromethane	450.	4.5×10^{2}
1,3-dichloropropene	8.9	8.9×10^{0}
dieldrin	0.00004	4.0×10^{-5}
2,4-dinitrotoluene	2.6	2.6×10^{0}
1,2-diphenylhydrazine	0.16	1.6×10^{-1}
halomethanes*	130.	1.3×10^{2}
heptachlor	0.00005	5×10^{-5}
heptachlor epoxide	0.00002	2×10^{-5}
hexachlorobenzene	0.00021	2.1×10^{-4}
hexachlorobutadiene	14.	1.4×10^{1}
hexachloroethane	2.5	2.5×10^{0}
isophorone	730.	7.3×10^{2}
N-nitrosodimethylamine	7.3	7.3×10^{0}
N-nitrosodi-N-propylamine	0.38	3.8×10^{-1}
N-nitrosodiphenylamine	2.5	2.5×10^{0}
PAHs*	0.0088	8.8×10^{-3}
PCBs*	0.000019	1.9×10^{-5}
TCDD equivalents*	0.0000000039	3.9×10^{-9}
1,1,2,2-tetrachloroethane	2.3	2.3×10^{0}
tetrachloroethylene	2.0	2.0×10^{0}
toxaphene	0.00021	2.1×10^{-4}
trichloroethylene	27.	2.7×10^{1}
1,1,2-trichloroethane	9.4	9.4×10^{0}
2,4,6-trichlorophenol	0.29	2.9×10^{-1}
vinyl chloride	36.	3.6×10^{1}

* See Appendix I for definition of terms.

Table 1 Notes:

a) Dischargers may at their option meet this objective as a total chromium objective.

b) If a discharger can demonstrate to the satisfaction of the Regional Water Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR PART 136, as revised May 14, 1999.

c) Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where: y = the water quality objective (in µg/L) to apply when chlorine is being discharged;
x = the duration of uninterrupted chlorine discharge in minutes.

E. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded*.

2. The natural taste, odor, and color of fish, shellfish*, or other marine resources used for human consumption shall not be altered.

3. The concentration of organic materials in fish, shellfish* or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

F. Radioactivity

1. Discharge of radioactive waste* shall not degrade* marine life.

* See Appendix I for definition of terms.

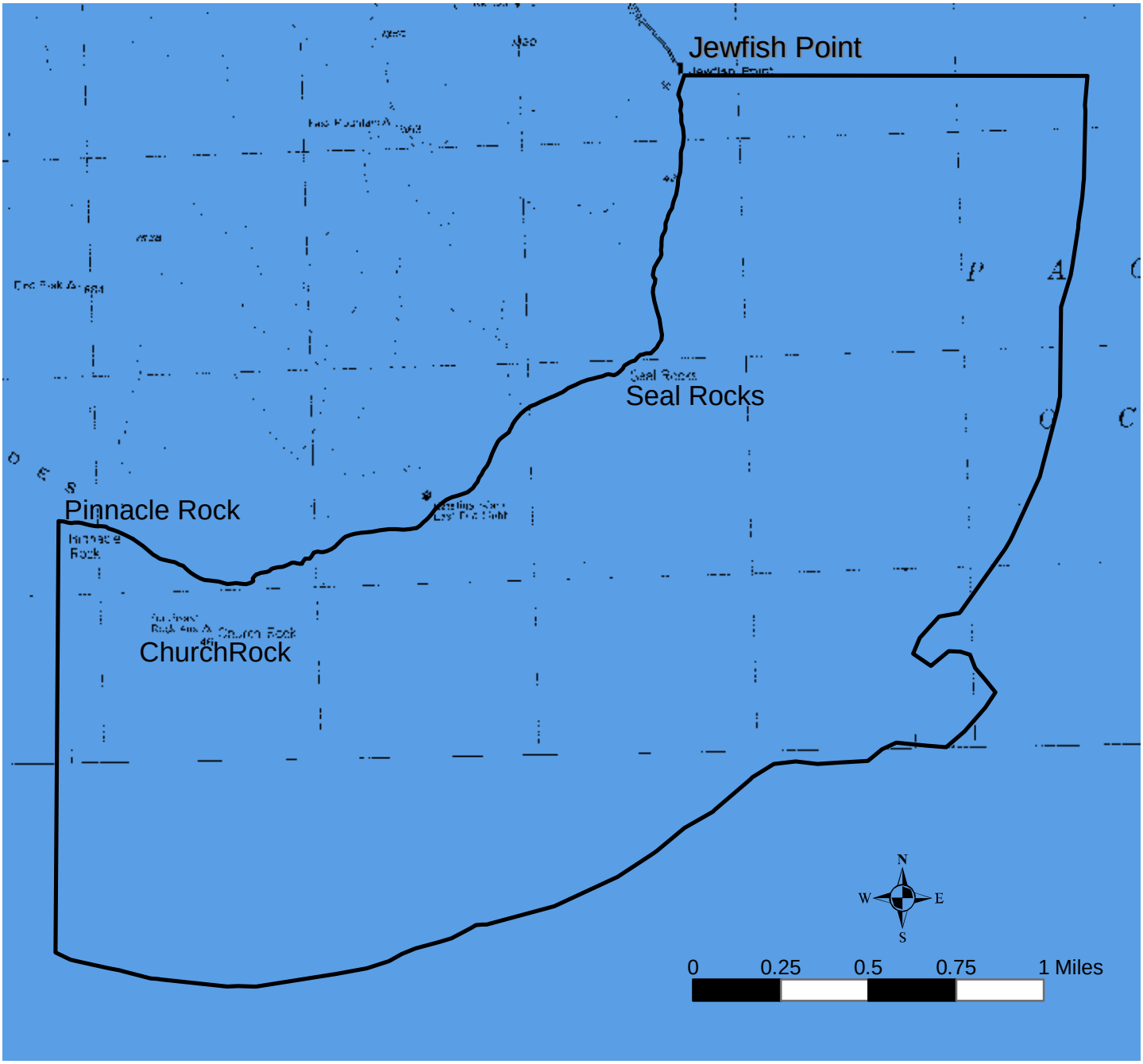
Table 2 – Site Specific Permits and Plans

Agency	Permit Number	Description	Regulations	Recordkeeping/Reporting
SWRCB	WDID # 419I011729	SWPPP	Stormwater NPDES CAS000001	- Annual Sampling - Monthly Monitoring - Annual Report
SCAQMD	F94220	Aggregate Receiving, Screening , Riprap Production System	Rule 201 – Equipment Requiring a Permit	- Monthly Aggregate Processing
Department of Conservation State Mining and Geology Board and Los Angeles County Department of Regional Planning/DPW	Mine ID# 91-19-0010 SMP Case No. 86136 – (4)	Mining and Reclamation Plan	SMARA	- Annual Report of Compliance - Annual Financial Assurances - AB3098 Listing
LA County Fire Department	FA0020435	Hazardous Materials Business Plan	CUPA	- Annual Inventory Update - Business Emergency Plan Every 3 Years - SPCC Every 5 Years, - Monthly Petroleum Storage Inspection - Hazardous Waste Weekly Inspection
DTSC	CAL000223892	Hazardous Waste Generator	CCA Title 22	- Waste Manifest Documentation
CalRecycle	TPID # 1509384-01	Waste Tire Generator	Title 14	- Comprehensive Trip Log 3 Years
SCAQMD	Facility ID # 82149	Rule 403 Plan	Rule 403 Fugitive Dust	Rule 403 recordkeeping Table 2 and 3 log retained on-site for 6 months

ATTACHMENT B

FIGURES

Figure 1 – Site location map



Approximate Outline of ASBS 28

FIGURE 1: SITE LOCATION MAP		
SITE: Area of Special Biological Significance 28	DRAWN: RS	APPROV.: KH
	SCALE: See Map	DATE: 09/12
CLIENT: Connolly Pacific Company		
SOURCE: USGS Santa Catalina, East, CA		

3777 Long Beach Blvd., Annex
Long Beach, CA 90807
Phone: (562) 495-5777

Figure 2 – Site Layout Map

EL 480

EL 400

BERM

EL 350

EL 340

BERM

EL 250

Separator Plant
SC-32
WE-1

BERM

EL 180

BERM

BERM

BERM

Sediment Basin
SE-2

Sediment Basin

Outfall 1

Outfall # 1 off
rocks if safe

CAT001

Crane

Mooring Buoy (distance not
to scale) Approximately
450ft off point
WE-1

Sediment
Basin
SE-2

Sediment Basin

Outfall 2

Outfall # 2 off
rocks if safe

CAT002

Crane

Mooring Buoy
Approximately
250ft off point
WE-1

14,500 Gallon Diesel Tank
SC-20
SC-31
SC-33

SC-33

WE-1

4,000 Gallon Diesel Fuel
SC-20
SC-31
SC-33

Separator
Plant
SC-32
WE-1

CAT
SHOP

Waste Oil
SC-34

CAT
Shop

Outfall 3

Drum
Storage
SC-31

Sediment
Basin
SE-2

Sediment
Basin

WE-1

Main
Office

Shop

Equipment
Parking Area
SC-43

LEGEND

DIRECTION OF FLOW

OUTFALL LOCATION

Best Management Practices

SC-20	Vehicle & Equipment Fueling
SC-22	Vehicle & Equipment Parking
SC-31	Outdoor Liquid Container Storage
SC-32	Outdoor Equipment Operations
SC-33	Outdoor Storage of Raw Materials
SC-34	Waste Handling & Disposal
SC-43	Parking/Storage Area Maintenance
SE-2	Sediment Basin
SC-11	Spill Prevention, Control, & Clean up
SC-10	Non-Storm Water Discharge
WE-1	Wind Erosion Control

NOTE: WATER FROM EL 250 TO SHOP THAT COMES OFF HILLS FLOWS TO CAT SHOP CATCH BASIN

SCALE: 0 300' 1"

FIGURE 2: SITE LAYOUT MAP

SITE:
Connoly Pacific Company
ASBS 28

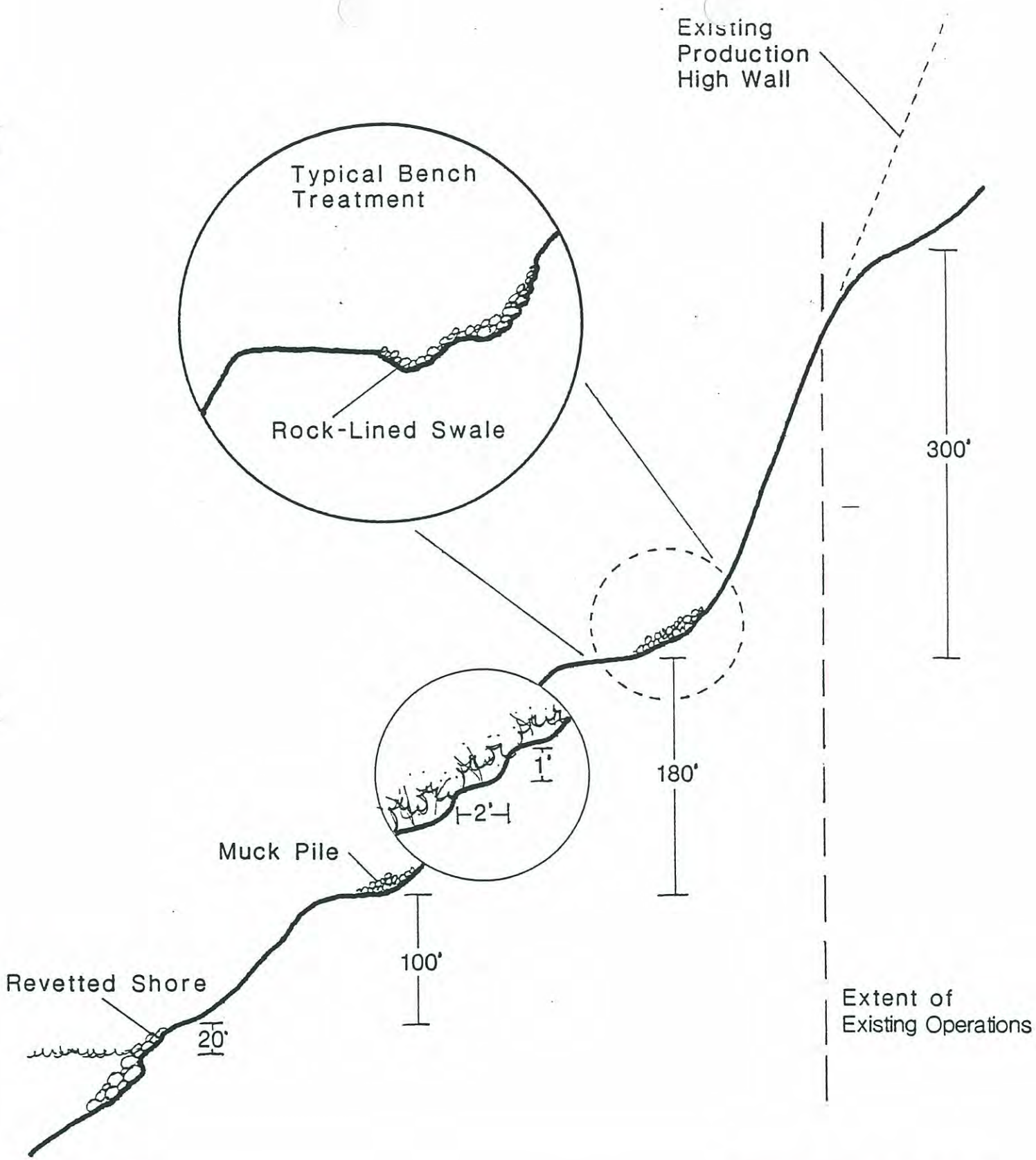
CLIENT: Connoly Pacific Company

DRAWN: KD | APPROVED: KH

SCALE: 1"=300' | DATE: Oct. 2013

ALTA ENVIRONMENTAL
3777 Long Beach Blvd.
Annex Building
Long Beach, California
P: 562-495-5777
F: 562-495-5877
www.altaenviron.com

Figure 3 – Swale Cross Section

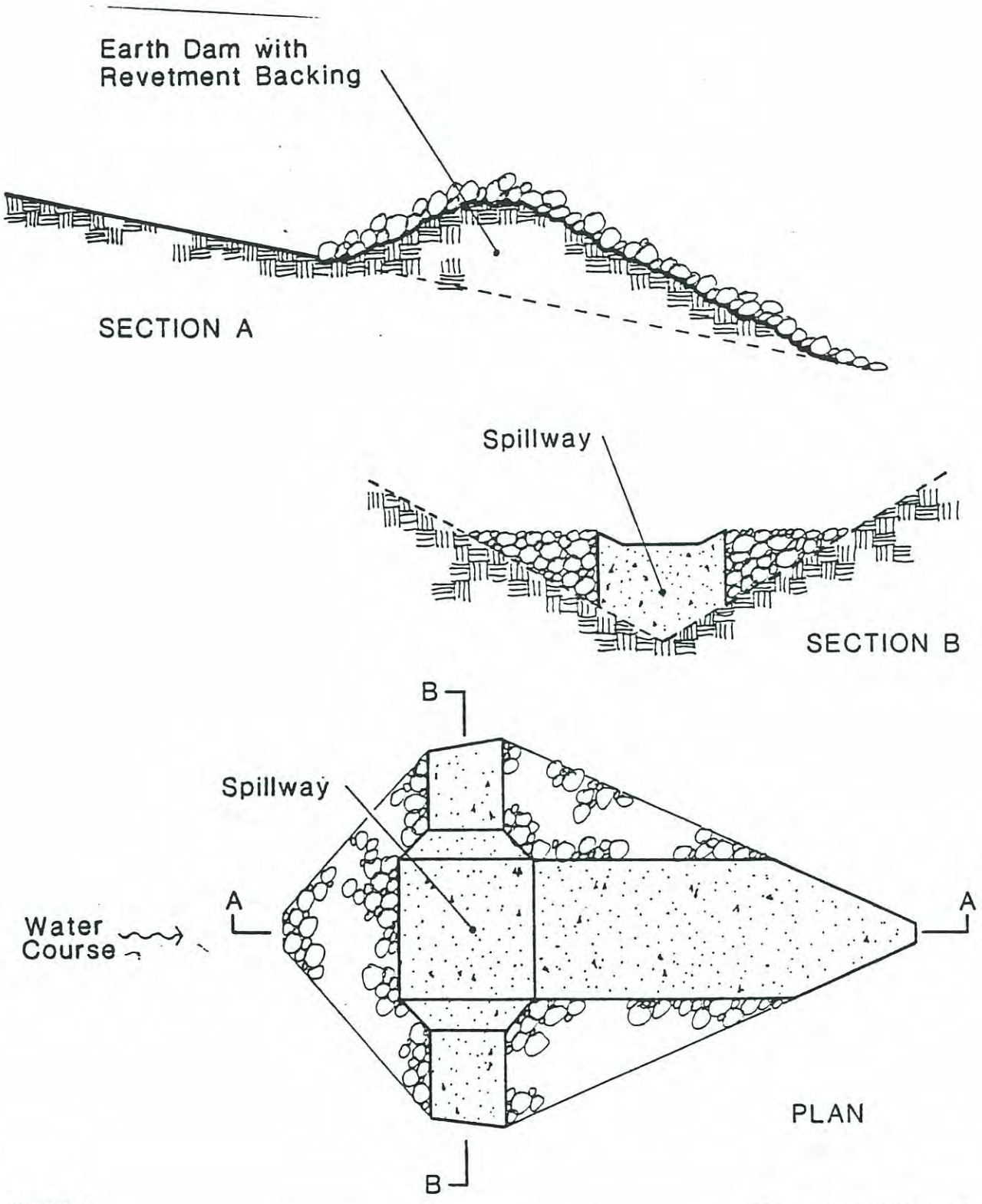


Pebbly Beach Quarry

No Scale

Figure III-1
Typical Cross Section
Final Topographic Conditions

Figure 4 – Sediment Basin



Catalina Quarries

Figure III-2
Sedimentation Trap Concept

ATTACHMENT C

WATERFRONT PLAN

Alta Environmental
November, 2013

ALTA ENVIRONMENTAL

3777 LONG BEACH BLVD, ANNEX BLDG. LONG BEACH CA 90807 altaenviron.com o.562.495.5777 f.562.495.5877

WATERFRONT PLAN

ASBS 28-SUBAREA IV

Santa Catalina Island

Prepared in Accordance with:

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2012-0012

Prepared for:

Connolly-Pacific Company
901 Pebbly Beach Road
Avalon, CA 90704

Project No.: CNLP-12-12367
Date: September 20, 2012
Prepared By: Kathy Hubbard

ATTACHMENTS

ATTACHMENT A – TABLES

ATTACHMENT B – FIGURES

ATTACHMENT C – WATERFRONT PLAN AUDIT PROTOCOL

ATTACHMENT D – AIR PERMITS AND AIR PROGRAM

ATTACHMENT E – SWPPP

ATTACHMENT F – SPCC

ATTACHMENT G – HMBP

ATTACHMENT H – REFERENCES

ATTACHMENT I – AMENDMENTS

I. INTRODUCTION

The Connolly-Pacific Company (Connolly) quarry has been in operation since 1934 and is located at 901 Pebbly Beach Road, Avalon, CA 90704. This facility is a quarry located on Santa Catalina Island (Catalina) within the designated Area of Biological Significance (ASBS) Number 28, Subarea IV (Figure 1).

A. Facility Operations

The Connolly quarry is an active mining operation. The site Processing Area is improved with offices, parking areas for trucks and equipment, maintenance shops, aggregate stockpiles, aggregate transfer equipment, petroleum storage tanks and parts warehouses.

Material is mined from hillside areas using the shot method. Shot holes are drilled into the hillside and loaded with explosives. After detonation the released material is loaded into front end loaders and taken to the separator plants. The separator plants consist of belt conveyors, screens and other sorting equipment. The mined product is separated according to customer needs. The operation also includes a crushing operation to reduce the size of the product depending on the customer order. The separated product is then stockpiled using front end loaders and subsequently loaded onto barges for off-site delivery.

Tugboats are used to tow barges to the quarry from the Connolly maintenance facility located in the Port of Long Beach at 1925 West Pier D Street. Upon arrival at the quarry, tugboats operated by a certified crew, position the barge on moorings located adjacent to the shore in front of a Derrick Crane. Certified crane operators transfer the loaded skip box from the shore to the barge. The barge is slowly loaded from bow to stern. Crane operators carefully dump the skip box to mitigate potential aggregate loss overboard. Barge loading operations usually take about 4 hours. Tugboats tie off at the mooring and wait while the barges are being loaded. Once the barge is full, the tugboats return to the loaded barge to tow it to the job site where the aggregate is used for a construction project.

The Processing Area encompasses the waterfront and marine activities subject to this waterfront plan. Those activities include barge loading using derrick cranes, aggregate transfers using mobile equipment, offshore mooring repair, offshore tugboat operations, vehicle maintenance, and equipment maintenance. Potential pollutants associated with these operations include but are not limited to: dust, petroleum products, paints, cleaning products, metals, sanitary waste, bilge water waste, trash, solvents, and acids.

B. Special Protections: Regulatory Background

Connolly received notice in a letter dated May 30, 2012 of the State Water Quality Control Board's (SWRCB) adoption of the General Exception to the California Ocean Plan of Waste Discharge Prohibition for selected Storm Water and Nonpoint Source Discharges into Areas of Special Biological Significance (ASBS). In addition to the notification of adoption, the letter detailed information that must be submitted to the SWRCB. The letter outlined that the General Exception requires parties with Waterfront and Marine Operations to develop a Waterfront and Marine Operations Plan (Waterfront Plan). The Waterfront Plan must be provided to the SWRCB, with a copy to the Regional Water Quality Control Board by September 20, 2012. The Waterfront Plan must include mitigation measures and best management practices that reduce the potential for pollutants associated with waterfront activities from entering the adjacent ASBS water body.

These requirements are derived from The Public Resources Code which states that "waste discharges shall be prohibited or limited by the imposition of special conditions" in accordance with the California Water Code and implementing regulations, including, but not limited to, the California Ocean Plan (Ocean Plan). The Ocean Plan states "Waste shall not be discharged to areas designated as being of special biological significance," unless an “exception” is granted and Special Protections, as determined by the SWRCB and California Ocean Plan, are implemented. Stringent terms, prohibitions, and special conditions have been adopted by the SWRCB that comprise the limitations on point source storm water and nonpoint source discharges, providing Special Protections for marine aquatic life and natural water quality in ASBS.

These Special Protections are defined in Attachment B of the General Exception Resolution No. 2012-0012. The requirements in the resolution can be summarized generally to eliminate dry weather run-off, ensure that wet weather run-off does not alter natural water quality in the ASBS, and that adequate monitoring be conducted to determine if natural water quality and the marine life beneficial use is protected.

The Order also states that the exception to the Ocean Plan prohibition against waste discharges to the ASBS is granted to Connolly Pacific provided that:

1. The discharges are covered under an appropriate authorization to discharge waste to the ASBS, such as an NPDES permit and/or waste discharge requirements;
2. The authorization incorporates all of the Special Protections, contained in Attachment B to the resolution, which are applicable to the discharge; and
3. Only storm water and nonpoint source waste discharges are covered by this resolution. All other waste discharges to ASBS are prohibited, unless they are covered by a separate, applicable Ocean Plan exception.

C. Special Protections: Waterfront Plan Provisions

The Special Protections require that a discharger with waterfront and marine operations comply with the following:

1. For discharges related to waterfront and marine operations, the discharger shall develop a Waterfront Plan.

2. This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS. The applicable specific elements that must be included in the waterfront plan are:

    a. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.

b. The Waterfront Plan shall include Management Practices to address the prohibition.
c. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, and human sewage to ASBS is prohibited.
d. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.

D. Special Protections: Waterfront Plan Objectives

The objective of the plan is to eliminate or mitigate nonpoint source waste discharges from waterfront operations that could potentially impact the Natural Water Quality in the ASBS. Natural ocean water quality is defined as: That water quality (based on selected physical chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of:

1. Man-made constituents (e.g., DDT);
2. Other chemical (e.g., trace metals, particulates), physical (e.g., temperature/thermal pollution, sediment burial) and biological (e.g., bacteria) constituents at levels that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and
3. Non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man.

II. SITE CHARACTERISTICS

Santa Catalina Island is located at 33°22' north latitude, 118°25' west longitude and lies approximately 20 miles offshore of the Palos Verdes Peninsula. The island is 22 miles (35.4 km) long, 8 miles (12.9 km) across at its widest point, and is oriented in a general northwest to southeast direction. Santa Catalina Island is part of Los Angeles County. Avalon is the only city on the island, however there is a community located between Catalina Harbor and Isthmus Cove, known as Two Harbors. Approximately, 100 permanent residents of Two Harbors maintain this local recreational facility utilized by vacationers, the area's primary industry (SWRCB 1979).

ASBS No. 28, Subarea IV encompasses a portion of eastern Santa Catalina Island between Jewfish Point and Binnacle Rock. The seaward boundary extends from the intertidal zone to a depth of 300 feet or a distance of 1 nautical mile offshore, whichever is greatest. The ASBS contains approximately 2,756 acres of land, with approximately 2.7 miles of shoreline (SWRCB 1981). The Connolly quarry is located adjacent to ASBS No. 28, Subarea IV, on Pebbly Beach Road, Avalon, CA 90704.

The quarry encompasses about 208 acres of seacliff between Pebbly Beach and Seal Rocks. Graded, but unimproved private roadways from Avalon provide land access to the site and mooring buoys lying directly offshore permit barges to receive quarried materials from the site. Two large cranes operate at the loading areas near Jewfish Point, and a materials processing area covers a graded bench just behind the primary loading area.

Land uses surrounding the quarry include industrial operations and open space areas. Properties to the north, near Pebbly Beach and outside the coverage of this plan, support several industrial uses, including the Southern California Edison power plant, the Avalon sewage treatment plant, a sanitary landfill and a freight barge loading terminal. The town of Avalon lies approximately one-half mile farther north. Lands to the south and west are within an Open Space and Conservation easement. The Pacific Ocean (San Pedro Channel) lies to the east.

A. Physical Description

The waterfront Processing Area subject to this plan is composed of a relatively flat, pervious surface (See Figure 1). The waterfront area is equipped with a completely enclosed steel maintenance shop and office along the northern perimeter. The shop is used for equipment repairs, parts storage, and battery storage. Utility truck parking, loader parking and dump truck parking is located west of the main shop. The parking area is graded so that discharge flows easterly back toward the shop. There is a 3 foot aggregate/gravel berm along the shoreline to ensure that no materials are released to the ocean. A small wooden shed is located south of the main shop. The shed is used to store tires, anti-freeze and thinners. The CAT shop is a stainless steel building with a concrete floor located south of the wooden shed along the waterfront. The CAT shop is equipped with two roll-up doors on each end to allow for the easy movement of large quarry equipment. There are 8 portable horizontal oil tanks just east of the CAT shop. Each tank is within its own secondary containment. There are eight 55-gallon drums containing used oil filters along with one 500-gallon tank containing waste oil located south of the CAT shop. Twelve 55-gallon drums of oil are stored just north of the CAT shop. There is a 14,500-gallon diesel aboveground storage tank and a 4,000-gallon aboveground fuel transfer tank located along the shoreline south of the CAT shop. Both tanks are equipped with secondary containment and overfill protection. Two Derrick cranes used for loading aggregate onto barges are located further south along the shoreline. The cranes are electric and the motors for the cranes are housed within a brick building. The brick building contains hydraulic fluid for the cranes as well as eyewash stations and small amounts of other chemicals.

B. Geology

The geology of Santa Catalina Island consists of Mesozoic metamorphic basement rocks intruded by Miocene igneous rocks. Tertiary sedimentary rocks are scattered across the island. The island generally is regarded as a southward extension of the Franciscan formation, although the schist lithologies found on Catalina differ slightly from the typical Franciscan schists. A variety of schists, breccias and sedimentary marine layers form the complex geologic structure of Catalina.

C. Vegetation

The quarry site lies in the coastal plant community known as Coastal Sage Scrub. Coastal Sage Scrub occurs on dry rocks and gravelly slopes in the coastal range, and these areas receive ten to twenty inches of rainfall per year. Quarrying operations have removed most of the on-site vegetation. Those slopes within the lease boundaries which have yet to be mined still contain native plant materials and in fact, quarry areas which have been mined previously or presently support quarry related land uses show signs of natural revegetation processes. The active quarry site can be classified into four distinct zones, and some of these zones reveal plant growth. The four zones are:

1. Production work areas or benches (unconsolidated crushed rock subbase)
2. Unconsolidated bench slope faces
3. Shoreline slope face comprised of armor rock sea walls
4. Production high wall and slump pile at base

Grass type plant growth has occurred at the upper production areas and at the base of the slump pile. The toes of muck piles and the bases of undisturbed stockpiles exhibit woody plant growth. This revegation results from deposition of windborn seeds and seeds deposited in animal fecal matter. Further revegetation of bare slopes and abandoned areas will occur via the quarry reclamation process. These revegetation strategies are discussed in the section of the Reclamation Plan titled "Revegetation".

D. Climate

Santa Catalina Island is characterized by a semi-arid Mediterranean climate with mild, wet winters and warm, dry summers. Skies are generally clear, however heavy cloudiness occurs primarily in the early spring months when stratus clouds drifting in from the sea may cause low ceilings or fog (SWRCB 1981). Weather in this area is largely controlled by the Eastern Pacific high, which is located off the coast of Northern California during the spring and summer months; this high pressure cell prevents low pressure systems from moving down the coast into Southern California (SWRCB 1979).

ASBS No. 28, Subarea IV consist of both leeward and windward aspects and each can experience different climates. Summer and winter temperatures in the southwestern portion are usually around 80ºF and 50ºF, respectively. Weather for the northeastern portion can be estimated from the City of Avalon data, however slight differences may occur as Avalon is semi-protected in a canyon.

E. Physiography/Geomorphology

Santa Catalina Island is located on the coastal borderland of the Southern California Bight (SCB), a wide continental shelf characterized by ridges (the Channel Islands are ridges that extend above sea level) and basins. The SCB is a marine province stretching from Point Conception in central California to the area between Punta Colnett and Punta Eugenia in Baja California. It is part of a gently sloping southeasterly facing shelf extending for an average distance of approximately 5 miles from the east end of Santa Catalina Island.

The land mass within ASBS 28, Subarea IV is extremely rugged and mountainous, and is intersected by five narrow and steep-sided canyons leading to the sea. The canyons discharge only 3% of all surface drainage on Catalina. Intertidal and subtidal geomorphology ranges from fine sand to variable densities of concentrations of boulders and occasional bedrock outcrops or pinnacles. Sandy sediments and rocky substrates account for approximately 40 and 60% of the intertidal zone, and, 80 and 20% of the subtidal zone, respectively. Subtidal areas near headlands are characterized by exposed bedrock, either with interspersed pockets of coarse sand or covered by variable quantities and sizes of gravity-transported boulders. Most boulders are medium-sized, (2-5 feet, 0.6-1.5 m), resulting in areas of medium physical relief. Exposed bedrock and boulders become less common with increasing depth as the substrate changes to fine sand beyond a depth of 35-40 feet (10-12 m). Sediments in subtidal areas offshore of the beaches grade from coarse to fine as depth increases. Most of the subtidal substrate is sand, therefore forests of giant kelp are not present. Within the quarry region, the subtidal area has been modified by quarry operations. Large intertidal boulders occasionally are dislodged by storm swells, and roll down the subtidal slopes. Similar-sized boulders then are placed in the intertidal zone Connolly, to preserve the original coastline as required by their Mining and Reclamation Plan developed in accordance with the Surface Mining And Reclamation Act (SMARA). A small amount of rocks are introduced into the subtidal inadvertently during barge-loading operations. (SWRCB 1981).

F. Hydrology

Oceanic seasonal changes in wind direction commonly create seasonal patterns for the currents off of the California Coastline. For much of the year, the California current brings colder northern waters southward along the shore as far as Southern California (MLPA 2006). The California current is the eastern leg of the North Pacific Gyre, a massive, clockwise moving current system which encompasses the entire North Pacific Ocean (SWRCB 1979).

The Southern California Bight is the 300 km of recessed coastline between Point Conception in Santa Barbara County and Cabo Colnett, south of Ensenada, Mexico. The dramatic change in the angle of the mainland coastline creates a large backwater eddy in which equatorial waters flow north near shore and subartic waters flow south offshore. This unique oceanographic circulation pattern creates a biological transition zone between warm and cold waters that contains approximately 500 marine fish species and more than 5,000 invertebrate species (SWRCB 1979). The hydrological variation resulting from winds and currents create a wide range of ecological environments.

G. Biology

Biological surveys were conducted and reported in the State Water Board's California Marine Waters, Areas of Biological Significance Reconnaissance Survey Reports (1979-1981). The results indicate that 44 different species of flora, 260 invertebrate species, and 27 fish species ASBS 28.

During the Southern California Bight 08 rocky intertidal survey, Twenty-one rocky intertidal sites were quantitatively sampled for habitat quality, invertebrate and algal abundance and composition by Raimondi's UC Santa Cruz Coastal Biodiversity research team. The monitoring focused on differences between reference and ASBS discharge sites. Preliminary results indicated that: 1) there were no significant differences in macro-invertebrate or algal species richness based on geographic grouping or type of site (discharge vs. reference); 2) there were large geographic differences in algal and sessile invertebrate species composition, likely reflecting natural biogeography, but no statistically significant differences between reference sites and ASBS discharge sites; and 3) there were large geographic differences in mobile invertebrate species composition, once again reflecting natural biogeography, but no statistically significant differences between reference sites and ASBS discharge sites.

H. Water Chemistry

Receiving water samples were collected during storm events and analyzed for Ocean Plan water quality parameters as part of the Bight '08 survey and the Exception application. Two Ocean Plan parameters, copper and nickel, exceeded the Ocean Plan Objectives.

California Ocean Plan water quality objectives for copper include an instantaneous maximum of 30 ug/l, a daily max of 12 ug/l and a six month median of 3 ug/l. California Ocean Plan water quality objectives for nickel include an instantaneous maximum of 50 ug/l, a daily max of 20 ug/l and a six month median of 5 ug/l. ASBS 28 reported elevated levels of copper in three locations, the highest reported copper level was 40.5 ug/l, and an elevated level of nickel from storm water run-off at one location at 54 ug/l.

I. Land Use

The Pebbly Beach Quarry produces rock construction materials which range in size from sand-size grains to boulders which measure several feet across and weigh upwards of several tons. The City of Avalon is located on Santa Catalina Island and is relatively close to but not immediately adjacent to the ASBS. The facility is approximately 248 acres (1 km^2) and is completely pervious (i.e., no paved roads or parking areas). The watershed has two direct discharges and three natural streams draining to the ASBS. The major source of anthropogenic impact is associated with the approximately 248-acre quarry operated by Connolly located in the Pebbly Beach Extractive Use Zone of the Santa Catalina Island Local Coastal Plan. Connolly leases the property from the Santa Catalina Island Company. Connolly must maintain the natural shoreline contours, therefore rocks are added periodically to areas where storms have caused slippage. There is a jetty and a pier constructed at the quarry. Connolly is also required to reconstruct a "natural" hillside topography upon reclamation.

J. Economic, Social, Cultural Background

According to the Santa Catalina Island Local Coastal Plan, the rock quarry operation is an important resource of breakwater armor rock and rubble used in construction of island and mainland break waters and shoreline protection facilities. Public access to the quarry is not permitted.

III. APPLICABLE REGULATIONS

Activities at the Connolly waterfront are controlled by an overlapping network of Local, State, and Federal laws and regulations. As a result, the authority to address a given discharge or activity is not always clear. Many of these regulations include implementation of inspections and Best Management Practices. Applicable regulations are outlined below.

A. Federal Laws and Regulations

Clean Water Act: The CWA (92-500), which is administered primarily by the EPA, governs the discharge of pollutants to waters of the United States through the National Pollutant Discharge Elimination System (NPDES) permit system.

Coastal Zone Act Reauthorization Amendments: Section 6217 jointly administered by NOAA and EPA, The application of management measures by States is described more in *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance*.

Endangered Species Act: Provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead federal agencies for implementing ESA are the US Fish and Wildlife Service and NOAA Fisheries Service.

Executive Order 13547 - Stewardship of the Ocean, Our Coasts, and the Great Lakes: This order adopts the recommendations of the Interagency Ocean Policy Task Force, except where otherwise provided in this order, and directs executive agencies to implement those recommendations under the guidance of a National Ocean Council.

The Marine Protection Research, and Sanctuaries Act: (MPRSA - also known as the Ocean Dumping Act) prohibits the dumping of material into the ocean that would unreasonably degrade or endanger human health or the marine environment.

16 USC 1431 and 15 CFR Part 922 and 50 CFR Part 404: National Marine Sanctuaries Act and implementing regulations.

Navigation and Navigable Waters: Primarily administered by the Coast Guard and the Department of Homeland Security, vessel operators must also comply with those provisions of the following laws and regulations applicable to specific vessels (not intended to be an exhaustive list).

33 CFR Parts 151 and 401: Coast Guard ballast water management, discharge, and exchange requirements.

33 CFR Part 155 Subparts B and C: Coast Guard oil pollution prevention requirements.

33 CFR Part 159: Coast Guard sewage discharge requirements.

40 CFR Part 110, 117, and 302: EPA oil or hazardous substance discharge reporting requirements.

40 CFR 122.44(p): Coast Guard requirements for safe storage and transportation of pollutants.

40 CFR Part 140: EPA sewage discharge requirements.

33 USC 190-1915: Act to prevent pollution from ships.

33 USC 2701-2720: Oil Pollution Act of 1990.

Clean Air Act: 40 CFR Part 60 Subpart OOO – New Source Performance Standards.

B. State Laws and Regulations

California State Lands Commission: Article 4.7 – Performance Standards for the Discharge of Ballast Water for Vessels Operating in California Waters:

Porter-Cologne Water Quality Control Act and the State Water Resources Control Board: The SWRCB and Porter Cologne are the State's primary water quality control law to prevent nonpoint source pollution. Waste discharge requirements issued under Porter-Cologne prevent Nonpoint Source (NPS) pollution by implementing applicable water quality control plans and policies such as the California Ocean Plan, Special Protections and ASBS.

State Water Board has adopted a Nonpoint Source Management Plan that describes a three-tiered management approach to address NPS pollution. The plan focuses on implementation of BMPs as the primary way to meet water quality standards. Water Code Section 13360 as a way to directly require implementation of management measures through discharge requirements.

California Clean Coast Act of 2005: This statute (PRC 72400) authorizes the SWRCB and the SLC to regulate the release of graywater, sewage treated or untreated, sewage sludge, oily bilgewater, and hazardous waste.

California Department of Fish and Game Code 5650: Under Fish and Game Code 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of California any of the following:

- Any petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum, or carbonaceous material or substance.
- Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill, or factory of any kind.
- Any sawdust, shavings, slabs, or edgings.
- Any factory refuse, lime, or slag.
- Any cocculus indicus.
- Any substance or material deleterious to fish, plant life, mammals, or bird life.

California Endangered Species Act: Pursuant to the California Endangered Species Act (CESA), a permit from the California Department of Fish and Game (DFG) is required for projects that could result in take of a plant or animal species that is state listed as threatened or endangered.

California No Discharge Zone: On February 9, 2012, the U.S. EPA signed and approved a State of California proposal to ban the discharge of sewage (both treated and untreated) within California waters. This rule covers all California waters within 3 miles of the coastline.

Surface Mining and Reclamation Act (SMARA): The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. The Office of Mine Reclamation (OMR) provides assistance to cities, counties, state agencies and mine operators for reclamation planning.

C. Local Laws and Regulations

Title 22 Planning and Zoning: Los Angeles County Department of Regional Planning implements the land use policy as defined by the General Plan for each land use category.

Title 12 Environmental Protection: Los Angeles County CUPA implements Chapter 6.5 Division 20 of California Health and Safety Code for Hazardous Waste, Chapter 6.67 of Division 20 of the H&SC for Aboveground Petroleum Storage, Chapter 6.95 of Division 20 of the H&SC for Hazardous Materials Release Response Plan and Inventory Program and H&SC Section 13143.9 Hazardous Materials Management Plan and Inventory Statement.

Ordinance No. 92-0032 Los Angeles County Surface Mining & Reclamation Ordinance: Los Angeles County Department of Regional Planning is the lead agency along with the Department of Conservation for approval and permitting of excavation and mining activities. Annual reports, financial assurances and inspections are required under these regulations.

PM_{10} Emission Reductions from Aggregate and Related Operations: South Coast Air Quality management District – Rule 1157 applies to all permanent and temporary aggregate and related operations and Rule 403 for fugitive dust.

NPDES General Permit No. CAS000001 for Waste Discharge Requirements for Discharges of Strom Water Associated with Industrial Activities: This General Permit generally requires facility operators to:

1. Eliminate unauthorized non-storm water discharges;
2. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP); and
3. Perform monitoring of storm water discharges and authorized non-storm water discharges. All facility operators must prepare, retain on site, and implement an SWPPP emphasizing BMPs.

D. Other

American Waterways Operators (AWO) Responsible Carrier Program: The program is intended to serve as a template for AWO member companies to use in developing company-specific safety programs that are consistent with applicable law and regulation, that incorporate sound operating principles and practices not currently required by law or regulation, and that are practical and flexible enough to reflect a company's unique operational needs.

A. Vessel Operating Policies and Procedures
B. Safety Policy and Procedures
C. Security Policy and Procedures
D. Environmental Policy and Procedures
E. Incident Reporting Procedure
F. Emergency Response Procedures
G. Internal Audit and Review Procedures
H. Vendor Safety
I. Organization and Levels of Authority
J. Personnel Policies and Procedures

IV. WATERFRONT PLAN DEVELOPMENT AND IMPLEMENTATION

The Special Protections outlined in the General Exception are the principal vehicle for the implementation of the waterfront plan. However, numerous other programs directly and indirectly deal with the control of nonpoint source discharges from the quarry operations. The applicable programs and requirements are summarized in Section III above and Tables 1 and 2. The implementation of the waterfront plan takes place at the federal, state and local levels. It is critical that the team members responsible for implementing the plan understand the relationship between the agencies, their jurisdictions and the requirements defined in these documents.

A. Waterfront Plan Development Process

This Waterfront Plan was created using the steps outlined below.

1. Mining and processing activities were assessed through site inspection and document review to identify nonpoint source waste discharges.
2. Applicable regulations for the priority activities and pollutants were identified.
3. Management measures and Best Management Practices were identified using existing plans and permits.
4. ASBS specific Best Management Practices were identified as necessary to correspond to the additional requirements necessary for the Waterfront Plan.

B. Waterfront Plan Implementation

1. The monitoring, inspection and training requirements necessary to implement the Waterfront Plan are defined in Tables 3 – Onshore Activities and Table 4 – Offshore Activities.
2. Each table includes the applicable regulatory requirements, inspection requirements, inspection frequency, training requirements and training frequency. Upon completion of the specified program listed in Tables 3 and 4, the requirements of the Waterfront Plan should be met.
3. Items that are highlighted in red in Tables 3 and 4 will be developed and implemented by September 20, 2013.
4. The Waterfront Plan will be audited annually to evaluate implementation of the Best Management Practices. Audit checklists will be developed by September 20, 2013 and included in Attachment C of this document. Training sign in sheets, inspection checklists and reports will be surveyed to verify plan implementation and effectiveness. In the event it is determined the program is not meeting the ASBS objectives, program elements will be revised using a corrective action approach.
5. Upon corrective action implementation, the waterfront plan will be revised and the amendment log will be updated to reflect the revisions. If redundancies are found within the implementation of the plan, the requirements will be consolidated as allowed by the respective regulations.

C. Waterfront Plan Implementation Team

David Scott – Director of Safety and Compliance	(562) 437-2831 Ext. 223	Cell (562) 577-0725
Robert Machado – Plant Manager	(310) 510-0626	
Laura Machado – Administrative	(310) 510-0626	
Paul Romo – Superintendant	(310) 510-0626	Cell (562) 577-0721

Responsibility	**Team Member**
Plan Responsible Person	David Scott
Best Management Practices	Robert Machado/Paul Romo
Inspection/Observation	Robert Machado/Paul Romo
Training	David Scott
Reporting	David Scott/Laura Machado
Recordkeeping	Laura Machado

ATTACHMENT A –

TABLES

TABLE 1 – SITE SPECIFIC PERMITS AND PLANS

Agency	Permit Number	Description	Regulations	Recordkeeping/Reporting
SWRCB	WDID # 419I011729	SWPPP	Stormwater NPDES CAS000001	- Annual Sampling - Monthly Monitoring - Annual Report
SCAQMD	F94220	Aggregate Receiving, Screening , Riprap Production System	Rule 201 – Equipment Requiring a Permit	- Monthly Aggregate Processing
Department of Conservation State Mining and Geology Board and Los Angeles County Department of Regional Planning/DPW	Mine ID# 91-19-0010 SMP Case No. 86136 – (4)	Mining and Reclamation Plan	SMARA	- Annual Report of Compliance - Annual Financial Assurances - AB3098 Listing
LA County Fire Department	FA0020435	Hazardous Materials Business Plan	CUPA	- Annual Inventory Update - Business Emergency Plan Every 3 Years - SPCC Every 5 Years, - Monthly Petroleum Storage Inspection - Hazardous Waste Weekly Inspection
DTSC	CAL000223892	Hazardous Waste Generator	CCA Title 22	- Waste Manifest Documentation
CalRecycle	TPID # 1509384-01	Waste Tire Generator	Title 14	- Comprehensive Trip Log 3 Years
SCAQMD	Facility ID # 82149	Rule 403 Plan	Rule 403 Fugitive Dust	Rule 403 recordkeeping Table 2 and 3 log retained on-site for 6 months

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Table 2 **Regulatory Requirements**

Operation	Process within Operations	Environmental Concern	Areas Reviewed	Provides Lead Agency Authority	Lead Agency	Primary Regulatory Permits/Plans	Regulatory Requirements	Secondary Regulatory Permits/Plans	Regulatory Requirements	Regulatory Documents		Facility BMPs
Onshore Operations	Loading of Aggregate	Air Quality	Transfer of Aggregate	EPA Clean Air Act	South Coast Air Quality Management District	Rule 403	Suppression of Dust	Rule 1157	Suppression of Dust	AQMD - Rule 1157	AQMD - Rule 403	Wetting of aggregate materials
		Water Quality	Transfer of Aggregate Use of Dust Suppresants on Unpaved Roads* Leaking Machinery	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	NPDES General Industry Permit	Waste Discharge Requirements	California Ocean Plan	Water Contact Standards	California Ocean Plan	Stormwater General Industry Permit	Inspections of equipment for Leaks and Damage
		Spill Prevention	Bulldozer Transfer Activities	EPA Clean Water Act Oil Pollution Prevention Regulation	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Aboveground Petroleum Storage Act	Development of Spill Prevention Control & Countermeasure Plan	*	*	LA County APSA	CUPA - SPCC Fact Sheet	Active Secondary Containment
			Loader, Utility & Dump Truck Activities									
	Derreck Operations	Air Quality	Transfer of Aggregate	EPA Clean Air Act	South Coast Air Quality Management District	Rule 403	Suppression of Dust	Rule 1157	Suppression of Dust	AQMD - Rule 1157	AQMD - Rule 403	Wetting of aggregate materials
		Water Quality	Leaking of Machinery Fluids	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	NPDES General Industry Permit	Waste Discharge Requirements	California Ocean Plan	Water Contact Standards	Stormwater General Industry Permit	California Ocean Plan	Inspections of equipment for Leaks and Damage
	Vehicular Fueling	Spill Prevention	Rupture of Oil Tanks Spill during Loading Operations	EPA Oil Pollution Prevention Regulation	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Aboveground Petroleum Storage Act	Development of Spill Prevention Control & Countermeasure Plan	*	*	LA County APSA	CUPA - SPCC FactSheet	Float Valve With Automatic Shut Off Visible Level Indicator Protective Barriers
	Vehicular Maintenance	Spill Prevention	Performing general maintenance on equipment, eg : oil change, refilling of fluids Air Compressor in Area	EPA Oil Pollution Prevention Regulation	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Aboveground Petroleum Storage Act	Development of Spill Prevention Control & Countermeasure Plan	*	*	LA County APSA	CUPA - SPCC FactSheet	Spill Kits Inspections of equipment for Leaks and Damage
		Water Quality	Leaking of Machinery Fluids	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	NPDES General Industry Permit	Waste Discharge Requirements	California Ocean Plan	Water Contact Standards	Stormwater General Industry Permit	California Ocean Plan	Inspections of equipment for Leaks and Damage
		Non Hazardous/ Hazardous Waste	Air Compressor Blowdown Containment	EPA Resource Conservation & Recovery Act	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Resource Conservation & Recovery Act	Development of On Site Hazardous Waste Management	*	*	LA County Hazardous Waste Mgmt	LA County Haz Waste Fact Sheet	Hazardous Materials Business Plan Routine Inspections of Waste Accumulation Areas
	Vehicular Storage	Non Hazardous/ Hazardous Waste	Leaking/spill of Hazardous chemicals contained within area	EPA Resource Conservation & Recovery Act	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Resource Conservation & Recovery Act	Development of On Site Hazardous Waste Management	*	*	LA County Hazardous Waste Mgmt	LA County Haz Waste Fact Sheet	Hazardous Materials Business Plan Routine Inspections of Waste Accumulation Areas
		Water Quality	Leaking of Hazardous chemicals contained within vehicles	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	NPDES General Industry Permit	Waste Discharge Requirements	California Ocean Plan	Water Contact Standards	Stormwater General Industry Permit	California Ocean Plan	Inspections of equipment for Leaks and Damage
		Spill Prevention	Spill of hazardous chemicals contained within area	EPA Oil Pollution Prevention Regulation	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Aboveground Petroleum Storage Act	Development of Spill Prevention Control & Countermeasure Plan	*	*	LA County APSA	CUPA - SPCC FactSheet	Spill Kits Spill Containment Inspections of Accumulation & Satellite Areas
	Hazardous Waste Areas	Spill Prevention	Spill/ Leak from waste accumulated from maintenance of vehicles	EPA Oil Pollution Prevention Regulation	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Aboveground Petroleum Storage Act	Development of Spill Prevention Control & Countermeasure Plan	*	*	LA County APSA	CUPA - SPCC FactSheet	Inspections of equipment for Leaks and Damage
		Non Hazardous/ Hazardous Waste	Waste accumulated from maintenance of vehicles	EPA Resource Conservation & Recovery Act	Los Angeles County Fire Department Health Hazardous Materials Division *(Certified Unified Protection Agency)*	Resource Conservation & Recovery Act	Development of On Site Hazardous Waste Management	*	*	LA County Hazardous Waste Mgmt	*	Hazardous Materials Business Plan Routine Inspections of Waste Accumulation Areas
	Disposal Procedures	Water Quality	Solid and Liquid Waste from Trash	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	NPDES General Industry Permit	Waste Discharge Requirements	California Ocean Plan	Water Contact Standards	Stormwater General Industry Permit	California Ocean Plan	Covering of trash containers Water tight containers
	Boneyard/Surplus Equipment Areas	Water Quality	Leaking or Residual Oils found on stored equipment	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	NPDES General Industry Permit	Waste Discharge Requirements	California Ocean Plan	Water Contact Standards	Stormwater General Industry Permit	California Ocean Plan	Routine Inspections of equipment Use of Drip Pans
Offshore Operations	Boat Cleaning/Repair Operations	Water Quality	Deck Washdown, Hull Cleaning, Wastewater, Above Water Painting, Propellar, Rudder, Thruster, Stern Tube, Propulsion Pods Maintenance, Wire Rope Lubrication, Cathodic Protection, Biofouling Prevention	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	California Ocean Plan	Waste Discharge Requirements Water Contact Standards	*	*	California Ocean Plan	*	*Per American Waterways Operator Standards:* Fuel oil & bulk lubricating oil containment Bilge slop containment Placard prohibiting discardge of oil MARPOL placard Certified marine sanitation device Fuel oil transfer procedures Oil Spill Contingency Plan Spill Kit Hull Inspected in Drydock Training in spill mitigation, environmental protection &
	General Operating Processes	Water Quality	Graywater, Sewage, Cooling Sea Water, Condensate Discharge, Ballast Water, Bilge Water	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	California Ocean Plan	Waste Discharge Requirements Water Contact Standards	*	*	California Ocean Plan	*	*Per American Waterways Operator Standards:* Fuel oil & bulk lubricating oil containment Bilge slop containment Placard prohibiting discardge of oil MARPOL placard Certified marine sanitation device Fuel oil transfer procedures Oil Spill Contingency Plan Spill Kit Hull Inspected in Drydock Training in spill mitigation, environmental protection &
	Emergency Operations	Water Quality	Firemain System, Aqueous Film Forming Foam	EPA Clean Water Act Porter-Cologne Act	State Water Board [SWRCB]	California Ocean Plan	Waste Discharge Requirements Water Contact Standards	*	*	California Ocean Plan	*	*Per American Waterways Operator Standards:* Fuel oil & bulk lubricating oil containment Bilge slop containment Placard prohibiting discardge of oil MARPOL placard Certified marine sanitation device Fuel oil transfer procedures Oil Spill Contingency Plan Spill Kit Hull Inspected in Drydock Training in spill mitigation, environmental protection &

Connolly Pacific

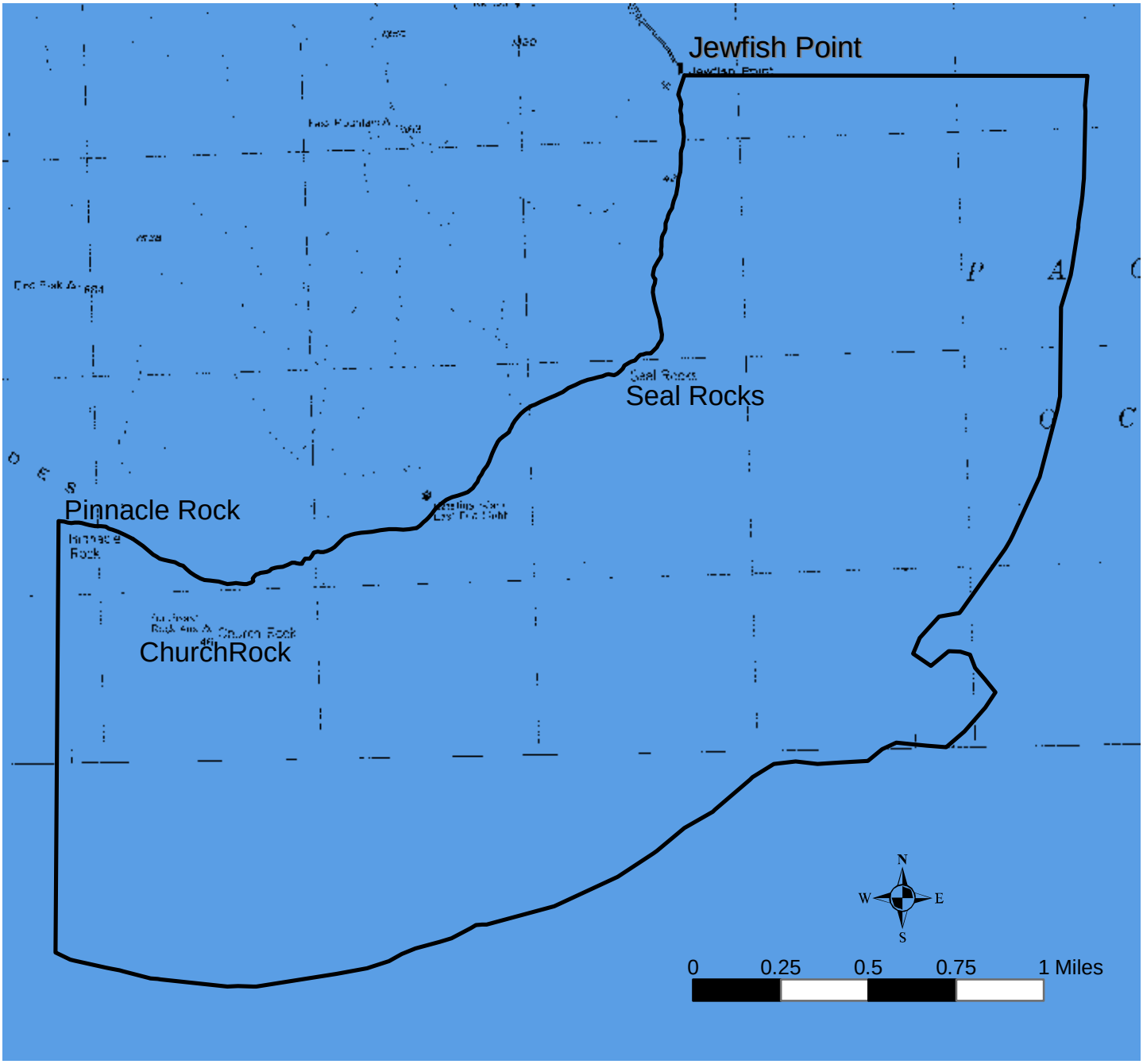
TABLE 3	ONSHORE OPERATIONS										
Area	**Pollutant Potential**	**Potential Event**	**BMP**	**Inspection Required**	**Maintenance &/or Inspection Type**	**Supporting Documents**	**Frequency of Maintenance &/or Inspection**	**Training Required**	**Training Type**	**Individuals Trained**	**Training Frequency**
Aggregate Stockpiles	Aggregate (dust, rock, gravel)	1) Stormwater Runoff 2)Dust	1a) Stockpile Grading 1b) Placement on Near Level Ground 1c) Inventory Minimalization 1d) Stormwater Diversion 2) Dust Suppression	Yes	1a & c) Inspection of Slope 1d) Visual Inspection 2) Suppresant Application	1a-d) Non-Storm Water Discharge Visual Observation Form **2) Dust Suppression Monitoring Forms**	1a-d) Initial & Quarterly 2) During Operation	Yes	1a-d) Stormwater Training 2) AQMD Fugitive Dust Control Training	1a-d) Responsible Person 2) Dust Control Supervisor	1 a-d) Initial & Annual 2) Initial &Bi Annual
Loading/Derrek Operations/Maintenance	Hydraulic Fluid, Fuel, Coolant, Oil, Lubricants Aggregate (dust, rock, gravel)	1) Leak/Spill 2) Aggregate Spill Over 3) Dust	1a) Visual Inspections 1b) Spill Kit 2) Stockpile Placement 3) Dust Suppression	Yes	1a) Visual Inspection 1b) Inspection of appropriate spill kit material/inventory 2) Visual Inspection 3) Suppresant Application	1a, 2) Non-Storm Water Discharge Visual Observation Form 1a, 2) Storm Water Discharge Visual Observation Form 1b) SPCC Available Emergency Equipment (Attachment H) 3) **Dust Suppresion Monitoring Forms**	1a,b,2) Initial & Quarterly 1a,b,2) During Wet Season (Monthly) 3) During Operation	Yes	1a,b,2) Stormwater & Spill Prevention Training 3) AQMD Fugitive Dust Control Training	1a,b,2) Responsible Person 3) Dust Control Supervisor	1a,b,2) Initial & Annual 3) Initial &Bi Annual
Loader, Utility and Dump Truck Operations/Maintenance	Hydraulic Fluid, Fuel, Coolant, Oil, Lubricants Aggregate (dust, rock, gravel)	1) Leak/Spill 2) Aggregate Spill Over 3) Dust	1a) Visual Inspections 1b) Spill Kit 2) Stockpile Placement 3) Dust Suppression	Yes	1a) Visual Inspection 1b) Inspection of appropriate spill kit material/inventory 2) Visual Inspection 3) Suppresant Application	1a, 2) Non-Storm Water Discharge Visual Observation Form 1b) SPCC Available Emergency Equipment (Attachment H) 3) **Dust Suppresion Monitoring Forms**	1a,b,2) Initial & Quarterly 3) During Operation	Yes	1a,b,2) Stormwater & Spill Prevention Training 3) AQMD Fugitive Dust Control Training	1a,b,2) Responsible Person 3) Dust Control Supervisor	1a,b,2) Initial & Annual 3) Initial &Bi Annual
Fuel Tank Area #1 (AST)	Petroleum Hydrocarbons	1) Above Ground Spill/Leak 2) Below Ground Spill/Leak	1a) Secondary Containment 1b) Spill Kits 1c) Direct Vision Gauge 1d & 2a) Automatic Shut Off Valve 2b) Cathodic Protection	Yes	1a) Visual Inspection 1b) Inspection of appropriate spill kit material/inventory 1c & 2a) Equipment Inspection 2b) Visual Inspection, Capping or Flanging of Pipelines not in service	1a,c, 2a,b) SPCC Facility Inspection Record (Attachment C) 1b) SPCC Available Emergency Equipment (Attachment H) 1a) Non Storm Water Discharge Observation Form	1a) Monthly 1b) Monthly 2a) Monthly 2b) When excavated or pipeline no longer in use	Yes	1a-d, 2a,b) Stormwater & Spill Prevention Training	1a) Responsible Party (Tank Inspectors,Fueling Operators) 1b) Responsible Party 1c) Responsible Party 2b) Responsible Party	1 a-c) Initial & Annual 2 a,b) Initial & Annual
Fuel Tank Area #2 (Tanker Truck Unloading Area)	Petroleum Hydrocarbons	1) Above Ground Spill/Leak 2) Below Ground Spill/Leak	1a) Secondary Containment 1b) Spill Kits 1c) Direct Vision Gauge 1d) Chocking 1e) Unloading Inspection 1f & 2a) Automatic Shut Off Valve 2b) Cathodic Protection (from AST Tank #1)	Yes	1a) Visual Inspection 1b) Inspection of appropriate spill kit material/inventory 1d,e) Unloading Inspection 2a) Equipment Inspection 2b) Visual Inspection, Capping or Flanging of Pipelines not in service	1a,c,f 2a,b) SPCC Facility Inspection Record (Attachment C) 1b) SPCC Available Emergency Equipment (Attachment H) 1a) Non Storm Water Discharge Observation Form 1d,e) **Unloading Inspection form**	1a) Monthly 1b,c) Monthly 1d,e) During Operation 2a) Monthly 2b) When excavated or pipeline no longer in use	Yes	1a,b, 2a,b) Stormwater & Spill Prevention Training 1d,e) Certified Hauler Training (DOT Registration Required)	1a,b) Responsible Party 1d,e) Hauler/Unloader 2a,b) Responsible Party	1a,b) Initial & Annual 1d,e) Initial & Annual
Fuel Tank Area #3 (Portable Tanks)	Oil	1) Above Ground Spill/Leak	1a) Secondary Containment 1b) Spill Kits 1c) Direct Vision Gauge 1d) Automatic Shut Off Valve	Yes	1a) Visual Inspection 1b) Inspection of appropriate spill kit material/inventory 1c & d) Equipment Inspection	1a,c,d) SPCC Facility Inspection Record (Attachment C) 1b) SPCC Available Emergency Equipment (Attachment H)	1a-d) Monthly	Yes	1a) Stormwater Training 1b,c,d) Spill Training	1a-d) Responsible Person	1 a-d) Initial & Annual
Hazardous/ Non Hazardous Waste Areas	Petroleum Hydrocarbons,Acids/Bases (from cleaners), Oil & Grease, Anti-Freeze, Heavy Metals	1) Above Ground Spill/Leak	1a) Covered Areas 1b) Spill Containment 1c) Allocated Accumulation Areas 1d) Spill Kits	Yes	1a) Inspection of roofing & flooring (for deterioration & housekeeping) 1b) Inspection of containment structures 1c) Inspection of Accumulation Areas 1d) Inspection of appropriate spill kit material/inventory	**1a,b,c) Waste Accumulation Inspection Form** 1d) SPCC Available Emergency Equipment (Attachment H)	1a) Annual 1b) Monthly 1c) Monthly 1d) Monthly	Yes	1a-c) Hazardous Waste Training 1b) Stormwater Prevention Training 1d) Spill Prevention Training	1 a - d) Responsible Person	1 a-d) Initial & Annual
Vehicle Equipment Maintenance & Storage Areas	Petroleum Hydrocarbons, Sulfuric Acid, Lead, Oil & Grease, Anti-Freeze	1) Above Ground Spill/Leak	1a) Enclosed/Covered Areas 1b) Product Labeling & Allocated Trash Recepticals 1c) Waste Oil & Battery Recycling 1d) Drip Pans 1e) Spill Kits 1f) MSDS Management	Yes	1a) Inspection of roofing & flooring (for deterioration & housekeeping) 1b) Inspection of Chemical & Trash Areas 1c) Monitoring/Recordkeeping of Hazardous Waste and Recyclable Items 1e) Inspection of appropriate spill kit material/inventory 1f) Recordkeeping of MSDS	**1a,b,) Waste Accumulation Inspection Form** **1c) Waste Tracking Form** 1e) SPCC Available Emergency Equipment (Attachment H) **1f) Manifest Tracking Form**	1a) Annual 1b) Weekly 1c) Monthly 1e) Monthly 1f) New Chemical &/or Updated MSDS available	Yes	1a,b,c,f) Hazardous Material & Waste / Waste Training 1e) Spill Prevention Training	1) Responsible Person 1b,c,f) Responsible Person 1e) Responsible Person	1 a,b,c,f,e) Initial & Annual
Boneyard/Surplus Equipment Storage	Petroleum Hydrocarbons, Oil & Grease, Anti-Freeze, Acids, Metals, Sediment	1) Stormwater Contaimination	1a) Removal of batteries 1b) Drip Pans (when feasible) 1c) Equipment Inspections 1d) Preventative Maintenance 1e) Spill Pallets	Yes	1a) Visual Inspection 1b) Visual Inspection 1c) Visual Inspection 1d) Equipment Inspection 1e) Visual Inspection	1a,b,c) Non-Storm Water Discharge Visual Observation Form 1e) SPCC Available Emergency Equipment (Attachment H)	1a) Initial & Quarterly 1b) Initial & Quarterly 1c) Initial & Quarterly 1d) Manufacturer Specified 1e) Monthly	Yes	1a,b,c,e) Spill & Stormwater Training 1d) Manufacturer Specific	1a) Responsible Person 1b,c) Responsible Person 1d) Responsible Person/ Maintenance Personnel 1e) Responsible Person	1a,b,e) Initial & Annual 1 c,d) Manufacturer Specifications
Bulldozer Operations	Hydraulic Fluid, Fuel, Coolant, Motor Oil, Lubricants	Above Ground Spill/Leak	1a) Preventative Maintenance 1b) Spill Kits 1c) Visual Inspection	Yes	1a) Maintenance of Equipment 1b) Inspection of appropriate spill kit material/inventory 1c) Visual Inspection	1b) SPCC Available Emergency Equipment (Attachment H) 1c) Non-Stormwater Discharge Visual Observation Form	1a) Manufacturer Specifications 1b) Monthly 1c) Quarterly	Yes	1a) Equipment Specific 1b,c) Spill & Stormwater Training	1a) Maintenance Mechanics 1b) Operators who work with equipment with spill potential	1a) Manufacturer Specifications 1b) Initial & Annual
Trash Recepticles	Recyclables, Refuse, Leachate	1) Above Ground Spill (tip over or wind event) 2) Leachate from rain event	1a) Covering of trash recepticles 1b) Trash Disposal/Pick Up 2a) Water Tight Dumpster	Yes	1a) Visual Inspection 1b) Visual Inspection 2a) Visual Inspection	1a,b, 2a) Non-Storm Water Discharge Visual Observation Form	1a)Quarterly 1b) Weekly* * (frequency dependant on average amount of trash deposited) 2a)Quarterly	Yes	1a) Stormwater Training 1b) Spill Training 2a) Spill & Stormwater Training	1a) Employees who utilize & inspect trash recepticles 1b) Responsible Party 2a) Employees who utilize & inspect trash recepticles	1a) Initial & Annual 1b) Initial & Annual 2a) Initial & Annual
Air Compressors	Petroleum Hydrocarbons	1) Above Ground Leak	1a) Drip Pans (if leaking) 1b) Preventative Maintenance 1c) Blowdown Containment	Yes	1a) Inspections for leaks 1b) Inspection Maintenance of Seals 1c) Inspection at event	1a) Non-Storm Water Discharge Visual Observation Form **1b,c) Preventative Maintenance Log**	1 a) Initial & Quarterly 1b,c) Manufacturer Specifications	Yes	1a) Stormwater & Spill Prevention Training	1a) Responsible Person	1a) Initial & Annual

Connolly Pacific

TABLE 4	OFFSHORE OPERATIONS									
Area	**Pollutant Potential**	**Potential Event**	**BMP**	**Inspection Required?**	**Maintenance &/or Inspection Type**	**Supporting Documents**	**Frequency of Maintenance &/or Inspection**	**Environmental Associated Training**	**Individuals Trained**	**Training Frequency**
Deck Cleaning Operations	Debris, Cleaning Residue	Residual chemicals running off deck during normal operation	Cleaning performed while in port	Yes	Routine Visual Inspection	Routine Visual Inspection Form Routine Vessel Inspection Form	Per Voyage or Weekly (whichever is more frequent) & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1 -2) Individuals who take part in cleaning of the deck area	1-2) Initial & Annual
Above Water Painting	Paint	Spill or Paint Residue	Painting to be performed while in port, spray guns not to be used	Yes	Routine Visual Inspection	Paint Application Form	Per Voyage or Weekly (whichever is more frequent) & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1 -2) Individuals who take part in painting operations	1-2) Initial & Annual
Hull Cleaning	Cleaner substances, Paint , Fouling , Anti biofoulant	Cleaning Residue, Paint Chip Residue, Fouling Residues, Anti biofoulant residue	Hull cleaning performed at drydock	Yes	Drydock Maintenance	Drydock Inspection Report Annual Visual Inspection Form	Annual & As Needed	1) Water Quality (Ocean Pollution Prevention)	1) Individuals who take part in the cleaning & inspection of the hull areas both above & below	1) Initial & Annual
Non Oil Machinery Wastewater	Wastewater	Discharge of wastewater into waters and ASBS areas	Wastewater goes into bilge, which is removed while in port	Yes	Routine Visual Inspection	Routine Visual Inspection Form Routine Vessel Inspection Form	Per Voyage or Weekly (whichever is more frequent) & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1 -2) Individuals who take part in bilge unloading operations	1-2) Initial & Annual
Maintenance of Propeller, Rudder, Thrusters, Bearings, Propulsion Pods, Stern Tube	Oils and lubricants	Residual from equipment maintenance and leaking around protective seals	Maintenance performed while in dry dock Spill Response Materials	Yes	Drydock Maintenance Annual Visual Inspection	Drydock Inspection Report Annual Visual Inspection Form	Annual & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1 -2) Individuals who take part in maintenance operations	1-2) Initial & Annual
Cathodic Protection	Metals	Degredation of sacrificial anodes leads to corrosion and chipping allowing metals to enter waters and ASBS	Condition of anodes monitored Replacements are made at signs of wear and/or damage	Yes	Inspection of condition	Drydock Inspection Report Annual Visual Inspection Form	Annual & As Needed	1) Water Quality (Ocean Pollution Prevention)	1) Individuals who inspect sacrificial anodes	1) Initial & Annual
Ballast Water Discharge	Oil, Marine organisms	Discharge of ballast allows for oil and foreign species to enter waters and ASBS	Ballasts are completely closed bladders which are opened during dry dock maintenance	Yes	Drydock Maintenance	Drydock Inspection Report Annual Visual Inspection Form	As Needed	1) Water Quality (Ocean Pollution Prevention)	1) Individuals who perform dry dock maintenance	1) Initial & Annual
Biofouling Prevention /Anti Fouling Hull Coating	Chemical residue	Chemical residue entering waters and ASBS	Inspection of flaking/biofouling and repainting of hull coating	Yes	Drydock Maintenance	Drydock Inspection Report Annual Visual Inspection Form	Annual & As Needed	1) Water Quality (Ocean Pollution Prevention)	1) Individuals who apply anti fouling coating	1) Initial & Annual
Bilge Water Disposal	Oily Water	Oily water discharge into waters and ASBS	Bilge water pumped out and emptied in port Bilge water level is monitored	Yes	Routine Visual Inspection	Routine Vessel Inspection Form Bilge Water Log	Per Voyage or Weekly (whichever is more frequent) & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1 -2) Individuals who take part in bilge unloading operations	1) Initial & Annual
Refrigeration & Air Condensate Discharge	Oily Water	Discharge of oily waters into water and ASBS	Discharges go to the bilge which is emptied into waste tanks/containers at port	Yes	Routine Visual Inspection	Routine Vessel Inspetion Form Bilge Water Log &/or Preventative Maintenance Log	Per Voyage or Weekly (whichever is more frequent) & As Needed	1) Water Quality (Ocean Pollution Prevention)	1a) Individuals who perform PMs associated with Refrigeration & Air Conditioning 1b) Individuals who take part in bilge unloading operations	1) Initial & Annual
Cooling Sea Water Discharge	Oils, Metals, Waters at raised temperatures	Discharge into water and ASBS	Keel cooling is performed, water is not in contact with contaminents	Yes	Preventative Maintenance of Keel Cooling System	Annual Visual Inspection Form Preventative Maintenance Log	Annual & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1) Individuals who perform maintenance and inspect the Keel Cooling System	1-2) Initial & Annual
Fire Extinguisers/Suppresants	CO_2 , Misc Fire Suppresants	Discharge into water and ASBS	Testing of Extinguishers performed while at Dry Dock Spill containment for any materials extinguished	Yes	Testing of Extinguishers	Annual Visual Inspection Form Preventative Maintenance Log	Annual	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1) Individuals required safety training with fire extinguishers	1-2) Initial & Annual
Sewage	Sewage	Discharge of sewage into waters and ASBS	Sewage treated through a continuous filter system Boat operators required to turn off system while in ASBS	Yes	Routine Visual Inspection & When within ASBS Area	Routine Vessel Inspection Form Preventative Maintenance Log	Per Voyage or Weekly (whichever is more frequent) & As Needed	1) Spill Prevention 2) Water Quality (Ocean Pollution Prevention)	1a) Individuals that operate the vessel 1b) Individuals that perform maintenance on the vessel with access to sewage system	1) Initial & Annual

ATTACHMENT B –

FIGURES



Approximate Outline of ASBS 28

FIGURE 1: SITE LOCATION MAP		
SITE: Area of Special Biological Significance 28	DRAWN: RS	APPROV.: KH
	SCALE: See Map	DATE: 09/12
CLIENT: Connolly Pacific Company		
SOURCE: USGS Santa Catalina, East, CA		

3777 Long Beach Blvd., Annex
Long Beach, CA 90807
Phone: (562) 495-5777

Separator Plant
SC-32
WE-1

Main Office

Shop

CAT Shop

Drum Storage
SC-31

Waste Oil
SC-34

Sediment Basin
SE-2

Outfall 3

Equipment Parking Area
SC-43

Separator Plant
SC-32
WE-1

WE-1

Sediment Basin
SE-2

SC-33

Sediment Basin
SE-2

Outfall 2

Sediment Basin
SE-2

Outfall 1

Crane

Crane

WE-1

14,500 Gallon Diesel Tank
SC-20
SC-31
SC-33

4,000 Gallon Diesel Fuel
SC-20
SC-31
SC-33

Mooring Buoy (distance not to scale)
Approximately 450ft off point
WE-1

Mooring Buoy
Approximately 250ft off point
WE-1

LEGEND

Outfall

Best Management Practices

- SC-20 – Vehicle & Equipment Fueling
- SC-22 – Vehicle & Equipment Parking
- SC-31 – Outdoor Liquid Container Storage
- SC-32 – Outdoor Equipment Operations
- SC-33 – Outdoor Storage of Raw Materials
- SC-34 – Waste Handling & Disposal
- SC-43 – Parking/Storage Area Maintenance
- SE-2 – Sediment Basin
- SC-11 – Spill Prevention, Control, and Clean up
- SC-10 – Non-Storm Water Discharge
- WE-1 – Wind Erosion Control

0 100' 200'

FIGURE 2: SITE LAYOUT

SITE:
Connolly Pacific Company
ASBS 28

PROJECT NUMBER: CNLP-12-12367

DRAWN: RS | APPROV.: KH

DATE: 09/19/12 | SCALE: 1" = 200'

ALTA ENVIRONMENTAL
3777 Long Beach Blvd
Annex Building
Long Beach, CA 90807
562-495-5777
www.altaenvIron.com

ATTACHMENT C –

WATERFRONT PLAN AUDIT PROTOCOL

ATTACHMENT D –

AIR PERMITS AND AIR PROGRAM

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

PERMIT TO OPERATE

Page 1
Permit No.
F94220
A/N 420008

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner
or Operator:

CONNALY-PACIFIC CO
1925 PIER D ST
LONG BEACH, CA 90802

ID 82149

Equipment Location: PEBBLY BEACH QUARRY AVALON, CA 90704-9999

Equipment Description :

AGGREGATE RECEIVING, SCREENING, RIP RAP PRODUCTION SYSTEM CONSISTING OF:

1. VIBRATING GRIZZLY FEEDER, 5'-5"W. X 28'-0"L., 100 H.P.
2. BELT CONVEYOR, OVERS, 5'-0"W.X 40'-0"L., 30 H.P.
3. BELT CONVEYOR, UNDERS, 6'-0"W. X 100'-0"L., 40 H.P.
4. STACKER, UNDERS, 6'-0"W. X 30'-0"L., 15 H.P.
5. BELT CONVEYOR, UNDERS, 4'-0"W. X 160'-0"L., 40 H.P.
6. BELT CONVEYOR, UNDERS, 3'-6"W. X 60'-0"L., 25 H.P.
7. TRIPLE DECK SCREEN, JCI, MODEL NO. 8203-3805, 8'-0"W. X 20'-0"L., 50 H.P.
8. STACKER, 1", 4'-0"W. X 125'-0"L., 25 H.P.
9. BELT CONVEYOR, RIP RAP, 4'-0"W. X 30'-0"L., 15 H.P.
10. STACKER, RIP RAP, 3'-0"W. X 100'-0"L., 30 H.P.

Conditions :

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL NOT PROCESS MORE THAN 612,000 TONS OF AGGREGATE IN ANY ONE MONTH.

FILE COPY

4 RECORDS SHALL BE MAINTAINED TO DEMONSTRATE COMPLIANCE WITH CONDITION NO 3 THESE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST TWO YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST

5 THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE AGGREGATE CHARGED AND AGGREGATE IN PROCESS IS KEPT ADEQUATELY MOIST TO PREVENT DUST EMISSIONS

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES

EXECUTIVE OFFICER

Dorris M Bailey

By Dorris M Bailey/DH04
12/11/2007

FILE COPY

FORM 403N

RULE 403 - LARGE OPERATION NOTIFICATION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765

Is this plan being submitted to comply with the requirements of a Notice to Comply or Notice of Violation? **YES/NO**
Notice Number_____ Please attach copy

Qualifying Criteria:

1. Does this operation contain more than 50 acres of disturbed surface area as of the date of submittal? **YES/NO**
   Please indicate the size of the project _____.
2. Will the earth moving operation exceed a daily earth moving or throughput volume of 5,000 cubic yards three times during the most recent 365-day period from the date grading begins? **YES/NO**

Please Print or Type

Contractor/ Consultant/ Owner: **(Circle one of the above)**		**Phone Number:**	
Address:	**City:**	**State:**	**Zip:**
Project Name:			
Nature of Business: □**Construction/Demolition** □**Sand & Gravel/Mining Operations** □**Cement Manufacturing**			
Name of Responsible Person of Organization: **Title:**		**Phone Number:**	
Environmental Observer: **Date Attended Dust Class:**		**Phone Number:** **ID Number:**	
Project Address: **(Attach location map)**	**City:**	**State:**	**Zip:**
Name of Property Owner: **(If different than above)**			
Anticipated Start Date:		**Anticipated Completion Date:**	
Telephone Number:			
Emergency Phone Number:			

In accordance with paragraph (e)(1) of Rule 403, I will ensure that the actions specified in Tables 2 and 3 will be implemented on-site for each applicable fugitive dust source type within the property lines and that records are maintained in accordance with Rule 403, subparagraph (e)(1)(c) . Further, I hereby certify that all information contained herein is true and correct.

SIGNATURE OF RESPONSIBLE MEMBER OF ORGANIZATION	TITLE	DATE

ATTACHMENT I
RULE 403 IMPLEMENTATION HANDBOOK

DRAFT FINAL

RULE 403 IMPLEMENTATION HANDBOOK

South Coast Air Quality Management District

Office of Planning and Policy

21865 Copley Drive

Diamond Bar, California 91765

April 2004

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

GOVERNING BOARD

Chairman: WILLIAM A. BURKE, Ed.D.
Speaker of the Assembly Appointee

Vice Chairman: S. ROY WILSON, Ed.D.
Supervisor, Fourth District
Riverside County Representative

MEMBERS:

MICHAEL D. ANTONOVICH
Supervisor, Fifth District
Los Angeles County Representative

JANE W. CARNEY
Senate Rules Committee Appointee

WILLIAM S. CRAYCRAFT
Council Member, City of Mission Viejo
Cities Representative, Orange County

BEATRICE J. S. LAPISTO-KIRTLEY
Mayor Pro Tem, City of Bradbury
Cities Representative, Los Angeles County/Eastern Region

RONALD O. LOVERIDGE
Mayor, City of Riverside
Cities Representative, Riverside County

JAN PERRY
Councilmember, City of Los Angeles
Cities Representative, Los Angeles County, Western Region

BILL POSTMUS
Supervisor, Fourth District
San Bernardino County Representative

JAMES W. SILVA
Supervisor, Second District
Orange County Representative

CYNTHIA VERDUGO-PERALTA
Governor's Appointee

DENNIS YATES
Council Member, City of Chino
Cities Representative, San Bernardino County

EXECUTIVE OFFICER:
BARRY R. WALLERSTEIN, D.Env.

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LIST OF FIGURES

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Preface

South Coast Air Quality Management District (AQMD) staff has amended the Rule 403 Implementation Handbook to provide guidance consistent with the most recent amendments to the Rule language. Any reference to a specific product name is for informational purposes only and does not represent an AQMD endorsement for the product.

S T A T E M E N T OF P U R P O S E

STATEMENT OF PURPOSE

The purpose of Rule 403 is to reduce the amount of fugitive dust entrained as a result of human activities. Rule 403 applies to any activity capable of generating fugitive dust.

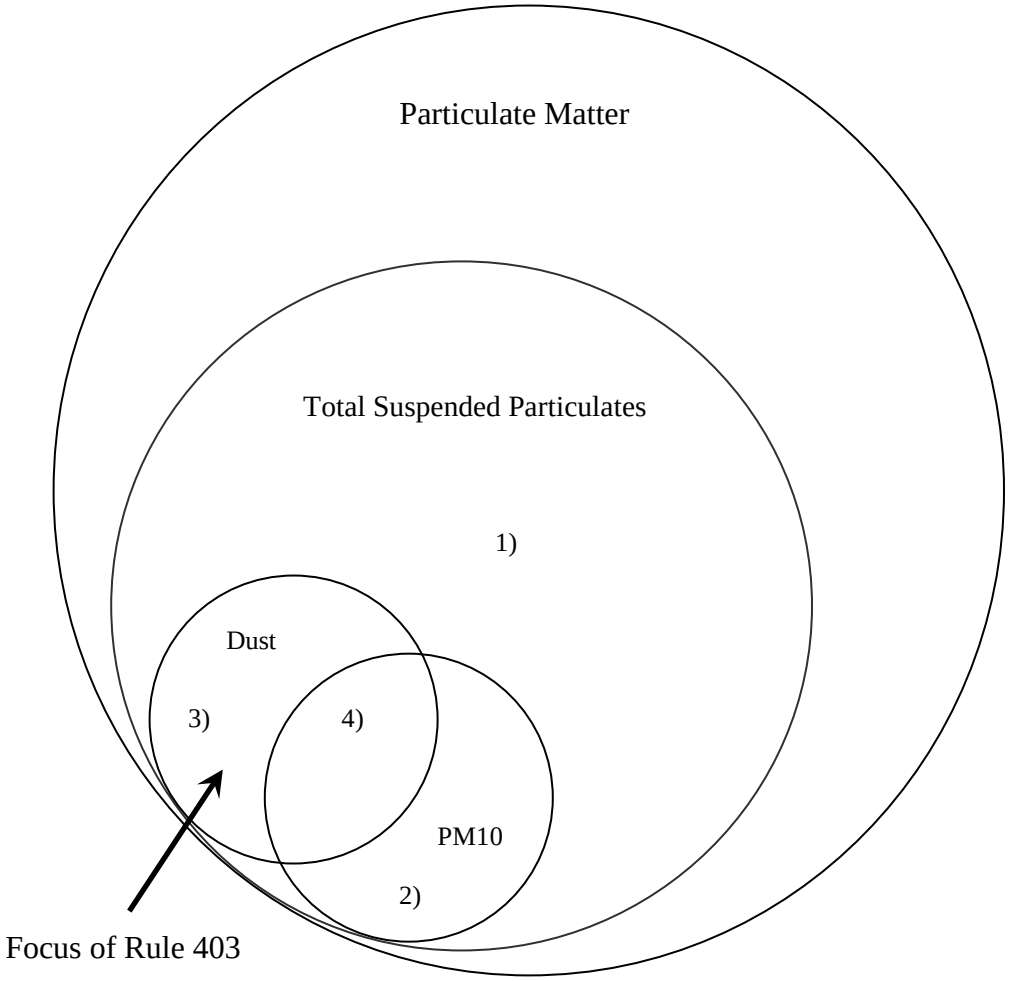
This Handbook has been developed by District staff to assist affected persons and activities in complying with Rule 403. Throughout this Handbook, several terms are used to describe various categories of dust or fine particulate matter. While all of the terms represent a form of particulate matter, each has a specific meaning. The following definitions should help the reader understand the differences between these terms. Figure 1-1 illustrates the relationship of these terms based on size.

PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions (defined in Rule 102).

TOTAL SUSPENDED PARTICULATE MATTER (TSP) is any airborne particulate matter as measured by applicable State and federal reference test methods. (A subset of PARTICULATE MATTER).

FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of human activities. (A subset of TOTAL SUSPENDED PARTICULATES).

PM10 is particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and federal reference test methods. Studies have indicated that appropriately 50 percent of total suspended particulate matter, by weight, is of PM10 size or less. (A subset of TOTAL SUSPENDED PARTICULATES).



1) TSP larger than 10 microns originating from exhaust stacks

2) PM10 not related to fugitive dust sources, such as sulfates, nitrates, and organic particles

3) Dust particles larger than 10 microns

4) Portion of ambient PM10 which can be reduced through fugitive dust emission controls

FIGURE 1-1

PICTORIAL RELATIONSHIP OF TERMINOLOGY

A P P L I C A B L E D I S T R I C T R U L E S

Fugitive Dust (Rule 403)

APPLICABLE DISTRICT RULES

Fugitive Dust (Rule 403)

Rule 403 requires the implementation of best available fugitive dust control measures during active operations capable of generating fugitive dust. Table 1 of Rule 403 lists best available control measures (BACM) by source. Figure 2-1 identifies the jurisdictional boundaries of the South Coast Air Quality Management District.

Rule 403 also requires activities defined as "large operations" to notify the AQMD by submitting Form 403N, implement the Rule 403 Table 2 and 3 control actions, and maintain records of control measure implementation. Rule 403 defines large operations as:

> "any active operations on property which contains in excess of 50 acres of disturbed surface area; or any earth-moving operation which exceeds a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cubic yards) three times during the most recent 365-day period."

Additional guidance for large operations is included in Section 5 of the Handbook.

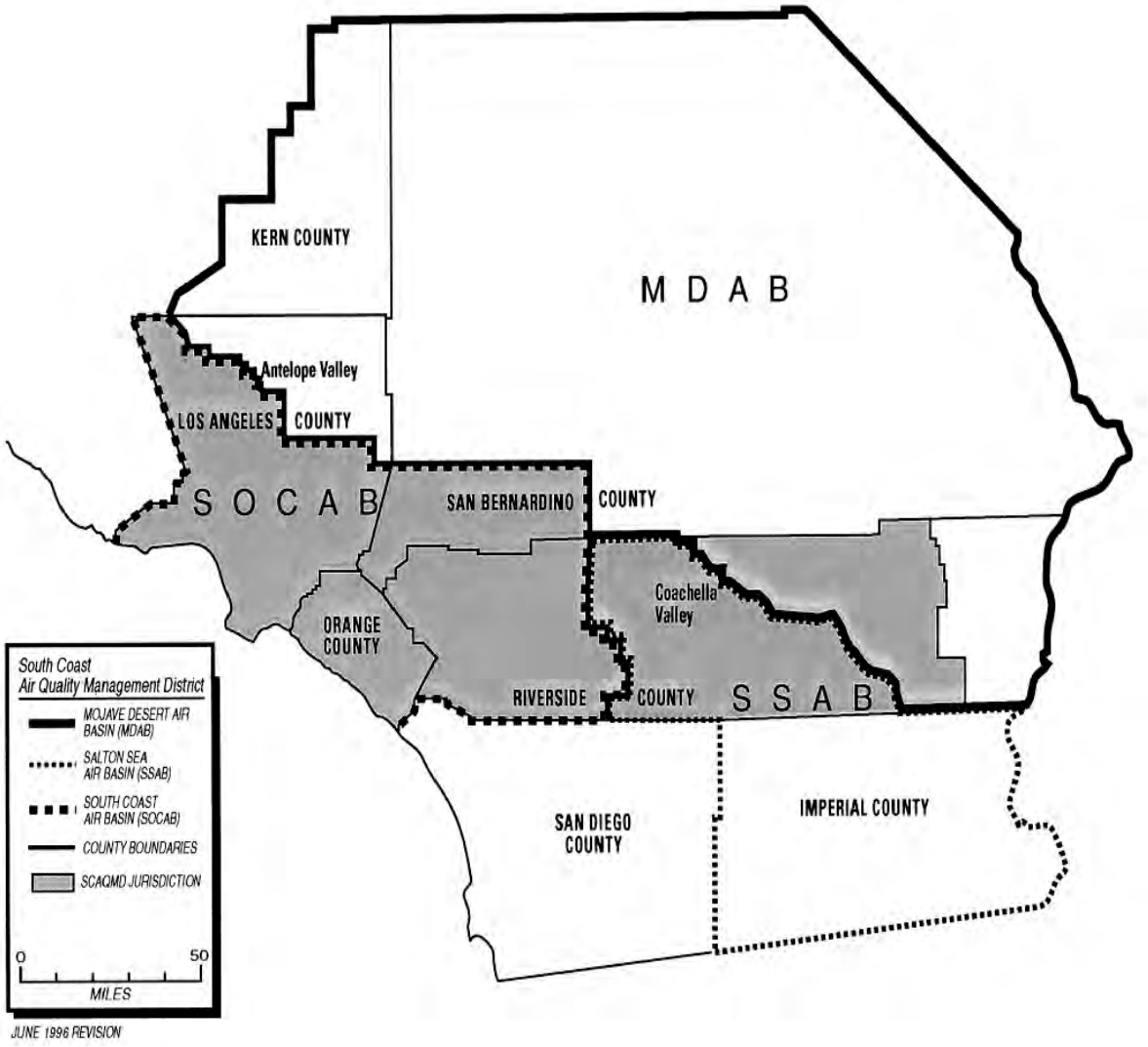


FIGURE 2 - 1

BOUNDARIES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AND THE SOUTH COAST AIR BASIN

In order to save space and avoid repetition, please refer to the latest version of Proposed Amended Rule 403, which is located elsewhere in the rule package.

S O I L M O I S T U R E T E S T I N G M E T H O D S

ASTM Standard Test Method D 2216
ASTM Standard Test Method D 1557

SOIL MOISTURE TESTING METHODS

American Society for Testing and Materials (ASTM) Standard Test Method D-2216 and ASTM D-1557

Tables 2 and 3 of Rule 403 contain a listing of dust control actions for a variety of fugitive dust sources for activities defined as large operations [see Rule 403 definition (c)(18)]. Specifically, Table 2 control action (1a) requires that certain earth-moving activities conducted at large operations maintain a soil moisture content level of at least 12 percent as determined by ASTM Standard Test Method D 2216. Additionally, Table 2 control action (1b) states that portions of construction sites that have an optimum soil moisture content for compaction of less than 12 percent, as determined by ASTM Standard Test Method D-1557, are to complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content.

A copy of Test Method D-2216 and D-1557 can be obtained from the ASTM web site http://www.astm.org

It should be noted that ASTM documents are periodically updated.

C H E M I C A L D U S T S U P P R E S S A N T S

Resource List of Vendors

CHEMICAL DUST SUPPRESANTS

Introduction

The following is a list of chemical dust suppressants and vendors. This resource list has been compiled from information provided to the AQMD by various vendors, but there are likely to be additional products that are commercially available. **This resource listing is not an endorsement by the AQMD to use any particular product**. It is the responsibility of each person who wishes to use a chemical dust suppressant to assure that such product is not prohibited for use in fugitive dust control by the California Regional Water Quality Control Board, the California Air Resources Board (ARB), the Environmental Protection Agency, or any applicable laws. Also, such products should meet any specifications, criteria, or tests required by any federal, state, or local water agency.

The California Air Resources Board (ARB) has a precertification program whereby manufacturers of air pollution control products request the ARB to conduct a third-party verification of performance claims. This analysis focuses on the air quality benefits of individual equipment or processes. A list of chemical dust suppressant vendors that have participated in the ARB's precertification program is listed on the Internet at http://www.arb.ca.gov/eqpr/mainlist.htm. This site also contains the documented PM10 control efficiency for these products when applied in accordance with the manufacturer's specifications.

For further information about ARB's precertification program, please e-mail or call Mr. Mike Waugh at (916) 445-6018 / mwaugh@arb.ca.gov or Ms. Marcelle Surovik at (916) 327-2951 / msurovik@arb.ca.gov.

Resource List of Vendors

Product Name	Vendor Contact
Acrylic polymers (Various other products including, lignosulfonates, surfactants, resins, enzymes, hydroseeding, and chlorides)	Dust Pro, Inc. Phoenix, AZ (602) 251-3878 www.dustpro.com
AGRI-LOCK and DUST-LOCK (synthetic resin and organic compound)	Swift Adhesives Research Triangle Park, NC (800) 213-4804
Agri-Fiber (organic compound)	Precision Hydroseeding Company Palm Desert (760) 778-3810 (888) 645-4800
AIRTROL Geobinder (gypsum based bonded fiber matrix)	United States Gypsum Co. San Diego, CA (619) 546-4733
Asphotac (asphaltic emulsions)	Pragma, Inc. Lodi, CA (209) 367-0579 (909) 598-1734
Blend R40 Series (water-based polymer emulsions)	Rohm and Haas Company Spring House, PA (215) 641-7000
Calcium Chloride (hygroscopic salt)	Lee Chemical, Inc. Moreno Valley (909) 369-5292
Calcium Chloride (hygroscopic salt)	Hill Brothers Chemical Company Orange, CA (714) 998-8800
DC-360 (polymer emulsion)	Global Eco Technologies, Inc Pittsburgh, CA (925) 473-9250

Product Name	Vendor Contact
DC-30 (co-polymer)	Southwest Boulder and Stone Escondido, CA (760) 751-3333
Dust Oil Emulsion (asphalt emulsion)	Morgan Emultech, Inc. Redding, CA (530) 241-1364
Dust Sorb 1118 (acrylic resin)	Aqua Chem Ltd. Bakersfield, CA (805) 323-8308
Dust Off (brine solution)	Leslie Salt Company Newark, CA (510) 790-8169
Dusty Roads (soil conglomerate/ wood byproduct)	Ecolink San Diego, CA (619) 483-3111
Dustex (lignosulfonate)	LignoTech USA Rothschild, WI (715) 359-6544*
DSS-40 (acrylic co-polymer)	S & S Seeds Carpentaria, CA (805) 684-0436
Eco-Polymer (polymer)	Eco-polymer Los Angeles, CA (323) 954-2240
Earthbond (organic emulsion)	Spectrum Pacific Santa Fe Springs, CA (562) 404-6131
ECO-110 and C-50 (polymer)	Dynaguard, Inc. Orange, CA (714) 771-7411

* Local suppliers available.

Product Name	Vendor Contact
Envirotac II (acrylic co-polymer)	Environmental Products and Applications Lake Elsinore, CA (909) 674-9174 (877) 371-1147
Ecotak-OP and Ecotak-SAT (hydroseeding)	Elliott Landscaping Cathedral City, CA (760) 343-2002
Ecology Control M Binder (co-polymer)	S & S Seeds Carpentaria, CA (805) 684-0436
Enduraseal 100/200 (organic emulsion)	Cascadia Technologies, Inc Vancouver, BC (604) 685-0877
EnviroKleen (polymer)	REAMS Associates, Inc. Santa Ana, CA (714) 953-3164
FIBER-SORB™ Dewatered Residual Wood Fiber (organic pulp product)	Coast Resource Management, Inc. Cerritos, CA (562) 860-4665
Fiberwood (hydroseeding mulch)	Green Stone Industries Sacramento, CA (800) 655-9754
Fibercraft (hydromulch cellulose fiber)	Dynamis, Inc. Sanger, CA (209) 875-0800
Hydro=Plant (hydroseeding)	Hydro=Plant, Inc. San Marcos, CA (760) 744-7360
Hydroseeder (seed mixes and applications)	Sanders Hydroseeding, Inc. Santa Ana, CA (714) 973-8873

Product Name	Vendor Contact
Lignosulfonate (wood pulp by-product)	Jim Good Marketing Shafter, CA (805) 746-3783
Magnesium Chloride (hygroscopic salt)	SouthWestern Sealcoating, Inc. Murrieta, CA (909) 677-6228
Magnesium Chloride (hygroscopic salt)	Dustpro, Inc. Phoenix, AZ (602) 251-3878
Magnesium Chloride (hygroscopic salt)	Jim Good Marketing Shafter, CA (805) 746-3783
Marloc (co-polymer)	Reclamare Company Seattle, WA (206) 824-2385
Marloc - SF (co-polymer)	Southwest Boulder and Stone Escondido, CA (760) 751-3333
Native Seed Mix (hydromulch)	Pacific Coast Seed, Inc. Livermoore, CA (925) 373-4417
Organic Soil Stabilizer (soil additive)	Desert Rock Supply La Quinta, CA (760) 360-1354
Perma-Zyme IIX (enzyme formulation)	Charbon Consultants Tustin, CA (714) 832-6366
Pennzsuppress D (emulsified resin)	Pennzoil Products Company Santa Fe Springs, CA (562) 906-0633
Road Oyl (pine tar)	Soil Stabilization Products Merced, CA (209) 383-3296

Product Name	Vendor Contact
Roadkill (soybean product)	Central Soya Company, Inc. Fort Wayne, IN (219) 425-5942
Sandcastles Dust Control Mix	Sandcastle Hydroseeding Lancaster, CA (805) 723-0515
SC Dust Oil Emulsion 715 (emulsified dust oil)	SC Dust Control Bakersfield, CA (805) 391-8357
Sentinel (organic binder-hydroseeding)	Albright Seed Company Camarillo, CA (805) 484-0551
	Precision Hydro-seeding Company Palm Desert, CA (760) 772-0237 (888) 645-4800
Soilmaster (polymer)	Environmental Soil Systems, Inc. Granada Hills (818) 368-4115
Soil Seal (polymer)	Soil Seal Corporation Los Angeles (213) 727-0654
Soil Seal (polymer)	Soil Stabilization Products Merced, CA (209) 383-3296
Soil Sement (polymer)	REAMS Associates Santa Ana, CA (714) 953-3164
Soil Sement (polymer)	Midwest Industrial Supply Santa Maria, CA (805) 937-7157 (800) 321-0697

Product Name	Vendor Contact
	Midwest Industrial Supply Canton, Ohio (800) 321-0699
Soil Guard	S & S Seeds Carpentaria, CA (805) 684-0436
TOPEIN™ Emulsions (organic dispersions)	Doyle Ellis Bakersfield, CA (877) TOPEINS
Terrazyme (organic enzyme)	Environmental Services & Products Walnut, CA (909) 595-0470

G U I D A N C E F O R

L A R G E O P E R A T I O N S

Large Operation Notification Procedures
Contact Signage
Statement of No Change
Notice of Completion

GUIDANCE FOR LARGE OPERATIONS

Notification Procedures

Rule 403 requires large operations that meet or exceed the threshold for large operations to:

- ✓ notify the District in writing by submitting a Large Operation Notification (Form 403N) with the appropriate site mapping within seven days of qualifying as a large operation to the address provided below:

  Phill Hubbard
  South Coast Air Quality
  Management District
  Rule 403 Compliance
  21865 E. Copley Drive
  Diamond Bar, CA 91765

- ✓ identify a dust control supervisor
- ✓ install contact signage that meets the minimum standards outlined by this Chapter within 50 feet of each public site entrance or other frequently-used work entrances. No more than four signs are required per site/facility. One sign is sufficient for multiple site entrances located within 300 yards of each other.
- ✓ implement the Rule 403 Table 2 and Table 3 control actions for each on-site source, and
- ✓ prepare daily records of control action implementation and maintain such recordkeeping information for three years.

Rule 403 also requires large operations to notify the AQMD 30 days after no longer qualifying as a large operation [subparagraph (e)(1)(F)] by submitting a Project Completion Form (Form 403 C) or submit a Statement of No Change (Form 403 NC) for projects that will last more than one year [paragraph (e)(2)]. The requirement to submit a Statement of No Change is not required for stationary sources (i.e., aggregate facilities, etc.) that operate for multiple years at one site.

A blank Large Operation Notification Form (Form 403N), minimum contact signage standards, a Notice of Completion Form (Form 403C), a Statement of No-Change (Form

403NC) is presented in this chapter. A sample recordkeeping form is included in Chapter 6.

FORM 403N

RULE 403 - LARGE OPERATION NOTIFICATION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765

Large operations are required to implement the Rule 403 Table 2 and Table 3 control measures and must notify the AQMD no later than 7 days after qualifying as a large operation. Completing this Form and returning it, along with a site location map, to the AQMD will represent compliance with the notification procedures. Note: activities that implement the Table 2 and the Table 3 control measures are required to maintain records of control measure application (see Chapter 6 of the Rule 403 Implementation Handbook).

Is this notification being submitted to comply with the requirements of a Notice to Comply or Notice of Violation? **YES/NO**

Notice Number_____ Please attach copy

Qualifying Criteria:

1. Does this operation contain more than 50 acres of disturbed surface area as of the date of submittal? **YES/NO** Please indicate the size of the project _____.

2. Will the earth moving operation exceed a daily earth moving or throughput volume of 5,000 cubic yards three times during the most recent 365-day period from the date grading begins? **YES/NO**

If you answered yes to either 1 or 2 above please continue with the application. If you answered no to both 1 & 2 you may stop here. If you still have questions regarding your qualifying status please call Phill Hubbard III at (909) 396-2966.

FORM 403N

RULE 403 - LARGE OPERATION NOTIFICATION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765

Please Print or Type

Contractor/ Consultant/ Owner: (Circle one of the above)		**Phone Number:**	
Address:	**City:**	**State:**	**Zip:**
Project Name:			
Name of Responsible Person of Organization:			
Title:		**Phone Number:**	
Dust Control Supervisor:		**Phone Number:**	
Date Attended Dust Class:		**ID Number:**	
Project Address: (Attach location map)	**City:**	**State:**	**Zip:**
Name of Property Owner: (If different than above)			
Type of Activity:			
Anticipated Start Date:		**Anticipated Completion Date:**	
Check here if permanent facility: **(Statement of No Change is not required for stationary sources (aggregate facilities, etc.) that operate at one site for multiple years)**			
Telephone Number:			
Emergency Phone Number:			
In accordance with paragraph (e)(1) of Rule 403, I will ensure that the actions specified in Tables 2 and 3 will be implemented on-site for each applicable fugitive dust source type within the property lines. Further, I hereby certify that all information contained herein is true and correct.			
SIGNATURE OF RESPONSIBLE MEMBER OF ORGANIZATION	**TITLE**	**DATE**	

GUIDANCE FOR LARGE OPERATIONS

Minimum Contact Signage Standards

Rule 403 subparagraph (e)(1)(D) requires large operations to install and maintain signage that identifies phone numbers for dust complaints. Signs must be installed within 50 feet of each public site entrance and other frequently-used work entrances. No more than four signs are required per site/facility. One sign is sufficient for multiple site entrances located within 300 yards of each other. The following guidance has been prepared to assist project operators in complying in this requirement.

CONSTRUCTION SITE SIGNAGE GUIDELINES (Minimum Requirements)

- ✓ The purpose of this signage is to allow the public to contact the responsible party if visible dust emissions or track-out of material is observed from a construction site.

Project size	**Over 50 Acres**
Sign size	48” x 96”

Permit # *(if applicable)*	4”
Site Name	4”
Project Name / Tract ####	4”
IF YOU SEE DUST COMING FROM	4”
THIS PROJECT CALL:	4”
Name, Phone Number XXX-XXXX	6”
If you do not receive a response, Please call	3”
the AQMD 1-800-CUT-SMOG	3”
	3”

Notes:

- ✓ Signage must be located within 50 feet of each project site entrance.
- ✓ No more than four signs are required per site/facility.
- ✓ One sign is sufficient for multiple site entrances located within 300 yards of each other.
- ✓ Text height shall be at a minimum as shown on right side of sign template above.
- ✓ Sign background must contrast with lettering, typically black text with white background.
- ✓ Sign should be 1 inch A/C laminated plywood board.
- ✓ The lower edge of the sign board must be a minimum of 6 feet and a maximum of 7 feet above grade.
- ✓ The telephone number listed for the contact must be a local or a toll-free number and shall be accessible 24 hours per day.

STATEMENT OF NO CHANGE FOR PROJECTS THAT EXTEND MORE THAN ONE YEAR

Approved large operation notifications are valid for one year from the date of AQMD acceptance. If a project will extend beyond one-year and if all sources of fugitive dust and control measures are the same as the originally accepted submittal, the operator can extend the applicability of the large operation notification for an additional year by submitting a Statement of No-Change (Form 403NC). A Statement of No-Change is not required for stationary sources (e.g., aggregate facilities, etc.) that operate for multiple years at one facility. A sample Form 403NC is provided on the following page.

FORM 403NC

STATEMENT OF NO CHANGE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765

Large operation notifications are valid for one year from SCAQMD acceptance. Rule 403 requires resubmittal of a large operation notification at least 30 days prior to the expiration date or the submittal will no longer be valid. Submittal of form 403NC will represent resubmittal of a large operation notification if conditions will not change in the upcoming year. SCAQMD acceptance of Form 403NC will make the previously approved submittal valid for <u>one</u> additional year from its original approval date. A Statement of No Change is not required for stationary sources (aggregate facilities, etc.) that operate at one site for multiple years.

Please Print or Type

Contractor/ Consultant/ Owner: **(Circle one of the above)**			**Phone Number**
Address:	**City:**	**State:**	**Zip:**
Project Name:			
Name of Responsible Person of Organization: **Title:**			
Dust Control Supervisor: **Date Attended Dust Class:**			**Phone Number:** **ID Number:**
Project Address: **(Attach location map)**	**City:**	**State:**	**Zip:**
Name of Property Owner: **(If different than above)**			
Type of Activity:			
Anticipated Completion Date:			
Telephone Number:			
Emergency Phone Number:			

Agreement

All conditions at the site are the same as identified in the large operation notification approved by the SCAQMD on _____. *(Please provide date)* Moreover, all control measures will be implemented at the site in the manner set forth in the previously approved large operation notification.

_____

Signature of Owner (Date)

_____

Signature of Operator or Contractor (Date)
(If not the same as owner)

SCAQMD Use Only

Date Received _____ Staff Initial _____

PROJECT COMPLETION FORM

Subparagraph (e)(1)(F) requires large operations to notify the AQMD within 30 days of no longer qualifying as a large operation. A sample Form 403C is provided on the following page.

FORM 403C

NOTICE OF COMPLETION
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 Copley Drive, Diamond Bar, CA 91765

Rule 403 requires large operations to notify the AQMD within 30 days of no longer qualifying as a large operation. This form has been prepared to assist activities in complying with this requirement.

PROJECT INFORMATION	PLEASE ENTER INFORMATION BELOW
CONSTRUCTION PROJECT NAME / REFERENCE NUMBER	
PROJECT ADDRESS/LOCATION	
OWNER/DESIGNEE NAME	
PHONE NUMBER	
SUPPLEMENTAL PHONE NUMBER	

OWNER (DESIGNEE) STATEMENT

I certify that the referenced site no longer qualifies as a large operation.

Owner Signature _____ Date _____

Inspection Results

An inspection by a SCAQMD representative has been performed with the following results noted:

_____ Construction has ceased and the entire site has been adequately treated for long-term stabilization

_____ Construction has ceased, but portions of the site have not been adequately treated for long-term stabilization *(Attach additional stabilization requirements)*

Enforcement Officer _____ Date _____

S A M P L E R E C O R D K E E P I N G

SAMPLE RECORDKEEPING

Recordkeeping is required of large operations implementing Tables 2 and 3, pursuant to subparagraph (e)(1)(C). SCAQMD staff has included the attached example to serve as guidance for activities that compile records under Rule 403. Activities that are required to conduct record keeping can use the attached form or they can prepare a site-specific form. Under subparagraph (e)(1)(C) of Rule 403, records are to be retained for three years and must be submitted to the AQMD Executive Officer upon request.

FUGITIVE DUST CONTROL
(SCAQMD Rule 403 Table 2 and 3 Control Measures)
Month:_____

Instructions:
1. (X) Check off daily all control measures implemente
2. Operator should initial daily.

		Fugitive Dust Source Category/Control Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earth-moving		*Control Actions*																															
	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR																															
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.																															
	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer and the California Air Resources Board. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board, complete the compaction process as expeditiously as possible after achieving at least 70 percent of optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.																															
	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.																															
		Contingency Control Measures																															
	(1A)	Cease all active operations, OR																															
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil																															

OPERATORS INITIALS:

FUGITIVE DUST CONTROL
(SCAQMD Rule 403 Table 2 and 3 Control Measures)
Month:_____

Instructions:
1. (X) Check off daily all control measures implemented.
2. Operator should initial daily.

Fugitive Dust Source Category/Control Measures			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Disturbed Surface Area		*Control Measure*																															
	(2 a/b)	Apply dust suppression in sufficient quantity and frequency to maintain stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.																															
	(2c)	Apply chemical stabilizers within five working days of grading completion; OR																															
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.																															
		Contingency Control Measures																															
	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days; apply Water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR																															
	(1B)	Apply chemical stabilizers prior to wind event, OR																															
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR																															
	(3B)	Take actions specified in Table 2, Item (3c); OR																															
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.																															
Inactive Disturbed Surface		*Control Measure*																															
	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR																															
	(3b)	Apply suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR																															
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR																															
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.																															

OPERATORS INITIALS:

FUGITIVE DUST CONTROL
(SCAQMD Rule 403 Table 2 and 3 Control Measures)
Month:_____

Instructions:
1. (X) Check off daily all control measures implemente
2. Operator should initial daily.

		Fugitive Dust Source Category/Control Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Unpaved Roads		*Control Measure*																													
	(4a)	Water all roads used for any vehicular traffic at least Once per every two hours of active operations normal [3 times per 8 hour work day]; OR																													
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR																													
	(4c)	Apply a chemical stabilizers to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.																													
		Contingency Control Measures																													
	(1C)	Apply chemical stabilizers prior to wind event, OR																													
	(2C)	Apply water twice per hour during active operation, OR																													
	(3C)	Stop all vehicular traffic																													
Open Storage Piles		*Control Measure*																													
	(5a)	Apply chemical stabilizers; OR																													
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR																													
	(5c)	Install temporary coverings; OR																													
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.																													
		Contingency Control Measures																													
	(1D)	Apply water twice per hour, OR																													
	(2D)	Install temporary coverings.																													
Paved Road Track-Out		*Control Measure* Compliance with Rule 403, Paragraph (d)(4) and (5)																													
		Contingency Control Measures																													
	(1E)	Cover all haul vehicles; OR																													
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.																													

OPERATORS INITIALS:

TEST METHODS

- **Opacity Test Methods**
- **Stabilized Surface**
- **Threshold Friction Velocity**
- **Silt Loading/Content**

OPACITY TEST METHODS

Time Averaged Method:

Note: This method can only be conducted by an individual who is a California Air Resources Board (CARB) certified Visible Emission Evaluation (VEE) observer. Qualification and testing requirements for a CARB-certified VEE observer can be obtained from the AQMD.

These procedures are for evaluating continuous fugitive dust emissions and are for the determination of the opacity of continuous fugitive dust emissions by a qualified observer. Continuous fugitive dust emissions sources include activities that produce emissions continuously during operations such as earthmoving, grading, and trenching. Emissions from these types of continuous activities are considered continuous even though speed of the activity may vary and emissions may be controlled to 100%, producing no visible emissions, during parts of the operation. The qualified observer should do the following:

Position: Stand at a position at least twenty (20) feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. The observer may follow the fugitive dust plume generated by mobile earth moving equipment, as long as the sun remains oriented in the 140° sector to the back. As much as possible, do not include more than one plume in the line of sight at one time.

Field Records: Record the name of the site, fugitive dust source type (e.g., earthmoving, grading, trenching), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation when opacity readings are initiated and completed.

Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). The initial observation should begin immediately after a plume has been created above the surface involved. Do not look continuously at the plume, but instead observe the plume momentarily at 15-second intervals. For fugitive dust from earthmoving equipment, make opacity observations at a point just beyond where material is not being deposited out of the plume (normally three (3) feet above the mechanical equipment generating the plume).

Recording Observations: Record the opacity observations to the nearest 5% every fifteen (15) seconds on an observational record sheet. Each momentary observation recorded represents the

average opacity of emissions for a fifteen (15) second period. If a multiple plume exists at the time of an observation, do not record an opacity reading. Mark an "x" for that reading. If the equipment generating the plume travels outside of the field of observation, resulting in the inability to maintain the orientation of the sun within the 140° sector or if the equipment ceases operating, mark an "x" for the fifteen (15) second interval reading. Readings identified as "x" shall be considered interrupted readings.

Data Reduction For Time-Averaged Method: For each set of twelve (12) or twenty four (24) consecutive readings, calculate the appropriate average opacity. Sets shall consist of consecutive observations, however, readings immediately preceding and following interrupted readings shall be deemed consecutive and in no case shall two sets overlap, resulting in multiple violations.

Intermittent Emissions Method

Note: This method can only be conducted by an individual who is a California Air Resources Board (CARB) certified Visible Emission Evaluation (VEE) observer. Qualification and testing requirements for a CARB-certified VEE observer can be obtained from the AQMD.

This procedure is for evaluating intermittent fugitive dust emissions: This procedure is for the determination of the opacity of intermittent fugitive dust emissions by a qualified observer. Intermittent fugitive dust emissions sources include activities that produce emissions intermittently such as unpaved road travel, screening, dumping, and stockpiling where predominant emissions are produced intermittently. The qualified observer should do the following:

Position: Stand at a position at least twenty (20) feet from the fugitive dust source in order to provide a clear view of the emissions with the sun oriented in the 140° sector to the back. Consistent as much as possible with maintaining the above requirements, make opacity observations from a position such that the line of sight is approximately perpendicular to the plume and wind direction. As much as possible, do not include more than one plume in the line of sight at one time.

Field Records: Record the name of the site, fugitive dust source type (e.g., pile, material handling, transfer, loading, sorting), method of control used, if any, observer's name, certification data and affiliation, and a sketch of the observer's position relative to the fugitive dust source. Also, record the time, estimated distance to the fugitive dust source location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), observer's position relative to the fugitive dust source, and color of the plume and type of background on the visible emission observation when opacity readings are initiated and completed.

Observations: Make opacity observations, to the extent possible, using a contrasting background that is perpendicular to the line of sight. Make opacity observations at a point just beyond where material is no longer being deposited out of the plume (normally three (3) feet above the surface from which the plume is generated). Make two observations per plume at the same point, beginning with the first reading at zero (0) seconds and the second reading at five (5) seconds. The zero (0) second observation should begin immediately after a plume has been created above the surface involved.

Recording Observations: Record the opacity observations to the nearest 5% on an observational record sheet. Each momentary observation recorded represents the average opacity of emissions for a five (5) second period.

Repeat the Observations listed above and the Recording Operations listed above in this procedure until you have recorded a total of 12 consecutive opacity readings. This will occur once six intermittent plumes on which you are able to take proper readings have been observed. The 12 consecutive readings must be taken within the same period of observation but must not exceed 1 hour. Observations immediately preceding and following interrupted observations can be considered consecutive.

Average the 12 opacity readings together. If the average opacity reading equals 20% or lower, the source is in compliance with the averaged method opacity standard described in the Rule.

STABILZED SURFACE TEST METHOD

Introduction:

The purpose of this test is to check whether a property is sufficiently crusted to prevent windblown dust. (Note: This test's primary function is to provide a simplified initial assessment of surface stability. If there is any doubt as to a property's stability after performing this test, the Threshold Friction Velocity test should be conducted to more thoroughly determine a surface's erodibility potential.)

Equipment:

- One steel ball. Diameter - 5/8 (0.625) inches. Mass - 16-17 grams
- A ruler or measuring tape
- A cardboard frame with a 1 ft. by 1 ft. opening (optional)

Step 1:

Select a 1 by 1 foot Survey Area that is representative, or a typical example, of the crusted surface.

Step 2:

Hold the small steel ball one (1) foot off the ground directly above your survey area. Use a ruler or measuring tape to make sure that your hand is at the correct distance above the ground. Drop the ball within the survey area.

Step 3:

Pass/Fail Determination. Observe the ground around the ball closely before picking it up. Did the ball sink into the surface so that it is partially or fully surrounded by loose grains of dirt? Has it dropped out of view entirely? Then pick up the ball. Look closely where the ball fell. Are loose grains of dirt visible?

If you have answered "yes" to any of the previous questions, the surface has failed the first drop test. Note that if the ball causes a slight indentation on the surface but you do not see loose grains, the surface has passed the test.

Step 4:

Select two additional areas within the 1 by 1 foot survey area to drop the ball. Repeat Steps 2 and 3. If the surface passes two or all three of the drop tests, the survey area is considered as passing the test.

Step 5:

Select at least two other survey areas that are representative of the crusted surface. Pick the areas randomly and make sure they are spaced some distance apart. Drop the ball 3 times within each of these additional survey areas. Once again, if the surface passes the test twice or three times, count the survey area as passing the test.

Step 6:

Examine Results. If all of the survey areas have passed the test, the surface is stable, or sufficiently crusted. If one or more survey areas have failed the test, the surface is insufficiently crusted. If the surface fails the visible crust test, but there are minimal loose grains on the surface, the U.S. EPA recommends that the Threshold Friction Velocity test be done. Where there is little loose material that can be collected, the surface is likely to pass the Threshold Friction Velocity test.

Question and Answer – Stabilized Surface Test Method

Question:

What if blowsand is on the crusted surface? (Blowsand is thin deposits of loose grains which have not originated from the surface you are testing, but have been blown there from some surrounding area. Blowsand tends to collect in certain areas rather than uniformly over the surface. If present, it will generally cover less than 50% of the entire surface.)

Answer:

Clear the blowsand from the survey area surfaces on which you plan to drop the ball. Blowsand should not be a factor in your results.

Question:

What if material has been dumped or piled on the surface that is not blowsand, such as dirt or swimming pool waste?

Answer:

Do not do the Stabilized Surface test on those surfaces unless they have crusted over. Instead, do the Threshold Friction Velocity test on any loose surface material.

Question:

What if two of the survey areas pass with flying colors and the third survey area fails miserably?

Answer:

Chances are that the third survey area is either part of an uncrusted portion of the lot or has a much lighter kind of crust or different soil type than that of the other two survey areas. This means that the third survey area represents a different kind of surface than the other survey areas. If this is the case, examine the disturbed surface areas on the lot carefully. Using measuring tape,

segment off (literally or mentally) the portion(s) of the lot that the third survey area represents. Size it up in feet and select two additional 1 by 1 foot survey areas on which to do the visible crust test. Keep in mind that if all other areas on the lot have a stable crust except for the newly identified area, it would need to be at least 5,000 square feet in size or subject to motor vehicle disturbance (i.e. trespassing) for disturbed vacant land requirements to apply.

THRESHOLD FRICTION VELOCITY

Introduction:

The purpose of the Threshold Friction Velocity, or TFV, test method is to determine a site's susceptibility to wind-driven soil erosion. TFV can differ among disturbed vacant lots depending on the type of soil and to what extent it is disturbed. The lower the TFV, the greater the propensity for fine particles to be lifted at relatively low wind speeds. Since rocks and other non-erodible elements add protection against soil erosion, they raise TFV if present on the disturbed surface. A TFV of 100 cm/sec or greater is considered sufficiently protective.

Equipment:

- A set of sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm and a lid and collector pan
- A small whisk broom or paintbrush with stiff bristles and dustpan. *(The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.)*
- A spatula without holes
- A cardboard frame with a 1 ft. by 1 ft. opening
- Basic calculator
- Graduated cylinder or measuring cup *(may possibly need)*

Step 1:

Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

Step 2:

Select a 1 foot by 1 foot survey area that is representative, or typical, of the disturbed surface. Mark this area using a cardboard frame. Check whether the surface is wet or damp. If so, return later to do this test method when the surface has dried.

Step 3:

Collect a sample of loose surface material to a depth of approximately 3/8 inch (1 cm) into a dustpan. This can best be done using a lightweight whisk broom/brush to carefully sweep the surface material within the marked survey area onto a spatula and lifting it into the dustpan. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface.

Step 4:

Check the dustpan for rocks or hard-packed clumps of soil collected in your sample. Measure their diameter and remove those larger than 3/8 inch (1 cm) in diameter from the sample.

Step 5:

Carefully pour the sample into the stack of sieves, minimizing release of dust particles by slowly brushing material into the stack with a whisk broom or paintbrush. (On windy days, use the trunk or door of a car as a wind barricade.) Cover the stack with a lid. Lift up the sieve stack and gently move it using broad, horizontal circular arm motions. Complete 10 clockwise and 10 counter-clockwise motions at a speed of approximately 1 second per motion. Be careful not to move the sieve too roughly in order to avoid breaking up any naturally clumped material.

Step 6:

Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass; e.g. material in each sieve (besides the top sieve that captures a range of larger elements) should look the same size. If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and gently rotate it using the same circular arm motions as before an additional 10 times. (You only need to reassemble the sieve(s) that contain material which requires further sifting.)

Step 7:

Line up the sieves in a row as they are disassembled, with the 4 mm sieve at one end and the collector pan at the other. Slightly tilt and gently tap each sieve and the collector pan so that all material is collected on one side. The material in the sieves and collector pan should be on the same side relative to your position. Observe the relative amount of material in each sieve and the collector pan to determine which contains the greatest volume. If this is difficult to determine, use a graduated cylinder or a measuring cup to measure the relative volume.

Step 8:

Use the table below to estimate TFV for the sieve catch with the greatest volume estimated in Step 7. For example, if the sieve containing the greatest volume is the one with the 0.5 mm opening, TFV = 58 cm/second.

Sieve Size Opening (mm)	Sieve No.	TFV (cm/sec)
4	5	> 100
2	10	100
1	18	76
0.5	35	58
0.25	60	43
Collector Pan	N/A	30

* TFV values in this table take into account the aggregate size distribution of particles between the different sieve size openings.

Step 9:

Repeat this procedure on at least two other representative areas on the disturbed surface. Average your TFV results from the three samples collected.

Step 10:

Examine Results. If the TFV you've calculated is greater than or equal to 100 cm/sec, the surface is stable.

Question and Answer – Threshold Friction Velocity Test Method

Question:

If there are hard-packed clumps of dirt on the surface, do I sieve these clumps along with the rest of the soil sample?

Answer:

If the hard-packed clumps are 1 cm or greater in size, extract them from the sample.

Question:

Can I combine all three collected soil samples into the sieve stack at once to save time?

Answer:

You may try combining the three samples after removing rocks or other non-erodible elements greater than 1 cm in diameter from each sample only if the mass of the three samples is

approximately the same. However, combined samples may be more difficult to sieve and require reassembling and re-shaking of the sieves more than once. Also, it may be difficult to visibly compare the volume of material caught in the sieves after they have been disassembled. Therefore, combining samples is not recommended.

Question:

If I see dust particles escaping when I collect a sample and transfer it to the sieves, should I start over?

Answer:

Not necessarily. A small amount of dust particles can escape without influencing the TFV results. In fact, it is very difficult to avoid having some dust escape. However, if you rush when collecting and/or transferring a sample to the sieves, you may cause too much dust to escape thus potentially causing error in your results. Or, on a relatively windy day you may lose too much dust unless you set up a wind barricade. Avoid doing this test at all on very windy days.

Question:

If you're not sure which sieve contains the greatest amount of material, can you weigh the sieves for comparison?

Answer:

While, typically, more volume corresponds to greater weight, this is not always the case. Use a measuring cup or graduated cylinder if necessary to determine the sieve that contains the greatest amount of material.

Question:

When determining TFV in step 8, can I combine material in the largest 2 sieves to estimate volume?

Answer:

No. This may fundamentally alter the premises on which the method is based and lead to an incorrect determination of stability.

SILT LOADING/CONTENT TEST METHOD

Introduction:

Silt Content Test Method. The purpose of this test method is to estimate the silt content of the trafficked parts of unpaved roads and unpaved parking lots. The higher the silt content, the more fine dust particles that are released when cars and trucks drive on unpaved roads and unpaved parking lots.

Equipment:

- A set of full height, eight inch diameter sieves with the following openings: 4 millimeters (mm), 2mm, 1 mm, 0.5 mm and 0.25 mm and a lid and collector pan
- A small whisk broom or paintbrush with stiff bristles and dustpan 1 ft. in width. *(The broom/brush should preferably have one, thin row of bristles no longer than 1.5 inches in length.)*
- A spatula without holes A small scale with half ounce increments *(e.g. postal/package scale)*
- A shallow, lightweight container *(e.g. plastic storage container)*
- A sturdy cardboard box or other rigid object with a level surface
- Basic calculator
- Cloth gloves (optional for handling metal sieves on hot, sunny days)
- Sealable plastic bags (if sending samples to a laboratory)
- Pencil/pen and paper

Step 1:

Look for a routinely traveled surface, as evidenced by tire tracks. [Only collect samples from surfaces that are not damp due to precipitation or dew. This statement is not meant to be a standard in itself for dampness where watering is being used as a control measure. It is only intended to ensure that surface testing is done in a representative manner.] Use caution when taking samples to ensure personal safety with respect to passing vehicles. Gently press the edge of a dustpan (1 foot in width) into the surface four times to mark an area that is 1 square foot. Collect a sample of loose surface material using a whiskbroom or brush and slowly sweep the material into the dustpan, minimizing escape of dust particles. Use a spatula to lift heavier

elements such as gravel. Only collect dirt/gravel to an approximate depth of 3/8 inch or 1 cm in the 1 square foot area. If you reach a hard, underlying subsurface that is less than 3/8 inch in depth, do not continue collecting the sample by digging into the hard surface. In other words, you are only collecting a surface sample of loose material down to 1 cm. In order to confirm that samples are collected to 1 cm in depth, a wooden dowel or other similar narrow object at least one foot in length can be laid horizontally across the survey area while a metric ruler is held perpendicular to the dowel.

At this point, you can choose to place the sample collected into a plastic bag or container and take it to an independent laboratory for silt content analysis. A reference to the procedure the laboratory is required to follow is at the end of this section.

Step 2:

Place a scale on a level surface. Place a lightweight container on the scale. Zero the scale with the weight of the empty container on it. Transfer the entire sample collected in the dustpan to the container, minimizing escape of dust particles. Weigh the sample and record its weight.

Step 3:

Stack a set of sieves in order according to the size openings specified above, beginning with the largest size opening (4 mm) at the top. Place a collector pan underneath the bottom (0.25 mm) sieve.

Step 4:

Carefully pour the sample into the sieve stack, minimizing escape of dust particles by slowly brushing material into the stack with a whiskbroom or brush. (On windy days, use the trunk or door of a car as a wind barricade.) Cover the stack with a lid. Lift up the sieve stack and shake it vigorously up, down and sideways for at least 1 minute.

Step 5:

Remove the lid from the stack and disassemble each sieve separately, beginning with the top sieve. As you remove each sieve, examine it to make sure that all of the material has been sifted to the finest sieve through which it can pass (e.g., material in each sieve - besides the top sieve that captures a range of larger elements - should look the same size). If this is not the case, re-stack the sieves and collector pan, cover the stack with the lid, and shake it again for at least 1 minute. (You only need to reassemble the sieve(s) that contain material, which requires further sifting.)

Step 6:

After disassembling the sieves and collector pan, slowly sweep the material from the collector pan into the empty container originally used to collect and weigh the entire sample. Take care to minimize escape of dust particles. You do not need to do anything with material captured in the

sieves -- only the collector pan. Weigh the container with the material from the collector pan and record its weight.

Step 7:

If the source is an unpaved road, multiply the resulting weight by 0.38. If the source is an unpaved parking lot, multiply the resulting weight by 0.55. The resulting number is the estimated silt loading. Then, divide by the total weight of the sample you recorded earlier in Step 2 and multiply by 100 to estimate the percent silt content.

Step 8:

Select another two routinely traveled portions of the unpaved road or unpaved parking lot and repeat this test method. Once you have calculated the silt loading and percent silt content of the 3 samples collected, average your results together.

Step 9:

Examine Results. If the average silt loading is less than 0.33 oz/ft², the surface is stable. If the average silt loading is greater than or equal to 0.33 oz/ft², then proceed to examine the average percent silt content. If the source is an unpaved road and the average percent silt content is 6% or less, the surface is stable. If the source is an unpaved parking lot and the average percent silt content is 8% or less, the surface is stable. If your field test results are within 2% of the standard (for example, 4%-8% silt content on an unpaved road), it is recommended that you collect 3 additional samples from the source according to Step 1 and take them to an independent laboratory for silt content analysis.

Independent Laboratory Analysis: You may choose to collect 3 samples from the source, according to Step 1, and send them to an independent laboratory for silt content analysis rather than conduct the sieve field procedure. If so, the test method the laboratory is required to use is: "Procedures For Laboratory Analysis Of Surface/Bulk Dust Loading Samples", (Fifth Edition, Volume I, Appendix C.2.3 "Silt Analysis", 1995), AP-42, Office of Air Quality Planning & Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina.

Question and Answer - Silt Loading/Content Test Method

Question:
If I see dust escaping when I collect a sample and transfer it to the sieves, should I start over?
Answer:

Not necessarily. A small amount of dust can escape without influencing the silt content results. In fact, it is very difficult to avoid having some dust escape. However, if you rush when collecting and/or transferring a sample to the sieves, you may cause too much dust to escape thus

potentially causing an error in your results. Or, on a relatively windy day you may lose too much dust unless you set up a wind barricade. Avoid doing this test on very windy days.

Question:

Once I calculate the percent silt content for 3 samples collected on one segment of an unpaved road, can I assume the same result for the whole length of the road?

Answer:

You may extrapolate results only to the extent that the rest of the unpaved road has the same average daily trips as the segment you tested and the surface condition on other segments of the road is the same.

Question:

If water is being used as a control measure on the source and this causes the surface to be damp, should I do the silt content test method on a damp surface?

Answer:

Do the silt content test method when the surface is dry in between water applications. The condition of the surface immediately following watering is different than after the water has evaporated. Since sources are required to be in compliance with the rule at all times, test the surface when it is dry.

Question:

If speed limit signs have been posted along an unpaved road as a control measure, do I need to test the surface for silt content?

Answer:

Yes. If speed limit signs have effectively lowered vehicle speeds on the road, the percent silt content may decrease. If signs have been ineffective in controlling speeds and no other controls are being applied, the source may be out of compliance. Either way, you should test to see whether the source meets the appropriate silt content standard.

O N - S I T E W I N D
M O N I T O R I N G EQUIPMENT

Guidance for Conducting Wind Measurements
Attachment A – Wind Monitoring Specifications

ON-SITE WIND MONITORING EQUIPMENT

Guidance for Conducting Wind Measurements

The following are AQMD requirements and recommendations for wind measurements used for data reporting or analysis. The meteorological data submitted to AQMD must be accurate and representative. To insure that the meteorological data is acceptable, facilities that wish to deviate from these recommendations must consult with AQMD staff prior to collecting data. In some cases, less stringent procedures may suffice. For example, a lower sensor height may be acceptable for windblown dust analysis from smaller construction sources. It is recommended that all facilities request that AQMD staff review and approve their monitoring plans and sensor specifications prior to the purchase and installation of equipment.

Aspects of a successful monitoring program include the selection of proper equipment, instrument siting, instrument and site maintenance, periodic audits and frequent data review. The instruments should be sited so as to characterize air flow between the source and receptor areas. In flat terrain, or where receptors are close to the source, one meteorological site may be adequate. Additional wind monitoring sites may be needed in complex terrain.

Wind Sensor Siting

The standard sensor height for measuring surface winds is 10 meters (33 feet) above ground level (AGL) over open, level terrain. This usually requires the installation of a tower or mast. For the instrument to be sited over open terrain, there shall be minimal obstructions to the wind flow, such as from buildings, hills or trees. In general, wind sensors should be located where the distance from the sensors to any obstruction is at least 10 times the height of that obstruction. When mounted on a building, wind sensors should be mounted at least 1.5 times the height of the building above the rooftop. Since these siting guidelines are sometimes not possible, especially in urban areas, it is

recommended that siting that deviates from these guidelines be reviewed by AQMD staff or an experienced consultant prior installation.

Data Recording Devices

Data loggers are the preferred method of recording and archiving the data. They are more precise and require less maintenance than strip chart recorders. Data loggers also allow data to be transmitted by telephone or radio to a central computer. All data records must be kept for a period of at least three years after the need for data collection has ended. Data recovery from a well-maintained meteorological system should be at least 90% complete on an annual basis, with no large data gaps (i.e., gaps greater than two weeks).

The U.S. Environmental Protection Agency (EPA) recommends a sampling frequency of once per second (EPA, 2000), which is typical for quality data loggers. Wind averaging periods may depend on the purpose of the data collected and the need to meet specific regulatory requirements. Either 1-hour or 15-minute averaging periods are common.

For each averaging time, wind speed and direction are usually scalar-averaged. Wind direction is defined as the direction from which the wind is blowing, measured in degrees from true north. Since wind direction has a numerical discontinuity between 360 and 001 degrees, scalar averaging of the wind direction is usually calculated using the unit vector method (EPA 2000). Resultant or vector averages are also often calculated, where the 1-second wind speeds and directions are added vectorially by breaking them into their horizontal components, adding the vector components, then recalculating a magnitude (speed) and direction. Both types of horizontal wind averaging, as well as the collection of peak instantaneous wind gusts during the averaging period and sigma theta, the standard deviation of the wind direction, are typical calculations for meteorological data loggers.

Time for the data recording system must be within five minutes of the correct local time, with data archived in Pacific Standard Time (PST) on a 24-hour clock. Thus there should be no change to Daylight Savings Time. It must also be noted whether the time stamp is at the start or the end of the averaging period. When reporting data, the convention is that time-ending data shall range from 0100 to 2400 PST for hourly averages and 0015 to 2400 PST for 15-minute averages. Time-beginning averages are reported with clock times starting at 0000 PST and ending with 2300 PST for hourly averages or 2345 PST for 15-minute averages. Reported data should have the site identification, year, day and time included at the beginning of the record.

Wind Sensor Accuracy

For wind sensors, the starting threshold must be rated as no higher than 0.5 meters per second. If there is some suspicion that the site would have a significant number of hours of wind speeds under 0.5 m/s, sensors with a lower threshold, such as 0.22 m/s, should be used. Wind speed systems shall be accurate to within 0.2 m/s ± 5 percent of the observed speed. Total wind direction system errors shall not exceed 5 degrees. This includes an instrument accuracy of ±3 degrees for linearity and ±2 degrees for alignment to a known direction. Table 1 summarizes these accuracy guidelines.

Table 1. Summary of Performance Criteria for Wind Sensors.

Sensor Type	Sensor Height	Range	Accuracy	Resolution	Starting Threshold	Procedural References
Wind Speed (Horizontal)	10 meters*	0.5 – 50 m/s	0.2 m/s ± 5% of observed wind speed	0.1 m/s	0.5 m/s	EPA, 2000 EPA, 1995
Wind Direction (Horizontal)	10 meters*	0 – 360 degrees (or 0 - 540˚)	+/- 5 degrees	1 degree	0.5 m/s	EPA, 2000 EPA, 1995

* Other sensor heights may be used when appropriate and approved by AQMD.

Maintenance

Frequent data review, preferably on a daily basis, is critical for collecting good meteorological data. In addition, visual inspections of each site should be made at least once every month. This will help to identify sensor alignment problems that may not be obvious in the data. During the inspections, it is recommended that the sensors be compared to the current conditions, possibly by using hand-held instruments such as a compass or GPS and portable anemometer.

In order to ensure that the sensors operate within the manufacturer's specifications, a calibration of the sensors should be performed once every six months by a trained technician or the sensor manufacturer. In corrosive, marine or dusty conditions, more frequent calibrations may be needed. Spare sensors are helpful to avoid data loss while sensors are brought down for calibration and repairs. A logbook of calibrations and repairs is required.

Furthermore, data that is critical for regulatory purposes should be independently audited by a qualified individual who is not affiliated with the organization that maintains and calibrates the instrument. The audits should be on a schedule that is appropriate for the measurements. Typically, once per year is adequate if a routine maintenance and calibration schedule is kept. An audit report shall be written and problems shall be corrected as soon as possible. The audit shall compare the individual sensors to the sensor performance criteria (Table 1) and also look at the data collection system as a whole, including the data logger and siting, to ensure that the data are representative and accurate.

References

EPA, 1995: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements. Document EPA/600/R-94-038d. United States Environmental Protection Agency Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

EPA, 1998: Technical Assistance Document for Sampling and Analysis of Ozone Precursors. Document EPA-600/R-98-161. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

EPA, 2000: Meteorological Monitoring Guidance for Regulatory Modeling Applications. Document EPA-454/R-99-005. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

Attachment A

WIND MONITORING SPECIFICATIONS

The following information is designed to provide installation and operating parameters for a wind monitoring station or device. It is to be used for Orders for Abatement and is not designed to represent approved AQMD specifications for a wind monitoring instrument or station.

- This station, or device shall be capable of indicating the wind speed with an accuracy of 0.2 meters/sec. ± 5% of observed speed
- The instrument or station should be located on-site so as to accurately characterize the air flow field on this construction project.
- The starting threshold shall be rated as no higher than 0.5 meters per second. [1]
- Data will be recorded on a data logger, which has been chosen over a strip chart recorder because they are: more precise, require very little maintenance, and allow data to be transmitted by telephone or radio. [1]
- Three months worth of wind monitoring data will be available on-site in the form of hard copies, and made available at the Inspector's request.
- All records will be maintained by the operator for a period of two years and made available upon request.
- The logger time shall be within 5 minutes of the correct time. [1]
- A sampling rate of once per second will be employed by the monitoring station or instrument. This sampling frequency is commonly used and recognized as an industry standard.
- The operator shall submit the specifications and operating parameters, for the wind monitoring instrument or station, to AQMD for approval as an appropriate measuring instrument.
- This instrument or station shall be calibrated and maintained in accordance with the manufacturer's specifications.
- The standard height for measuring surface winds is 10 meters above ground over level, open terrain. Open terrain is defined as being away from obstructions to flow, such s buildings, hills or trees. Generally, the wind sensors should be located where the horizontal distance between the sensors and any obstruction is at least ten times the height of that obstruction. [1]
- If wind sensors are to be mounted on a building, they should be mounted at a height at least 1.5 times the building height above the roof. It is usually not a good idea to mount

wind sensors on stacks, unless the sensors can be mounted on booms at least two stack widths away from the stack, and with a wind measurement system mounted on both sides of the stack. [1]

[1] EPA, 1995: Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV, Meteorological Measurements. Document EPA/600/R-94-038d. United States Environmental Protection Agency, Atmospheric Research and Exposure Assessment Laboratory, Research Triangle Park, North Carolina.

ATTACHMENT E –

SWPPP

TABLE OF CONTENTS

SECTION 1

FACILITY INFORMATION AND CERTIFICATION

FACILITY OPERATOR INFORMATION

Operator Name: Connolly Pacific
1925 Pier D Street
Long Beach, CA 90802

Contact: Steve Schryver
(562) 437-2831

Facility Location: Connolly Pacific
Pebbly Beach Rd.
Avalon, CA 90704

Facility Mailing Address: Connolly Pacific
P.O. Box 276
Avalon, CA 90704

Person Responsible for SWPPP: Paul Romo
(310) 510-0626

Responsibility	Pollution Prevention Team Member
Best Management Practices	Paul Romo
Inspection/Observation	Paul Romo
Monitoring/Testing	Paul Romo
Reporting	Laura Machado
Alternate	Laura Machado

Facility Information: Size of Facility: 248 Acres
Percent Impervious Surfaces: 0
WDID # 419I011729

SIC Code: 1429 Rock Quarry

CERTIFICATION:

I certify under penalty of law that this facility was inspected for non-storm discharges and illicit connections to surface drainages and that there are no illicit connections or discharges to the surface drainage system. Also that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Name Steve Schryver Position Vice President/General Manager

Signature _____ Date _____

SECTION 2

INTRODUCTION AND PUBLIC REVIEW

This document is a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP has been prepared to comply with Section A of the NPDES General Permit for Discharges of Storm Water Associated with Industrial Activities (General Permit), adopted by the California State Water Resources Control Board on November 19, 1991, amended in September 1992 and reissued in April 17, 1997. The General Permit implements regulations established by the U.S. Environmental Protection Agency on November 16, 1990 requiring listed industries to obtain NPDES Permits for discharging storm water from their facilities to surface waters. The federal regulations were established pursuant to Section 402(p) of the Federal Clean Water Act, added by 1987 amendments.

This SWPPP is intended to achieve two purposes: (1) to facilitate the identification of pollution sources that could affect the quality of storm water discharges and authorized non-storm water discharges from this facility; and (2) to document and implement the site-specific best management practices (BMPs) to minimize or prevent the pollutants associated with industrial activities in storm water discharges and non-storm water discharges. Topics addressed in this SWPPP include elimination of non-storm water discharges, pollutant sources and associated BMPs, storm water management, sedimentation and erosion control practices, preventative maintenance and good housekeeping practices, spill prevention and response, inspections, record keeping and employee training.

PUBLIC REVIEW

This SWPPP is available for public review, pursuant to Section 308(b) of the Federal Clean Water Act. Public requests to review this document should be made through the California Regional Water Quality Control Boards.

SECTION 3

FACILITY DESCRIPTION

This facility is a quarry located on Santa Catalina Island. Material is mined from hillside mining areas using the shot method. Shot holes are drilled into the hillside and loaded with explosives, after detonation the released material is loaded into front end loaders and taken to the separator plants. The separator plants consist of belt conveyors, screens and other sorting equipment. The separated product is then stockpiled using front end loaders and subsequently loaded onto barges for off-site delivery.

The site also has parking areas for trucks and equipment, a maintenance shop, aggregate stockpiles, petroleum storage tanks and parts warehouse.

Surface drainage is directed to the central processing area where low intensity rainfall percolates into the soil. Storm water from medium intensity rain events will collect in the central location and sheet flow to onsite sediment basins. Each outfall is equipped with a sedimentation basin which serves to reduce velocity of sheet flow and allow settling of particulates. Water from medium intensity rain events is detained in the basin and no discharge of storm water will occur. The basins will reduce velocity and particulate content from the first flush of rain from high intensity rain events that may result in storm water discharge.

A. Description of Significant Materials:

Significant materials that are present at the facility that may contribute pollutants to storm water run-off are provided in Appendix “D”. This appendix includes information describing the material type(s), location(s), typical quantities and frequency that materials are handled or stored.

B. Summary of Best Management Practices

The management practices indicated below have been implemented at this facility to minimize contact of significant materials with storm water discharges:

* Significant materials are stored to minimize contact with storm water discharges by covering, berming, grading and providing secondary containment.

* Listed in the following sections are the procedures for handling significant materials to minimize releases and to ensure prompt clean up of spills and leaks.

* Wastes from the facility are stored in designated containers and/or areas, and are disposed of in accordance with applicable local, state and federal regulations.

* Programs for storm water control have been established and include the following elements: inspections, sedimentation and erosion control, preventative maintenance and good housekeeping, spill prevention and response, employee training, record keeping and Best Management Practices (BMPs).

* Inspection and maintenance programs for equipment and vehicles have been established to ensure that the machines are operating properly and that leaks of fluids are prevented to the extent feasible.

* Equipment and vehicle parking/storage areas are graded to prevent storm water run-off from this area from discharging off-site. Dirt and aggregate berms have been constructed along the perimeter of the operating areas to prohibit of site run-off. The areas are inspected regularly for evidence of leaks, and/or managed in other ways to minimize pollutant discharges to storm water.

C. Potential Pollutants in Storm Water Discharge

Potential pollutants that may be present in storm water discharged from this facility are listed in Section 5 and Appendix D. Data is not available to support an estimate of the annual quantities of these materials that may be discharged in storm water.

D. Existing Storm Water Sampling Data

See Annual Reports in Section 14 for sampling data collected.

E. History of Significant Spills Since November 19, 1988

There have been no significant spills or leaks of toxic or hazardous pollutants into storm water since April 17, 1994, including chemicals that have been reported on EPA Form R (40 CFR 372), and oil or substances in excess of reportable quantities (40 CFR 110, 117, or 302).

SECTION 4

NON-STORM WATER DISCHARGES

This facility has completed a dry weather type observation audit of water and waste water discharges that could be discharged with storm water.

Typical sources of non-storm water discharges that were inspected for are listed below:

* Floor drains, sinks and other waste discharges to the surface.
* Waste discharges to building rain gutter down spouts.
* Discharges from wash out ponds.
* Vehicle and equipment wash down wastes.
* Steam cleaning wastes.
* Dust suppression

The audit did not identify any non-storm water discharges. BMPs are in place to prevent unauthorized non-storm water discharge.

SECTION 5

POTENTIAL POLLUTANT SOURCES AND ASSOCIATED BMPS

The sources of pollutants that may enter storm water at this facility are indicated below. The BMPs implemented to minimize pollutant contact with storm water at each source are also indicated.

1. Source: Aggregate Stockpiles

Pollutant: Sediment

Best Management Practices (SC-33):

* Stockpile area graded to minimize storm water run-on.
* Stockpiles placed on near level ground to minimize run-off.
* Inventory of raw materials is minimized when practicable.
* Run-off from stock piles is directed into sediment basins.

2. Source: Aggregate Processing Area

Pollutant: Sediment

Best Management Practices (SC-32):

* Storage area graded to prevent storm water run-on.
* Spill equipment is readily available.
* Employees trained in pollution prevention measures.

3. Source: Hillside Mining Area

Pollutant: Sediment

Best Management Practices:

* Hillside area is benched to reduce velocity and run-off erosion.
* Earthen berms are constructed to minimize velocity and divert run-off.
* Run-off is directed into on-site setting ponds.

4. Source: Above Ground Fuel Storage Tank(s) and Fueling Area

Pollutant: Petroleum Hydrocarbons

Best Management Practices (SC-20):

* Tank placed in secondary containment to prevent release of fuel even with total tank failure.
* Accumulated rain water in the containment area is managed in accordance with local, state and federal regulations. Water is inspected and sampled to determine corporate management measures.
* Storage tank fueling procedures established to prevent overfilling. Tank is equipped with visual gauges and automatic shut-off.
* Proper security measures are implemented to prevent vandalism.
* Spill cleanup equipment is clearly labeled and stored near the fuel pumps.

5. Source: Vehicle / Equipment Maintenance Area

Pollutant: Petroleum Hydrocarbons
Sulfuric acid from batteries
Lead
Oil and Grease
Anti-freeze

Best Management Practices (SC-22):

* Vehicle/equipment maintenance performed inside garage/building, whenever feasible.
* Vehicle/equipment maintenance performed under roofed space, whenever feasible.
* Clearly labeled drums and other containers placed in convenient locations to hold waste fluids and spent batteries removed from equipment.
* The remaining capacities of waste receptacles monitored and arrangements for pick-ups made promptly.
* Waste oils, waste antifreeze, used oil filters and discharged batteries recycled.
* Procedures established to ensure draining of engine fluids and transfer of waste fluids to drums or containers without spillage. These areas are located away from storm water drainage areas.
* Drip pans placed under vehicles/equipment when draining fluids or leaks suspected.
* Area equipped with dry spill cleanup equipment.
* Employees instructed to clean up any spills or leaks immediately using proper procedures for cleanup of minor spills.

6. Source: Battery Storage Area (new and discharged batteries)

Pollutant: Sulfuric Acid
Lead

Best Management Practices:

* Batteries stored inside building.
* Area equipped with dry spill cleanup equipment.
* Discharged batteries recycled using battery recycling service.

7. Source: Hazardous Materials Storage Area (examples: lube oil, cleaners)

Pollutant: Petroleum Hydrocarbons
Acids / Bases
Anti-freeze

Best Management Practices (SC-31):

* All hazardous material containers clearly labeled.
* Hazardous materials stored in designated areas only.
* Secondary containment provided for storage containers.
* Rain water and leaked or spilled material accumulated within secondary containment are inspected and tested for the presence of pollutants before being pumped out. If pollutants are detected, materials are disposed of in accordance with federal, state and local regulations.
* Area equipped with dry spill cleanup equipment.
* Employees instructed on the proper procedures for cleanup of minor spills.
* Material safety data sheets kept at the facility for all hazardous materials.
* Use of hazardous materials minimized.
* Inventory of hazardous materials maintained to minimize the storage of excess materials.

8. Source: Hazardous Waste Storage Area (examples: used oil filters, drain/waste oil, discharged batteries, used antifreeze)

Pollutant: Petroleum Hydrocarbons
Acids
Anti-Freeze
Heavy metals

Best Management Practices (SC-34):

* All hazardous waste containers clearly labeled.
* Hazardous waste stored in secondary containment in covered, designated areas only.
* Hazardous waste storage area maintained in accordance with applicable federal and state regulations.
* Inspections of condition of containers and area regularly conducted. Leaking or deteriorated containers placed in new containers. Other maintenance problems corrected promptly.
* Area equipped with dry spill cleanup equipment.
* Employees instructed on the proper procedures for cleanup of minor spills.

9. Source: Air Compressors

Pollutant: Petroleum Hydrocarbons

Best Management Practices (SC-32):

* Drip pans placed under compressors, if leaking.
* Seals regularly inspected and maintained.
* Blowdown contained and disposed of properly.

10. Source: Unpaved Vehicle / Equipment Parking or Storage Area

Pollutant: Petroleum Hydrocarbons
Oil and Grease
Anti-Freeze
Sediment

Best Management Practices (SC-43):

* Drip pans placed underneath vehicle/equipment during storage, if leaking.
* Vehicle/equipment regularly inspected.
* Leaks promptly repaired once discovered.
* Dry clean-up methods used to prevent the discharge of pollutants into the storm water conveyance system.

11. Source: Boneyard / Surplus Equipment Storage

Pollutant: Petroleum Hydrocarbons
Oil and grease
Anti-Freeze
Acids
Metals
Sediment

Best Management Practices (SC-43):

* Batteries removed.
* Drip pan placed under equipment containing oil, whenever feasible.
* Equipment regularly inspected.
* Leaks promptly repaired, once discovered.
* All equipment is stored on pallets.

12. Source: Municipal Garbage Dumpster

Pollutant: Biodegradable organic materials (e.g., BOD, COD)

Best Management Practices(SC-34):

* Dumpster with lid to remain closed when materials are not being placed in the container to keep out rain water and prevent debris from blowing away.
* Water tight dumpster used to keep free liquids in garbage contained.
* Dumpster located away from storm drain inlet or other storm water conveyance facility.
* Sign posted to instruct employees to immediately clean up spilled debris.

SECTION 6

FACILITY WIDE BMPS

Facility-wide BMPs are those practices that are not pollutant source-specific, and that assist in preventing and/or minimizing pollutants in storm water run-off. The facility-wide BMPs that have been implemented at this facility are indicated below.

* Employee Education

  All employees are instructed in the Storm Water Pollution Prevention Plan and their individual responsibilities in preventing the discharge of pollutants to storm water. Employees on the pollution prevention team are trained in their specific areas to prevent pollutants from leaving the site.

* Delivery Person Education

  Truckers who drive onto the site to pick up and deliver products are informed that they must not allow fuel or other fluids to spill onto the ground. They are instructed to notify the facility manager in case of accidental release.

* Partial Storm Water Detention (Delayed Surface Discharged)

  Storm water run-off from the facility is directed into one or more detention basins allowing sediment and debris to settle before water is discharged off-site. Accumulated sediment and debris will be removed from the basin on a regular basis to maintain capacity.

* Dust Control Measures

  The facility has a South Coast Air Quality Management District Rule 403 Fugitive Dust Control Plan. Rule 403 prohibits the emissions of fugitive dust from transport, handling, or storage activity in quantities such that the dust remains visible in the air beyond the source's property line. The new sources review regulation requires control of potential sources of fugitive dust through the application of dust suppressants, water sprays and other emission controls.

SECTION 7

SEDIMENTATION AND EROSION CONTROL PRACTICES

Erosion could cause large amounts of sediment to be discharged in storm water. The sedimentation and erosion control measures implemented at this facility are indicated below.

* Placement of obstacles to intercept run-off from steep terrain

  Earthen berms have been constructed to intercept run-off from steep terrain to reduce increased water velocities that could cause erosion.

* Inspection and Maintenance

  All moderate and steep slopes, discharge points, and other drainage features are inspected after every storm during the rainy season. These inspections are recorded on inspection forms. Corrective measures are promptly initiated if evidence of erosion is identified.

* Wind Erosion Control

  Where there is evidence of wind driven dust (e.g., aggregate loading/unloading areas, paved/unpaved vehicle access roads and parking areas, etc.) watering or other dust suppressant methods are applied in sufficient quantities and frequencies to maintain a stabilized surface. Excluded are any areas, which are inaccessible to watering vehicles due to excessive slope or other safety conditions.

* Stabilization of Moderate and Steep Slopes

  Slopes greater than thirty percent, that are not being actively mined, are stabilized by benching.

* Sedimentation Basins/Drainage Structures

  Sedimentation Basins shall be cleaned out to their original dimensions when they are full. The spoil material shall be deposited such that it does not directly re-enter the basin or cause sedimentation damage on-site or offsite.

  All drainage structures and sedimentation basins shall be maintained so they function properly.

SECTION 8

PREVENTATIVE MAINTENANCE ACTIVITIES AND GOOD HOUSEKEEPING

A. Preventative Maintenance

Preventative maintenance at this facility is performed to prevent leaks and other accidental releases from equipment and storage containers, and to maximize the removal of pollutants provided by BMPs that have been implemented. Preventative maintenance performed at this facility is listed below.

* Check seals on all equipment containing petroleum hydrocarbons or other pollutants and replace as necessary.

* Check seals on all containers holding petroleum hydrocarbons, or other potential pollutants and replace as necessary.

* Check accuracy of gauges that indicate liquid levels in storage tanks.

* Repair and improve erosion control measures before the beginning of each rainy season.

* Repair and improve erosion control measures damaged by a storm or facility operation.

B. Good Housekeeping Practices

Good housekeeping practices are measures that maintain a clean and orderly working environment. These measures include immediately cleaning up spilled materials, regularly sweeping paved areas, inspect and maintain material handling areas and depositing waste in designated receptacles. Employees are responsible for maintaining their work areas. Supervisors are responsible for ensuring that work areas are orderly.

The employee training program is intended to increase employee awareness of how their daily work activities and work areas can contribute pollutants to storm water discharges, and to suggest ways that their work habits could be modified to reduce the amounts of pollutants that are eventually washed away in storm water.

SECTION 9

SPILL PREVENTION AND RESPONSE

Materials stored and used at the facility could cause significant water quality impacts if accidentally released. Spilled materials could enter the storm water drainage system and be discharged to surface water. Spills could also cause soil and ground-water contamination. Measures have been implemented to minimize the possibility of spills. In addition, spill response procedures have been established for this facility. The spill prevention and response measures implemented by this facility are indicated below.

* Hazardous Materials Business Plan

  A Hazardous Materials Business Plan pursuant to Chapter 6.95 of the California Health and Safety Code has been prepared for this facility. The plan contains hazardous materials inventory and emergency response procedures.

* Secondary Containment

  Above ground tanks, drums and other containers of products or waste have secondary containment. Spilled material in the containment is promptly cleaned up and disposed of properly.

* Employee Training

  Employees who work with petroleum are trained in the proper use, handling, storage and disposal practices. Employees are also trained in proper spill response procedures.

* Spill Containment and Cleanup Equipment

  A supply of spill containment and cleanup equipment is kept on-site for prompt responses. Available equipment includes: personal protective equipment, absorbent materials, containment booms, plastic sheeting, empty DOT approved 55 gallon drums and acid base neutralizers.

* Regular Inspection of Hazardous Materials and Wastes Storage Areas

  Employees who regularly work with petroleum products and wastes are instructed to inspect storage areas regularly and to initiate corrective measures, if needed.

* Material Safety Data Sheets (MSDSs)

  MSDSs of the hazardous materials present at the facility are kept on-site and are kept current.

* Notification Procedures in Case of Spill Emergency

In the event of a major spill, regardless of the hour of the day, plant personnel will contact the SWP3 coordinator. If the primary coordinator cannot be reached, an alternative coordinator will be contacted.

The contact names and phone numbers are identified in Section 1 under pollution prevention team member.

In the event of a spill, the SWP3 coordinator will:

A. Immediately assess the situation based on data supplied by the plant supervisor or based on visual inspection.

B. Ensure SWPPP is followed

C. Follow up with post spill reporting.

* List of Contractors Compiled to Assist in Spill Response

A list of names and phone numbers of the nearest emergency response contractors has been compiled and is available in the facility office. The facility manager is authorized to retain the services of contractors to contain and clean up spills.

SPILL INCIDENT REPORT

From:_____ Date:_____

To:_____

1. Date of Spill:_____ Time:_____ am _____ pm

2. Amount of spilled material _____ pounds/gallons

3. Amount of spilled material escaping facility _____ pounds/gallons

4. Location of spill:_____

5. Type of spill material:_____

6. Spill detected by:_____

7. Description of cause:_____

8. Operator's name:_____

9. Warning Issued: No _____ Yes _____ Date:_____

10. Corrective action taken at the time of spill:_____

11. Corrective action taken after spill to prevent similar occurrence:_____

12. Recommended additional corrective actions:_____

EPA Called On: _____ **Time:** _____ **By:** _____

EPA Written Report Mailed On: _____ **By:** _____

TITLE III EMERGENCY RELEASE NOTIFICATION

NAME OF CHEMICAL: _____

_____

_____

_____ CAS# _____

QUANTITY OF THE RELEASE (Estimate):_____

_____

LOCATION: _____

_____

_____

_____

DATE: _____

TIME: _____

DURATION: _____

_____

_____

MEDIUM OR MEDIA INTO WHICH THE RELEASE OCCURRED (i.e. AIR, WATER, SOIL): _____

_____

_____

_____

ACTIONS TAKEN TO RESPOND TO AND CONTAIN THE RELEASE:

_____

_____

_____

NAME AND TELEPHONE NUMBER OF PERSON(S) TO BE CONTACTED FOR FURTHER INFORMATION: _____

_____

_____

SECTION 10 - INSPECTIONS

Type of Inspection	Description	Frequency
Annual Comprehensive Site & SWPPP Compliance Evaluation (Form “10A”)	Review all visual observation and inspection records, sampling & analytical results, inspect potential pollutant sources, evaluate BMPs to determine if they are adequate and properly implemented, and inspect SWPPP equipment (e.g., spill response equipment, etc.). Review all aspects of the SWPPP for accuracy, and revise as necessary. SWPPP revisions are to be made and implemented within 90 days of the evaluation. In addition, for quality assurance purposes, the facility operator shall review the SWPPP and Monitoring Program no less frequently than once a year to ensure that all elements of the plan and program are adequately conducted.	Annually
Non-Storm Water Discharge Visual Observation (Form "10C") Supplemental (Form “10D”)	The entire facility will be visually inspected to determine the effectiveness of SWPPP implementation. All areas containing pollutant sources as identified on Form “10C” will be inspected. The inspection will include an assessment of whether good housekeeping practices and preventative maintenance activities are being performed. All storm water discharge points and drainage ditches will be visually inspected for evidence of non-storm water discharge (authorized and unauthorized). If found, Form “10D” will be used to identify and document the source(s) and corrective measures. Corrective action will be implemented if deficiencies are identified.	Quarterly
Storm Water Discharge Visual Observation (Form "10F")	All storm water discharge points will be inspected for visible pollutants. If found, the source(s) will be identified and appropriate corrective measures will be implemented. No visual observations are required during adverse climatic conditions.	Once per month between October 1 and May 31 of each year
Storm Water Sampling (Form "10G")	To be used by facilities that are required to do storm water sampling. No sample collection is required during adverse climatic conditions.	Twice between October. 1 and May 31 of each year

A. Annual Comprehensive Site & SWPPP Compliance Evaluation Form "10A"

Connolly Pacific – 8955

To be filled out by Inspector.
Inspector Name: _____
Title: _____ Date/Time: _____/_____

SWPPP Element	**Revisions** Describe revisions made to the SWPPP to reflect changes/ differences identified at the site. (If no revisions state "none")	Date SWPPP Modified	Inspection or Review (check one) The Elements are Adequate/Accurate or Properly Implemented/Maintained	
			Yes	No
Facility Information (Section 1)				
Site Maps (Figures 3-1 and 3-2)				
Pollutant Sources (Section 5)				
Source-Specific BMPs (Section 5)				
Facility-Wide BMPs (Section 6)				
Sedimentation and Erosion Control Practices (Section 7)				
Preventative Maintenance & Good Housekeeping (Section 8)				
Spill Prevention and Response Procedures & Equipment (Section 9)				
Inspection Procedures Visual Observations & Inspections Records (Section 10)				
Record Keeping Procedures (Section 11)				
Employee Training Program (Section 12)				
Monitoring & Testing Sampling & Analysis Results (Section 15)				
Significant Materials Inventory (Appendix D)				

To be reviewed and signed by person responsible for SWPPP Implementation.

All elements of the SWPPP and Monitoring Program have been adequately conducted. O Yes O No

I have evaluated/inspected the elements in the above table and have supervised the revisions or changes, as needed.
Name: _____

Reviewer Signature: _____ Date: _____

B. Reserved For Future Use Form “10B"

(Left blank intentionally)

C. Non-Storm Water Discharge Visual Observation Form "10C"

Connolly Pacific-8955

Non-Storm Water Discharge Visual Observations are performed quarterly to ensure that best management practices are being implemented and to identify any evidence of non-storm water discharge. The completed form is to be filed in Section 10 of the SWPPP with the most recent observation first.

To be filled out by inspector.

Inspector Name: _____ Date: _____

Title: _____ Time: _____

Outfall No.	Outfall Location Refer to Section 3 - Site Map Figure 3-1	Water Being Discharged Yes	No
1	North of Equipment Parking area		
2	South of Equipment Parking area		
3	South of Crane		

Note: A supplemental Form "10D" must be completed for each outfall where non-storm water discharge is observed.

Areas Inspected	Is there evidence of spills/leaks or poor housekeeping? Yes	No	Describe condition and necessary corrective measure	Date Corrective Action Completed
Aggregate Stockpiles				
Aggregate Processing Area				
Hillside Mining Area				
Above Ground Fuel Storage Tank(s) & Fueling Area				
Vehicle / Equipment Maintenance Area				
Battery Storage Area				
Hazardous Materials Storage Area				
Hazardous Waste Storage Area				
Air Compressors				

Areas Inspected	Is there evidence of spills/leaks or poor housekeeping? Yes	No	Describe condition and necessary corrective measure	Date Corrective Action Completed
Unpaved Vehicle / Equipment Parking or Storage Areas				
Boneyard / Surplus Equipment Storage				
Municipal Garbage Dumpster				

To be reviewed and signed out by person responsible for SWPPP implementation.

Have corrective actions been identified and implemented to correct deficiencies noted during inspection?

θ Yes θ No Deficiencies

Signature:_____ Date:_____

D. Supplemental Non-Storm Water Discharge Visual Observation Form "10D"

(For observed non-storm water flows)

Connolly Pacific - 8955

This supplemental form must be attached to Form "10C" when filed.

To be filled out by inspector.

Outfall No.:_____

Outfall Type: ( ) pipe ( ) culvert ( ) ditch ( ) pond
( ) other (specify:_____)

Physical Observations (check appropriate descriptions)

	O Authorized Non-Storm Water Discharge			O Unauthorized Non-Storm Water Discharge
Color	( ) clear ( ) other, specify	( ) black/gray	( ) brown	( ) green
Clarity	( ) clear ( ) other, specify	( ) slightly cloudy	( ) muddy	
Odor	( ) none ( ) other, specify	( ) sewage	( ) musty ( ) petroleum	( ) chemical
Sheen	( ) none ( ) other, specify	( ) slightly sheen	( ) significant sheen	
Floating debris	( ) none ( ) other, specify	( ) garbage/litter	( ) construction debris	( ) sewage
Volume Estimate	( ) less than 1 gpm ( ) between 5 and 10 gpm ( ) between 50 and 100 gpm		( ) between 1 to 5 gpm ( ) between 10 to 50 gpm ( ) greater than 100 gpm	

Potential Source(s) of Non-Storm Water Discharge:

_____

_____

To be filled out by person responsible for SWPPP implementation.

Date of Review:

Actual Source(s) of Non-Storm Water Discharge:

Corrective Action Required? ( ) Yes ( ) No

Corrective Action Plan:

Date corrective action will be completed:

Date corrective action actually completed:

Signature:_____ Date:_____

E. Reserved For Future Use Form "10E"

(Left blank intentionally)

F. Storm Water Discharge Visual Observation Form "10F"

(For observed storm water flows)

Connolly Pacific – 8955

Storm Water Discharge Visual Observations are performed once a month during the wet season to identify any pollutant sources that may potential impact storm water discharges. The completed form is to be filed in Section 10 of the SWPPP with the most recent observation first.

To be filled out by inspector.

Date _____

Time of Inspection (This should be within the first hour of a storm event): _____

Inspector Name: _____ Title: _____

Outfall No.:_____

Outfall Type: ( ) pipe ( ) culvert ( ) ditch ( ) pond
( ) other (specify:_____)

Physical Observations (check appropriate descriptions)

Color	( ) clear ( ) other, specify	( ) black/gray	( ) brown	( ) green
Clarity	( ) clear ( ) other, specify	( ) slightly cloudy	( ) muddy	
Odor	( ) none ( ) other, specify	( ) sewage	( ) musty ( ) petroleum	( )chemical
Sheen (oily)	( ) none ( ) other, specify	( ) slightly sheen	( ) significant sheen	
Floating (debris)	( ) none ( ) other, specify	( ) garbage/litter	( ) constr. Debris	( ) sewage

Rainfall Event Information

Time Rainfall Began:

To be filled out by person responsible for SWPPP implementation.

Date of Review:

Corrective Action Required? ( ) Yes ( ) No

Corrective Action Plan:

Date corrective action will be completed:

Date corrective action actually completed:

To be reviewed and signed by person responsible for SWPPP implementation.

Signature:_____ Date:_____

G. Storm Water Sampling Form "10G"

Connolly Pacific-8955

This form is used to record pertinent storm water sampling information. This form must be filled out for every discharge outfall point sampled. Attach the completed Form "10G" with the sampling analytical results and file in Section 15 of the SWPPP with the most recent sample results first.

To be filled out by sampler: Date: _____

Sampler Name: _____

Title: _____

Facility Name: _____

Outfall Number: _____

Outfall Type:
( ) pipe ( ) pond* [date of last storm: _____]
( ) culvert ( ) curb inlet
( ) ditch / swale ( ) grate inlet
( ) other: _____

* If discharge from the pond does not occur during a storm event (i.e., storm water is retained for subsequent discharge) record the date of the most recent storm that produced significant storm water discharge.

Time Rainfall Began: _____ ( ) AM ( ) PM
Time Discharge Began: _____ ( ) AM ( ) PM
Time of Sample Collection: _____ ( ) AM ( ) PM

Note: *Samples are required to be collected during the first hour of a storm producing a discharge from the first storm event of the wet season and at least one other storm event during the wet season at each discharge outfall point (min. two per year per outfall). If you can not sample during the first hour, then sample as soon as possible and provide an explanation why you could not sample within the first hour. A storm is considered acceptable for sampling if the storm produces a discharge, occurs during scheduled facility operating hours and is preceded by at least 3 working days (includes non-working days such as weekends and holidays) of dry weather.*

Comments: _____

Sample Shipment:
( ) Overnight UPS
( ) Overnight Fed-Ex
( ) Our Driver
( ) Other

UPS No.: _____
Fed-Ex No.: _____
I.D. No.:

SECTION 11

RECORD KEEPING

Records will be kept on-site of all storm water-related compliance activities for a minimum of five years. The materials that will be retained to document compliance with the NPDES Storm Water General Permit will consist of the following:

* SWPPP and future revisions

* Records of spills and cleanup activities (See Section 9)

* All observation forms related to storm water and non-storm water (See Section 10)

* Records of preventative maintenance activities related to storm water discharges (See Section 10)

* Employee training records, including course sign-in rosters (See Section 12)

* Copy of General Permit (See Section 13)

* Copy of Notice of Intent (See Section 13)

* Annual Reports submitted to the Regional Water Quality Control Board (See Section 14)

* Correspondences with regulatory agencies regarding storm water discharge (See Section 14)

* Records of storm water monitoring (See Section 14)

* Significant Materials Inventory revisions (See Appendix D)

SECTION 12

EMPLOYEE TRAINING PROGRAM

Employee awareness of the relationship between their daily activities and storm water pollution is essential in improving the quality of storm water discharged from this facility. The employee training program covers the elements indicated below.

* NPDES Storm Water Regulations

  Employees are informed of NPDES permit requirements and potential penalties for violations.

* Storm Water Drainage and Sanitary Sewers

  Employees have been instructed on the differences between storm water conveyances and sanitary sewers/septic systems, including the types of water or waste-water that may be discharged to the two systems.

* Sources and Effects of Pollutants

  Employees have been informed of the sources of pollutants present on the facility that could be discharged with storm water. They have also been instructed on the effects of different types of pollutants on receiving surface waters.

* Best Management Practices

  Employees have been familiarized with the best management practices that are being implemented at the facility and their individual responsibilities for maintaining the effectiveness of the best management practices.

* Proper Chemical and Petroleum Storage, Handling, and Disposal Practices

  Employees who work with petroleum products and waste, including fuel, lubricating oil, batteries, solvents and paints have been trained in the proper storage, use, handling and disposal of these materials.

* Spill Response Procedures

  Employees who regularly work with petroleum products and waste have been trained to cleanup minor spills (generally, less than one gallon) of these materials, to notify supervisors / managers of all spills, and to recognize conditions that require the assistance of emergency contractors.

* Good Housekeeping

  Employees have been instructed in good housekeeping practices that should be incorporated into their daily activities to reduce the amounts of pollutants discharged in storm water.

* Preventative Maintenance

  Designated employees have been instructed on the preventative maintenance activities and frequencies, that are to be performed on equipment that could contribute pollutants to storm water.

* Storm Water Discharge Inspection.

  Designated employees have been trained to perform inspections of storm water discharge points, and sources of pollutants at specified frequencies to identify potential discharges of contaminated run-off.

A. Employee Training Record Form "12A"

To be filled in by Instructor:

Date: _____

Instructor Name: _____ Title: _____

Employee Name: _____ Employee Name: _____

Employee Name: _____ Employee Name: _____

Employee Training Element	Training Description	Date Training Completed
NPDES Storm Water Regulations	Employees are informed of NPDES permit requirements and potential penalties for violations.	
Storm Water Drainage and Sanitary Sewers	Employees have been instructed on the differences between storm water conveyances and sanitary sewers/septic systems, including the types of water or waste-water that may be discharged to the two systems.	
Sources and Effects of Pollutants	Employees have been informed of the sources of pollutants present on the facility that could be discharged with storm water. They have also been instructed on the effects of different types of pollutants on receiving surface waters.	
Best Management Practices	Employees have been familiarized with the best management practices that are being implemented at the facility and their individual responsibilities for maintaining the effectiveness of the best management practices.	
Proper Chemical and Petroleum Storage, Handling, and Disposal Practices	Employees who work with chemicals and petroleum products and waste, including fuel, lubricating oil, solvents, batteries, paints, and asphalt emulsions, have been trained in the proper storage, use, handling, and disposal of these materials.	
Spill Response Procedures	Employees who regularly work with chemicals and petroleum products and waste have been trained to cleanup minor spills (generally, less than one gallon) of these materials, to notify supervisors / managers of all spills, and to recognize conditions that require the assistance of emergency contractors.	
Good Housekeeping	Employees have been instructed in good housekeeping practices that should be incorporated into their daily activities to reduce the amounts of pollutants discharged in storm water.	
Preventative Maintenance	Designated employees have been instructed on the preventative maintenance activities, and frequencies, that are to be performed on storm water conveyances and other equipment that could contribute pollutants to storm water.	
Storm Water Conveyance/Discharge Inspection.	Designated employees have been trained to perform inspections of storm water conveyances, discharge points, and sources of pollutants at specified frequencies to identify potential discharges of contaminated run-off.	

Signature: _____ Date: _____
(Employee)

Signature: _____ Date: _____
(Employee)

Signature: _____ Date: _____
(Employee)

Signature: _____ Date: _____
(Employee)

Signature: _____ Date: _____
(Instructor)

SECTION 15 - MONITORING / TESTING

A. Permit Requirements

The following Monitoring Program was prepared in accordance with the requirements of the State of California Industrial Activities Storm Water General Permit (General Permit) dated October 15, 1992, and reissued on April 17, 1997. A copy of the General Permit, which outlines the SWPPP and Monitoring Program requirements, is included in Section 13, General Permit and NOI of the Storm Water Pollution Prevention Plan (SWPPP).

The Monitoring Program presented herein is intended to meet requirements of Section B.3 of the General Permit. Section B.3 requires that the Monitoring Program include:

- Perform visual observation of storm water discharges and authorized non-storm water discharges.
- Identification of the analytical methods to detect pollutants in storm water.
- Collect and analyze samples of storm water discharges.
- Evaluation/quality assurance procedures to measure and ensure that all elements of the SWPPP and Monitoring Program is effective and adequately conducted.

Trained facility personnel will perform the following tasks as required by the General Permit and outlined in the Monitoring Program:

- Perform visual observation; non-storm water discharge quarterly and storm water discharge monthly during the wet season (General Permit Sections B.3. a-d and B.4. a-d).
- Conduct storm water sampling (General Permit Sections B.5. a-c and B.10 a-b).
- Conduct an Annual Comprehensive Site and SWPPP Compliance Evaluation and provide documentation of the control measures implementation and effectiveness. The documentation will include a certification stating that the facility is in compliance with the General Permit requirements (General Permit Section A.9. a-d).
- Submit annual monitoring reports to the Executive Officer of the RWQCB (General Permit Section B.14).
- Keep records of all monitoring data for a minimum of five years (General Permit Section B.15).

B. Objectives of the Monitoring Program

The objectives of this Monitoring Program are to:

- Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Efficient Limitations, and Receiving Water Limitations specified in the General Permit.

- Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.

- Aid in the implementation and revision of the SWPPP required by Section A of the General Permit.

- Measure the effectiveness of the BMPs to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges.

C. Visual Observation of Discharge Points

Visual observations will be conducted quarterly for non-storm water discharges at all facility discharge outfall points associated with industrial activities identified in the Non-Storm Water Discharge Visual Observation Form "10C" of the SWPPP. The purpose of the non-storm water discharge observation is to verify the elimination of non-storm water discharges and observe authorized non-storm water discharge and their sources.

Visual observations will be conducted monthly for storm water discharges during the wet season at all facility discharge points. The purpose of the storm water discharge observation is to assist in evaluating the effectiveness of the SWPPP. All records of visual observations will be kept at the Facility for five years from the date of the observations. In the event of no rain during one of the months requiring a storm water inspection, the form should be completed indicating "no rain".

Non-Storm Water Discharge Visual Observations (Section B.3. a-d)

Non-Storm Water observations are performed to ensure that the best management practices are being implemented at all potential pollution sources and to identify any evidence of non-storm water discharge.

Visual observation associated with industrial activities will be conducted at this facility quarterly, during daylight hours, on days with no storm water discharges and during scheduled facility operating hours at all discharge outfall points. Quarterly visual observations will be conducted in each of following periods: January – March, April – June, July – September, and October – December of each year. The observations will be conducted within 6 – 18 weeks of each other.

If a non-storm water discharge is observed the following information will be recorded on the Supplemental Non-Storm Water Discharge Visual Observation Form "10D" of the SWPPP:

- Discoloration
- Stains
- Odors
- Floating Materials
- Sludges
- Other notable characteristics

Storm Water Discharge Visual Observations (Section B.4. a-d)

Each year Facility personnel will perform visual observations of all storm water discharge locations associated with industrial activities. The observation will be conducted according to the following parameters:

- During the first hour of a storm producing a discharge.
- During scheduled facility operating hours.
- One storm event per month during the wet season (October – May 31).
- During daylight hours that are preceded by at least three (3) working days (may be separated by non-working days such as weekends and holidays) without storm water discharges.

During the visual observation, the following information will be recorded on Storm Water Discharge Visual Observation Form "10F":

- Color
- Clarity
- Odor
- Sheen (oil/grease)
- Floating debris
- Other notable characteristics

D. Storm Water Sampling and Analysis (Section B.5. a-c)

Section B.5. of the General Permit indicates the facility operator shall collect storm water samples. The facility will use the standard grab sampling method to obtain storm water samples and does not propose to use any alternate method.

Sampling Locations (B.7.a-d)

Three sampling locations for the facility have been identified on the facility map. Form 10 "G" is provided in Section 10 of the SWPPP to record all of the information associated with sampling.

Schedule (B.5.a)

Twice during each October through May wet season.

Requirements

Grab samples of storm water discharge must be collected and laboratory analyzed. The first storm event of each wet season plus at least one additional storm event must be analyzed. If the first storm event is not sampled, an explanation must be provided in the Annual Report and another storm event must be sampled in its place. Samples must be from storm events that occur during scheduled facility operating hours and are preceded by at least three (3) working days of dry weather. Samples must be collected during the first hour of discharge. If sampling during the first hour is impractical, the samples should be collected as soon as practical and an explanation provided in the annual report. Samples must be collected from every discharge point, unless the facility operator determines that industrial activities and BMPs within two or more drainage areas are substantially identical. If this is the case, the facility may collect a reduced number of samples or combined samples for analysis from the "identical" discharge points.

Samples must be analyzed for the following analytes by a laboratory certified for conducting the analysis by the State Department of Health Services.

1. pH
2. Total Suspended Solids (TSS)
3. Specific Conductance; and
4. Oil and Grease (or Total Organic Carbon)

Toxic chemicals and other pollutants that are likely to be present in storm water discharge in significant quantities must also be analyzed.

This facility's SIC code does not require analysis of additional parameters from Table D of the General Permit.

Records must be retained for a minimum of five years from the date of sampling. Records must contain at least the following information:

1. Name(s) of person(s) collecting samples;
2. Date and time of sampling;
3. Sampling locations;
4. Date and time of laboratory analysis;
5. Name of analyst;
6. Analytical techniques used;
7. Analysis results;
8. Quality assurance/quality control results; and
9. Explanation for samples not collected according to requirements of the General Permit.

If sampling could not be performed due to adverse weather, the record must describe why the sampling could not be conducted, including documentation of all significant storm water discharge events. If sampling could not be conducted due to discharge occurring after-hours, the record must document the situation.

Sample Collection Exceptions

Samples will not be collected during the following conditions:

1. Weather conditions present a danger to the individual(s) collecting the samples;
2. The discharge does not begin during scheduled facility operating hours; or
3. The discharge is not preceded by three working days without storm water discharge.

Sampling Overview

The goal of sampling is to represent the quality of storm water discharge. Table 1 summarizes the basic requirements for sampling and analysis. The parameters in Table 1 are discussed below.

TABLE 1
SAMPLE COLLECTION AND ANALYSIS PARAMETERS

	Container Material	Volume	Preservative	Parameter	EPA Method	Analyze When
Container 1	Plastic or Amber Glass with Teflon Lined Cap	1 Liter	Cool in Ice Chest 4C	pH	150.0	Immediately
				Total Suspended Solids	160.2	Within 7 days
				Specific Conductance	120.1	Within 28 days
Container 2	Plastic or Amber Glass with Teflon Lined Cap	Approx. 250 ml	HCl or to H_2SO_4 pH < 2, Cool in Ice Chest 4C	Oil and Grease	413.1	Within 28 days
Container 3	Polypropylene	Approx. 250 m	HNO_3 to ph < 2, Cool in Ice Chest to 4C	Iron	EPA 6010B	Within 6 months

Sample Type

You will be collecting grab samples. A grab sample is collected continuously at one time during an uninterrupted interval. You can use funnels, long-handled samplers, containers suspended by rope or wire, or other collection means to collect samples from difficult to reach points. You must make sure that the grab sample is representative of discharge conditions at the time of sampling. This can be accomplished by carefully collecting the sample and observing discharge conditions during sampling. The collection procedures given later provide further guidance on how to collect the sample.

Laboratory Analytical Method

Table 1 gives procedure identification numbers for the EPA required laboratory analysis methods. These procedure numbers inform the laboratory of the specific analytical protocols that must be followed.

Container Type and Volume

Oil and grease analysis and iron analysis have unique requirements. The oil and grease sample requires a glass container with a volume of approximately 250 ml. Also, the oil and grease sample must be collected separately from all other samples. Since oil and grease will stick to the container, the oil and grease sample must not be transferred between containers if possible. The oil and grease sample should be preserved with sulfuric acid (see preservation section). The iron sample must be collected separately in a polypropylene container with nitric acid preservative. Both samples should be placed in an ice chest and stored at 4 °C.

The other parameters (pH, total suspended solids and specific conductance) can be combined together in the same container. The container can be either polyethylene or glass. The container should be at least 1 liter to ensure plenty of samples is collected for analysis. Containers must be certified clean for use in environmental sampling.

Containers should be labeled with the information listed below. Labels should be filled-out with basic information and pre-applied before field work. Labels should be printed with a water-proof marker.

Label information:

- Facility name
- Name of sample collector
- Sample identification number
- Data and time of sample collection
- Type of analysis required
- Location of sample collection
- Preservatives used
- Type of sample (grab)

Sample Preservation and Holding Times

Some parameters and pollutants that must be analyzed are unstable. These will change after the sample is collected. Sample preservation is required to make sure that the sample remains representative of the storm water discharge at the time of collection. Preservatives can minimize the changes that occur prior to laboratory analysis. All samples are preserved by placing the container in a cooler with ice. The preferable set-up is to have the cooler pre-chilled with blue ice.

Oil and grease and iron use acid for preservation. The acid is placed in the sample container prior to sample collection. Acid preservatives can be purchased with the sample containers or obtained from the laboratory. If you don’t want to handle acid, the laboratory can spike the sample with acid as long as the sample is rushed there.

Preservatives can only slow down the changes that occur in a sample with time. Maximum holding times are specified to place a limit on how long samples can remain in preserved storage before analysis. Samples that exceed the holding time are not valid and sampling must be repeated.

pH is the most restrictive, since analysis must be done immediately, even in the field. This is not always practical due to certification, but a field measurement can be done and the sample can be taken directly to the laboratory for confirmation of the results.

Suggested Supplies, Equipment, and Materials

1. Sample Collection Form 10G for each discharge point.
2. Watch or portable clock.
3. Two sample jars for each discharge point, plus two spares.
4. Sample container identification labels.
5. Sample preservatives.
6. Cooler.
7. Water-proof marker.
8. Chain Of Custody Record.

Procedures

1. You should be prepared to sample from the first storms of the wet season in case there are no later storms.
2. All equipment and containers that come into contact with the sample should be certified clean to avoid contamination.
3. Fill-out container labels with basic information and apply the labels to the container before the sampling event. Make sure caps are on securely.
4. Fill-out Sample Collection Forms with basic information prior to the event.
5. Samples must be from a storm event that occurs during scheduled facility operating hours and is preceded by **at least 3 working days** of dry weather.
6. Samples must be taken during the first hour of discharge. If sample collection during the first hour is impractical, take the sample as soon as practical. Note on the Sample Collection Form the reasons why samples could not be taken during the first hour.
7. Take the grab sample from the horizontal and vertical center of the discharge point. Avoid stirring up bottom sediment in the channel. Keep the sample free from uncharacteristic floating debris.

E. Standard Methods

Laboratory Analysis (B.10.b)

All laboratory analyses will be conducted by a state certified laboratory in accordance to the test procedures under 40 CFR Part 136 as follows: for pH (EPA 150.1), Total Suspended Solids (EPA 160.2), Specific Conductance (EPA 120.1), and Oil and Grease (EPA 413.2/SM5520f), or Total Organic Carbon (EPA 415.1), Iron (EPA Method 7010B). No trip blank samples or duplicate samples are proposed at this time; method blanks will be performed by the laboratory.

The laboratory chosen for the Facility storm water sampling analyses is:

Associated Laboratories
806 North Batavia
Orange, CA 92868
(714) 771-6900

(This laboratory is certified by the State of California, Department of Health Services. Refer to the Storm Water Sampling Guide for a list of equipment provided by the laboratory and Justice & Associates).

F. Annual Comprehensive Site and SWPPP Compliance Evaluation

Annual Comprehensive Site and SWPPP Compliance Evaluation (Section B.9.a-d)

Facility personnel will conduct an annual evaluation and complete the Annual Comprehensive Site and SWPPP Compliance Evaluation Form "10A" of the SWPPP. The evaluation will be completed prior to July 1 of each year.

The Annual Evaluation will include:

- Review and evaluation of all aspects of the SWPPP.
- Review of the visual observation and inspection records and sampling and analytical results for accuracy.
- Inspect all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- Review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained.
- Review SWPPP & Monitoring Program to ensure all elements have been adequately conducted.

The facility must be self-certified based on the annual evaluation, that the site is in compliance with the General Permit requirements. Certification records must be signed and certified in accordance with Section C.9. and C.10. of the General Permit.

G. Record Keeping and Reporting

Record Keeping Procedures (B.13)

Records of all storm water information and copies of all sampling observations and reports will be compiled and retained on-site for a minimum of 5 years from the date of the sample, observation, or report. The following information will be documented in accordance with the General Permit requirements on the Applicable forms:

- The date, time and specific place of site inspections, sampling and visual observations and/or measurements.
- The individual(s) who performed the site inspections, sampling and visual observations and/or measurements.
- The date(s) and time(s) laboratory analyses were performed.
- The individual(s) who conducted the laboratory analyses.
- Flow measurements or estimates (If required by Section B.6).
- The analytical techniques or methods used and the results with detection limits of such laboratory analyses.
- Quality assurance/quality control records and results.
- Non-storm water discharge and storm water discharge visual observation records.
- Visual observation, sample collection exception, and chain of custody records.
- All calibration and maintenance records of on-site instruments used.
- All sampling and analysis exemption and reduction certifications and supporting documentation.
- The records of any corrective actions and follow-up activities that result from visual observations.

Annual Reporting (B.14)

A summary of monitoring records will be forwarded by July 1 of every year to the Executive Officer of the RWQCB. The summary will include the following information:

- An evaluation summary of visual observations.
- An evaluation summary of sampling and analytical results.
- Certification based on the annual evaluation and site inspection, which the facility is in compliance with the General Permit.
- In the event of adverse climatic conditions which prohibits collection of samples or performing the wet season observation, a description of why the sampling or observation could not be conducted, including documentation of all significant storm water discharge events.

The report shall be signed and certified in accordance with Section C.9. and C.10. of the General Permit. The report will be submitted by July 1 of each year to the Executive Officer of the RWQCB.

H. Assessing the Effectiveness of the Monitoring Program

Assessing the Effectiveness of the Monitoring Program (B.2.d)

The effectiveness of the Monitoring Program will be assessed annually. The assessment will be based upon the results of the annual evaluations and inspections of non-storm water and storm water discharge visual observations, and the storm water sampling and analytical results.

The storm water sampling data will be compiled and evaluated by Facility personnel. Evaluated storm sampling data will be compared with the non-storm water and storm water discharge visual observations. Review of the data will help characterize the quality of potential discharges from Facility.

Each year, the monitoring data will be reviewed to determine whether there are any trends in the storm water quality from the Facility. Problem storm water pollutants, if any, will be identified after the first year of sampling. The probable sources of problem storm water pollutants will also be identified, if possible. The BMPs identified in the SWPPPs will be evaluated and inspected to determine if the BMPs are effectively controlling the significant pollutants. Based upon the results of the annual observation and inspection, if the BMPs are being implemented properly, but are not effective, additional measures will be proposed. The data will be evaluated annually to note any changes in the pollutant concentrations of concern.

The future needs for monitoring may change over time. The parameters for sampling will be periodically reviewed and modified accordingly.

I. Quality Assurance/Quality Control Program

The Monitoring Program for the Facility is designed to ensure that all elements of the SWPPP, sampling procedures and record keeping tasks are consistent and adequately conducted. The Monitoring Program contains a detailed Quality Assurance/Quality Control (QA/QC) program. The QA/QC program consists of training, sample collection and handling, sampling equipment and laboratory quality assurance.

Training

The central element of the QA/QC program will be to train selected Facility personnel who will be responsible for conducting the non-storm water and storm water discharge visual observations, collecting the storm water samples, documenting the monitoring results and performing the annual evaluation and site inspection. The Sampling Guide and training program will be provided to the selected Facility personnel. Structured checklists and flow charts will be issued to ensure consistent methodologies and documentation of results.

Sample Collection and Handling

All sample collection and handling will follow procedures outlined in the Sampling Guide document and training program. Each sample will be collected in a properly prepared container by the method discussed in the Sampling Guide. Samples will be stored in refrigerated conditions until they are received by the laboratory.

After the sample is collected, a record of possession of the sample will be documented on a Chain-of-Custody (COC) form. Sample identification and location, data and time of collection, preservative used, number of containers per sample, name and address of the laboratory the sample is to be sent, analysis requested, condition of the sample and any special instruction or notations are also recorded on the COC.

Sampling Equipment

All sampling collection pitchers used in the field will be cleaned with de-ionized water and dried prior to the collection of samples from other sampling points. A description of the sampling equipment is included in the Sampling Guide.

Laboratory Quality Assurance

All samples will be submitted to a Department of Health Services, California-certified analytical laboratory to be analyzed for the requested parameters by EPA Methods, as discussed in Section E, Standard Methods of this Monitoring Program.

The laboratory is aware of recommended holding times and will ensure that samples are analyzed within the specified time frame of the SWPPP requirements. The laboratory has an internal QA/QC program and will utilize certified reference material, laboratory control samples, instrument blanks, spikes, matrix spikes, matrix spike duplicates and quality control charges to measure the accuracy of the analyses.

The laboratory results will be reviewed by Facility personnel to ensure quality assurance. If any errors or discrepancies are found, the laboratory will be notified by the Facility and corrective actions will be taken.

SECTION 13

GENERAL PERMIT AND NOI

SECTION 14

CORRESPONDENCE / REPORTS

SECTION 15

MONITORING / TESTING

APPENDIX B

EXAMPLE EMPLOYEE TRAINING MATERIALS

APPENDIX C

INSTRUCTIONS FOR CONDUCTING INSPECTIONS AND COMPLETING INSPECTIONS FORMS

APPENDIX D

SIGNIFICANT MATERIALS INVENTORY

APPENDIX E

SWPPP CHECKLIST

ATTACHMENT F –

SPCC

Connolly-Pacific Co.
A subsidiary of Knife River Corporation

AGENCY:

United States Environmental Protection Agency

Spill Prevention Control and Countermeasure Plan

Prepared for:

Pebbly Beach Facility
Pebbly Beach Road
Avalon, CA 90704
June 18, 2008

The SPCC plan is not required to be filed with U.S. EPA, but a copy must be available for on-site review by the Regional Administrator during normal working hours. The SPCC plan must be submitted to the U.S. EPA Region IX Regional Administrator and the state agency along with the other information specified in §112.4 within 60 days if either of the following occurs:

1. *The facility discharges more than 1,000 U.S. gallons of oil in a single discharge as described in §112.1(b)*

2. *The facility discharges more than 42 US gallons of oil as described in §112.1(b) in each of two discharges, within any twelve-month period.*

PROFESSIONAL ENGINEER CERTIFICATION [§112.7 (3)(d)]

I hereby certify that having examined the facility and being familiar with the provisions of 40 CFR Part 112, attest that the Spill Prevention Control and Countermeasure Plan has been prepared in accordance with good engineering practices.
A Chemali Date: 6/18/08 Antoine Chemali, P.E. Registration Number: C67699 Expiration Date: 6/30/09

(Engineer place stamp in area below)

Table of Contents

ATTACHMENTS

"A"	-	Certification of Substantial Harm Determination Form
"B"	-	Dike / Containment Drainage Record
"C"	-	Facility Inspection Record
"D"	-	Spill Prevention Briefing Record
"E"	-	Training Record
"F"	-	Spill Information Record
"G"	-	Agency Notification Report
"H"		Available Emergency Equipment
"I"		Facility Spill History
"J"		Reference Information

TRAINING MATERIALS

REGULATIONS

CONTAINMENT INFORMATION

Calculation Figures for Tank Area 2 / Tanker Truck Unloading Area

Containment Information Table

Figure 2

SPCC PLAN REVIEW [§112.5(b)]

The responsible official at this facility has completed a review and evaluation of the SPCC Plan at least once every five years. This facility has not changed the facility design, construction, operation or maintenance, which materially affects the facility's potential for the discharge of oil into or upon navigable waters or adjoining shorelines. Evidence of these reviews is recorded below. (Note: If facility has been modified in design, construction or maintenance which materially affects (i.e., increases or decrease) the facility's potential to discharge oil into or upon navigable waters, then this plan must be revised and recertified by a licensed engineer.)

Signature	Date

MANAGEMENT CERTIFICATION [§112.7]

This SPCC plan is fully approved by the management of this company.

I declare under penalty of law that I have reviewed this Spill Prevention Control and Countermeasure Plan and understand my responsibilities, and that the information in this and all attached documents is true and correct to the best of my knowledge.

Date: June 18, 2008

Steven Schryver, General Manager/Vice President

INTRODUCTION [§112.7(a)(1-2)]

The objective of this plan is to describe the procedures, which are followed by the Connolly-Pacific Co. (CPC) to prevent, control, and/or mitigate releases of oil and related petroleum substances to the environment at the Pebbly Beach Quarry located on Catalina Island, California.

CPC manages and operates the Pebbly Beach Quarry. Pebbly Beach is a rock quarry that meets regulatory criteria for an on-shore, non-transportation related facility engaged in storing and consuming oil and oil products. The SPCC Plan is required as Pebbly Beach has the potential to store greater than 1,320 gallons of oil and oil products above ground. Most of the site inventory is contained in aboveground storage tanks and operating equipment, though as idle or spare items must be counted in the 1,320 gallons, and as the site inventory can vary; Pebbly Beach continues to maintain this Plan. There are no polychlorinated biphenyl (PCB) - containing oils and no buried or partially buried petroleum product tanks at Pebbly Beach. This Plan is specific to petroleum products; if a hazardous material or hazardous waste is mixed with the oil, then all applicable Local, State, and Federal disposal laws must be followed.

This Spill Prevention Control and Countermeasure Plan (SPCC Plan) was prepared to comply with the requirements of Part 112, Oil Pollution Prevention of the Code of Federal Regulations Title 40 (40 CFR).

A complete controlled copy of this Plan is maintained at Pebbly Beach Quarry and is available in the main office, for review or use during normal working hours. A controlled copy will also be available at the Connolly-Pacific Co. main office, Long Beach, California during normal working hours for reference.

The SPCC Plan is amended whenever a change in design, construction, operation, or maintenance affects the facility's spill potential. It is also amended whenever applicable regulations are revised, or the plan is found ineffective. In accordance with 40 CFR 112.5, no amendment to the SPCC Plan shall be effective unless it has been certified by a Registered Professional Engineer (PE) familiar with the provisions of 40 CFR 112. At a minimum, the SPCC Plan is reviewed and evaluated by CPC once every 5 years. CPC will amend the Plan in accordance with 40 CFR 112.7.

In an effort to present a more comprehensive Plan, a description of the property that comprise Pebbly Beach, privately owned by CPC. It should be noted that any oil or petroleum product spillage occurring on Pebbly Beach property owned by CPC will be cleaned up promptly by a responsible subcontractor.

FACILITY DESCRIPTION [§112.7(a)(3)]

This facility is a quarry located on Santa Catalina Island. Material is mined from hillside mining areas using the shot method. Shot holes are drilled into the hillside and loaded with explosives, after detonation the released material is loaded into front end loaders and taken to the separator plant. The separator plant consists of belt conveyors, screens and other sorting

equipment. The separated product is then stockpiled using front end loaders and subsequently loaded onto barges for offsite delivery.

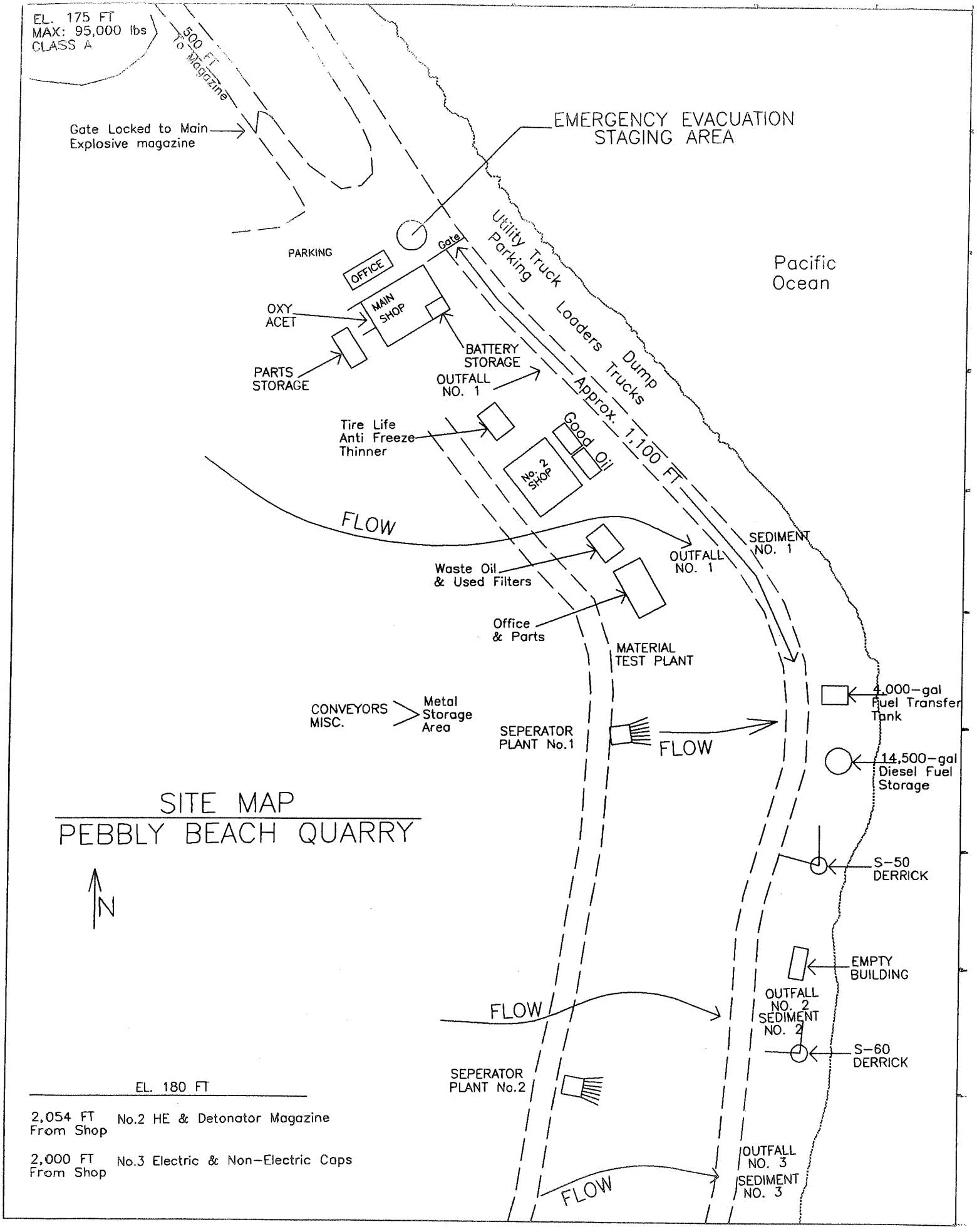
The site also has parking areas for trucks and equipment, a maintenance shop, aggregate stockpiles, petroleum storage tanks, and a parts warehouse.

Surface drainage is directed to the central processing area where low intensity rainfall percolates into the soil. Storm water from medium intensity rain event will collect in the central location and sheet flow to onsite sediment basins. Each outfall is equipped with a sedimentation basin which serves to reduce velocity of sheet flow and allow settling of particulates. Water from medium intensity rain events is detained in the basin and no discharge of storm water will occur. The basins will reduce velocity and particulate content from the first flush of rain from high intensity rain events that may result in storm water discharge.

FACILITY INFORMATION [§112.7(a)(3)(i)]	
Facility Name: Site Address:	Connolly-Pacific Company Pebbly Beach Road, P.O. Box 276 Avalon, CA 90704
Facility Responsible Official: Title: Working Hours Phone Number: After Working Hours Phone Number:	Paul Romo Superintendent (310) 510-0626 (310) 510-7095
Facility SPCC Coordinator: Title: Working Hours Phone Number: After Working Hours Phone Number:	Robert Machado Assistant Superintendent (310) 510-0626 (310) 510-9562
Owner:	Connolly-Pacific Company
Address:	1925 Pier D Street, Long Beach, CA 90802
Phone:	(562) 437-2831
SIC Code:	1429 Rock Quarry
Date Operation Started:	1932
Fixed Storage:	1-63,000 Gallon Vertical AST (Diesel) 1-500 Gallon Horizontal AST (Waste Oil) 1-4,000 Gallon Horizontal Transfer AST (Diesel)
Portable Storage:	8-500 Gallon Horizontal AST (Oil) 20-55 Gallon Drums (Oil & Used Oil Filter)

Portable Equipment Storage Capacities (Caterpillar Front-end loaders and Haul trucks)	16-32 Gallon Hydraulic tanks 16-60 Gallon Diesel Tanks
Maximum Storage Capacity:	74,072 (Include Drums)

Facility Map


EL. 175 FT
MAX: 95,000 lbs
CLASS A
500 FT To Magazine
Gate Locked to Main Explosive magazine
EMERGENCY EVACUATION STAGING AREA
PARKING
OFFICE
Gate
Utility Truck Parking
Loaders Dump Trucks
Approx. 1,100 FT
Pacific Ocean
OXY ACET
MAIN SHOP
PARTS STORAGE
BATTERY STORAGE
OUTFALL NO. 1
Tire Life
Anti Freeze
Thinner
Good Oil
No. 2 SHOP
FLOW
SEDIMENT NO. 1
OUTFALL NO. 1
Waste Oil & Used Filters
Office & Parts
MATERIAL TEST PLANT
CONVEYORS MISC.
Metal Storage Area
SEPERATOR PLANT No.1
FLOW
4,000-gal Fuel Transfer Tank
14,500-gal Diesel Fuel Storage
S-50 DERRICK
EMPTY BUILDING
OUTFALL NO. 2
SEDIMENT NO. 2
S-60 DERRICK
FLOW
SEPERATOR PLANT No.2
OUTFALL NO. 3
SEDIMENT NO. 3
FLOW
SITE MAP
PEBBLY BEACH QUARRY
N
EL. 180 FT
2,054 FT From Shop
No.2 HE & Detonator Magazine
2,000 FT From Shop
No.3 Electric & Non-Electric Caps

FACILITY TRANSFER OPERATIONS, AND IN-PLANT PROCESS [§112.7(a)(3)(ii)]

Operator Training

All personal responsible for fueling equipment shall be thoroughly trained in the operation of the fuel storage and dispensing system. The operational training will also include Emergency Response training for fire and/or spills.

Bulk Storage Tank Loading Plan

The loading of diesel fuel will be under the direction of General Petroleum, the fuel supplier, and will be in accordance with all applicable Local, State, and Federal Laws and Regulations.

Connolly-Pacific will have a dedicated tank operator who will assist General Petroleum with the connection of the fueling hose and the opening of the tank fill valves

The attendant will have no other responsibilities except emergency assistance during the tank filling operation, which will last approximately one and one half hours.

Upon completion of filling the 63,000-gallon tank, the truck operator will close the fuel tank valve and clear the fuel hose. Then close the fuel hose valve to the truck prior to disconnecting the hose, thereby preventing any excess dripping of product into the containment pad.

To prevent any possibility of overfilling the tank, the system will be equipped with a float valve, which will shut off flow automatically at the maximum fill height of the tank. In addition, a level indicator will be visible by the fill operators.

Equipment Fueling Tank

Connolly Pacific will use a single 4,000-gallon double wall storage tank to fuel all the quarry equipment. Connolly Pacific will fill the tank equipped with an offloading pump every few days by the bulk storage tank. The tank will be stationary at the dedicated loading area and all equipment loading will take place at the loading area thereby reducing risk of spills and fire hazard at remote areas of the quarry.

Fueling of the storage tank will not be done simultaneously with the fueling of equipment.

Equipment Fueling Tank Loading Plan

A fueling operator will be present at all times during fueling operations. The operator will connect the hose to the tank, open the valve from the bulk tank, set the desired quantity of fuel to be dispensed on the automatic pre-set meter, and start the pump each time the tank is filled. Upon completion, the operator will reverse the procedure each time the tank is filled.

Any spillage on the concrete containment pad will be cleaned up immediately prior to fueling of equipment.

Equipment Fueling Area

The fueling area will be located away from the bulk storage tank, overhead lifting equipment, and vegetated areas. A concrete containment pad will be constructed to prevent ground contamination, and protective barriers will be installed to prevent equipment from getting too close to the tank.

Pipelines not in service or on standby for an extended period are capped or blank flanged and marked as to their origin.

There is no aboveground piping at the facility. Refer to Attachment "C" for the Facility Inspection form to record pipe inspections.

There is no aboveground piping that would be endangered by normal vehicular traffic.

DISCHARGE AND DRAINAGE CONTROLS [§112.7(a)(3)(iii)]

Secondary containment or dikes are provided around tanks, drums, and equipment, which store oil products.

EMERGENCY RESPONSE PROCEDURES [§112.7(a)(3)(iv-vi)]

Control of Potential Spills

In the event of an oil spill, facility personnel are trained to immediately inform the superintendent or his designee of the spill. Employees will attempt to control the spill with the emergency equipment available at the facility and any other necessary means of control. The superintendent or his designee will assess the situation and call emergency response agencies by dialing 9-1-1 if the spill cannot be immediately controlled by facility personnel.

The Superintendent will notify the necessary agencies when a spill reaches navigable water or a spill result in a release exceeding the limits allowed by law[2]. Refer to Attachments "F" & "G" to record and report spill information.

Facility personnel trained in recovery methods are available to recover spilled oil material. The recovered materials are shipped to the main facility (Long Beach, CA) and disposed of in accordance to applicable federal, state, and local regulations.

The agencies will be contacted when the conditions of the event allows, and within 48-hours of the first report of the emergency event.

The following is a list of on-site personnel and primary agency numbers:

• Paul Romo (Responsible Official)	Onsite	(310) 510-0626
	Offsite	(310) 510-7095
• Robert Machado (SPCC Coordinator)	Onsite	(310) 510-0626
	Offsite	(310) 510-9562
• State Of California, Office of Emergency Service		(800) 852-7550
• National Response Center		(800) 424-8802
• Local Emergency Response Agency		911
• Los Angeles County Fire Department		(310) 510-0424

[2] A competent attorney who is familiar with applicable laws and regulations of hazardous materials management should be consulted to avoid the possibility of any future liabilities.

EMERGENCY DISCHARGE REPORTING INFORMATION AND PROCEDURES [112.7(a)(4)]

The following steps are to be taken immediately in the event of an oil spill. Subsequent emergency procedures can be found in Spill Controls and Countermeasures in this plan.

If you are not trained:

1. Evacuate and warn others as necessary of the release size and location.

2. **If there are injuries or immediate off-site expertise is needed, call 911**

3. Contact Connolly-Pacific Pebbly Beach main office at 310-510-0626, and provide the following information:
   - Location of spill
   - Approximate quantity and identity of product
   - Other hazards, emergency conditions

4. Notify responsible official and on-duty crew chief, radio channel 78

5. Meet the responders at a safe distance from the release and direct them to it

If you are trained:

1. Evacuate and warn others as necessary of the release size and location.

2. **If there are injuries or immediate off-site expertise is needed, call 911**

3. Contact Connolly-Pacific Pebbly Beach main office at 310-510-0626, and provide the following information:
   - Location of spill
   - Approximate quantity and identity of product
   - Other hazards, emergency conditions

4. Take the following action **only if they can be completed safely**.
   a. Shut down equipment
   b. Close valves to isolate a leak in a line
   c. Upright leaking drums or containers
   d. Plug a leak utilizing a peg, duct tape, etc.
   e. Block floor drains, storm drains, or storm water drainage channels
   f. Construct a dike to contain the material utilizing sorbents, booms, or soils
   g. Apply sorbent to contain petroleum product

5. Meet the responders at a safe distance from the release and direct them to it

SPILL CONTROLS AND COUNTERMEASURES [§112.7(a)(5)]

Spill controls and countermeasures are safety measures to ensure prompt response to spills and mitigation of the consequences. In the event of a spill, the general procedure includes: notification of the Quarry office, Responsible Official, and Safety Director; spill containment and isolation; and clean-up and disposal of small spills by the on-site staff, and for large releases, a licensed disposal contractor. In addition, appropriate regulatory agencies will be notified, if required.

Responsible Officials have overall responsibility to address any oil spill from their processes or equipment.

Spill response actions by Responsible Official generally consist of notifying appropriate personnel, including the Quarry Office and the Safety Director as necessary, and securing the area while the response team continues to control and contain the spill. Absorbent pillows, blankets, and other materials are stored near all tanks and equipment. A summary of spill control material and equipment inventories is provided in Attachment H. Small contained spills (less than 5 gallons) resulting from transfer operations are cleaned up by the staff involved, using oil dry at the time of the spill. The used absorbent materials are placed into drums and are paced in the used oil storage area to await disposal.

The Responsible Official shall implement oil spill controls and countermeasures including the assignment of personnel to stop additional spillage. The Responsible Official will direct response actions for spills that reach the ground or surface water. Spill control and clean-up take priority over routine activities or operations. Specific procedures to be implemented upon detection of an oil or petroleum substance spill are summarized below. The Responsible Official and Safety and Compliance Director conduct a review of the spill event and provide lessons learned to the quarry staff. This review would then become part of the Spill Report, which is prepared by the superintendent. The SPCC Coordinator is responsible to oversee the implementation of lessons learned into the site program.

Responsible Official, with assistance from response team staff, will perform a Notable Event if the spill is ≥ 5-gallons and/or if it meets any regulatory reporting criteria's.

Spillage in Diked or Curbed Areas

Spills in diked or curbed areas are considered controlled unless the diking or curbing is inadequate to contain an ongoing spill. If the diking or curbing are insufficient, the procedures in undiked or uncurbed areas are applicable. The on-site personnel should follow the process as identified here.

If the spill is controlled:

1. The individual discovering the spill must notify Responsible Official (radio channel 78), who in turn will activate the response by notifying the response team. The following information is reported:
    - Location of spill
    - Approximate quantity and identity of product

- Other hazards or emergency conditions

2. The Responsible Official or authorized delegate should assess the size and nature of the spill and the hazards, and attempt to halt any further spillage by use of available control measures without subjecting responders to safety hazards. The Safety and Compliance Director should be consulted as necessary during normal working hours.
3. The oil should be pumped out of any containment into drums under direction of the Responsible Official and/or authorized delegate.
4. Absorbent material should be used to remove residual oil. Oil and oil-containing wastes should then be transferred to the used oil storage area for disposal.
5. The event should be reported and analyzed as detailed in this Section. The spill would also be recorded in Attachment I (facility spill history).

Spillage in Undiked or Uncurbed Areas

Equipment fueling operations, vendor transfer operations, and certain machinery components, create a potential for releases in undiked or uncurbed areas. Machinery releases could be significant but would likely be confined within a building. The Equipment refueling operations without oil containment pits and vendor transfer operations could release hundreds of gallons. The on-site personnel should follow the response process identified here.

In the event of a spill, the following procedures should be followed:

1. The individual discovering the spill should notify Responsible Official and/or delegate on (radio channel 78) to activate site personnel. This would notify Quarry Management and the response team who in turn should contact any other necessary on-site responders. The following information should be reported:
   - Location of spill
   - Approximate quantity and identity of product
   - Other hazards or emergency conditions
2. The Responsible Official, or upon request, the Safety and Compliance Director, would assess the size and nature of the spill and the hazards, and attempt to halt any further spillage by use of available control measures without subjecting responders to safety hazards. The Safety and Compliance Director may be consulted as necessary during normal working hours.
3. The spread of the spill would be controlled by constructing make-shift dikes of dirt and/or absorbent pads or booms.
4. If material contained in the make-shift dike is of sufficient quantity, the Responsible Official would have it pumped out and transferred into drums. Alternatively, absorbent material could be utilized. Oil and oil-containing wastes would then be transferred to the used oil storage area for disposal.
5. The event should be reported and analyzed as detailed in this Section. The spill should also be recorded in Attachment I (Facility Spill History).

Spillage onto the Surface

Generally, the normal flow of a spill from a petroleum storage vessel, machinery, equipment, secondary containment, or transport vehicle would be toward the nearest natural drainage. In the event of a catastrophic spill, the oil or petroleum would flow or migrate toward the facility boundary. In this event, Oil booms, socks, and other available control measures, pre-positioned near the equipment or transfer operation, would be deployed promptly in the immediate vicinity of the spill. The blocked or boomed product should then be quickly skimmed and pumped into drums and transported to a permitted treatment or disposal facility.

Specific steps are outlined below:

1. The individual discovering the spill should notify the Responsible Official on (radio channel 78) to activate site personnel. This would notify Quarry Management and the response team staff who in turn should contact any other necessary on-site responders. The following information should be reported:
    - • Location of spill
    - • Approximate quantity and identity of product
    - • Other hazards or emergency conditions
2. The Responsible Official and the response team should assess the size and nature of the spill and attempt to halt any further spillage by use of available control measures without subjecting responders to safety hazards. The Safety and Compliance Director should be consulted as necessary during normal working hours.
3. Absorbent materials should be spread in the area of the spill by qualified, trained quarry personnel or a subcontractor, to remove accumulations on the ground, if feasible.
4. The Responsible Official should coordinate any booming and skimming from storm water channels or pathways. Recovered oil should be pumped into tank trucks by a subcontractor and transported for treatment/disposal. The Quarry Management oversees the operation.
5. The event should be reported and analyzed as detailed in this section. The spill should also be recorded in Attachment I (Facility Spill History).

Spill Report and Event Analysis

The Responsible Official should record the event on the Spill Information Record as included in Attachment F of this SPCC Plan.

A Notable Event should be completed following any discharge of oil greater than five gallons, or any oil discharge to a storm water channel, swale, or sewer (storm or sanitary). The Responsible Official, with assistance from the response team will conduct this formal review and analysis of the incident. The process will include at a minimum:

- Interviews with the person or persons involved in the incident, any witnesses, and the person in charge of the process/equipment involved to understand the event, its cause, and how the response was handled.

- Discussion with others involved with similar processes/equipment to identify possible changes to prevent a similar incident and to relay lessons learned from the event.
- Preparation of a written brief to the Safety and Compliance Director detailing the cause and response, and any recommended changes to prevent similar occurrences.
- After consultation with the SPCC Coordinator and the Safety and Compliance Director, a safety briefing should be held for all involved and a memorandum to concerned staff could be issued.

Copies of the Spill Report, including the Notable Event if applicable, should be provided by the Responsible Official to the Safety and Compliance Director, the General Manager, and the SPCC Coordinator.

Some discharges, as identified in the regulations and this SPCC Plan, contain additional reporting requirements. This information can be found in this SPCC Plan.

POTENTIAL EQUIPMENT FAILURES [§112.7(b)]

Potential equipment failures are outlined in following **Table**. Refer to Figure 2 for containment area locations.

Potential Event	Spill Direction	Volume Released	Spill Rate	Containment Type/Capacity
Complete Tank Failure (Diesel) Tank Area #1	South/East	1 to 63,000 Gallons Approximately	Gradual to Instantaneous	Steel Containment Structure/Volume of tank plus sufficient free board.
Complete Tank Failure (Diesel) Tank Area #2	South/East	1 to 4,000 Gallons Approximately	Gradual to Instantaneous	Steel Double walled Containment Structure/ Volume of tank plus sufficient free board.
Storage Tank Rupture (Oil) Tank Area #3	East	1 to 500 Gallons (Approx. 8-500 Gallon Portable Tanks)	Gradual to Instantaneous	Each Tank is housed within its own steel containment structure/ volume of tank plus sufficient free board.
Storage Tank/Drum Rupture (Waste Oil or Oil & Used Oil Filters) Tank Area #4	East	1 to 500 Gallons (Storage Tank) 1 to 55 Gallons (Approx. 8-55 Gallon Drums Stored)	Gradual to Instantaneous	Concrete Containment Structure/ Volume of the largest tank/drum plus sufficient free board.
Drum Rupture (Oil) Drum Area #1	East	1 to 55 Gallons (Approx. 12-55 Gallon Drums Stored)	Gradual to Instantaneous	Concrete Containment Structure/ Volume of the largest tank/drum plus sufficient free board.
Caterpillar 796-C Complete Tank Rupture (diesel and/or Oil)	South/East	1 to 198 gallons (Hydraulic 58 gallons, Diesel 140 gallons stored)	Gradual to Instantaneous	Each Tank is housed within its own steel containment structure/ volume of tank plus sufficient free board.
Caterpillar 773-B Complete Tank Rupture (Diesel /Oil)	South/East	1 to 243 gallons (Hydraulic 58 gallons, Diesel 185 gallons stored)	Gradual to Instantaneous	Each Tank is housed within its own steel containment structure/ volume of tank plus sufficient free board.

POTENTIAL EQUIPMENT FAILURES [§112.7(b)] (continued)

Potential equipment failures are outlined in following **Table**. Refer to Figure 2 for containment area locations.

Potential Event	Spill Direction	Volume Released	Spill Rate	Containment Type/Capacity
Caterpillar 773-E Complete Tank Rupture (diesel and/or Oil)	South/East	1 to 235 gallons (Hydraulic 55 gallons, Diesel 180 gallons stored)	Gradual to Instantaneous	Each Tank is housed within its own steel containment structure/ volume of tank plus sufficient free board.
Caterpillar 988-B/F Complete Tank Rupture (Diesel /Oil)	South/East	1 to 241 gallons (Hydraulic 77 gallons, Diesel 163 gallons stored)	Gradual to Instantaneous	Each Tank is housed within its own steel containment structure/ volume of tank plus sufficient free board.
Caterpillar 992-D Complete Tank Rupture (diesel and/or Oil)	South/East	1 to 554 gallons (Hydraulic 259 gallons, Diesel 295 gallons stored)	Gradual to Instantaneous	Each Tank is housed within its own steel containment structure/ volume of tank plus sufficient free board.

Note: Fuel tank drain valves are capped and padlocked. Drainage valves for containment structures are locked closed and manually operated. Minor drips or leaks are controlled by absorbents or other clean-up materials.

CONTAINMENT AND DIVERSIONARY STRUCTURES [§112.7(c)(1)]

The containment areas are constructed to be sufficiently impervious to contain spilled oil. Refer to Figure 2 for containment area locations.
The unloading area for tanker trucks are curbed or sloped to provide secondary containment.
Sorbent materials are provided in strategic locations throughout the facility.

DEMONSTRATION OF PRACTICABILITY [§112.7(d)]

Facility management has determined that use of the containment and diversionary structures or readily available equipment to prevent discharge oil from reaching navigable water is practical and effective at this facility.

INSPECTIONS AND RECORDS [§112.7(e)]

Inspections of the tanks are conducted on a regular basis and visually monitored routinely. The inspections consist of checking for damage or leakage stains or discolored soils, excessive accumulation of water in diked areas and ensure that dike drain valves are securely closed. Inspections that indicate a leak, potential oil spill event or potential failure will require an inspection be performed and filed. The form will identify the location of the inspected area, inspector's name, date, procedures to mitigate or abate the problem, and any comments. Refer to Attachment "C" for the Facility Inspection Record. Records and inspection forms are filed and maintained onsite for a period of three years.

PERSONNEL, TRAINING, AND SPILL PREVENTION PROCEDURES [§112.7(f)]

Facility personnel have been instructed by management in the operation and maintenance of oil pollution prevention equipment and applicable pollution control laws and regulations.

The Superintendent, Paul Romo is accountable for oil spill prevention at the Connolly-Pacific Pebbly Beach facility.

Spill prevention briefings are provided by management for operating personnel to ensure adequate understanding of this SPCC plan. New employees receive instruction in the contents of this SPCC during their orientation. Personnel are properly instructed in the operation and maintenance of equipment in order to minimize the likelihood of an oil discharge.

These briefings highlight and describe any possible spill events or failures, recently developed precautionary measures, and updates with current information as it pertains to this SPCC plan. Refer to Attachment "D" for the Spill Prevention Briefing and Attachment "E" for the

SECURITY [§112.7(g)]

The facility is properly secured by fencing to restrict unauthorized access. The entrance gates are securely locked during non-operating hours.

Valves or drains that permit the direct outward flow of the tank's contents to the surface are secured in a closed position when in non-operating or non-standby status.

The starter control on the fuel pump or fuel dispenser are in the locked 'off' position and are located in a secure area, which is locked when pumps are not in use. This area is accessible only by authorized personnel.

The loading and unloading connections of oil pipelines are capped when not in service or on standby for an extended time.

Lights are located in such a position so as to illuminate the (office and storage areas.) Consideration was given to discovery of spills at night and preventing spills occurring through vandalism.

LOADING AND UNLOADING OF TANKER TRUCKS AND TANKS [§112.7(h)]

The operator uses only certified haulers registered with the Department of Transportation (DOT). Truck loading and unloading procedures meet the minimum requirements and regulations by the DOT.

Curbing and/or berming containment has been installed at the transfer tank unloading area and is designed to contain the single largest compartment volume with any truck used at the facility.

Chock blocks are provided at the loading/unloading area to prevent and/or aid in preventing vehicle departure as well.

The lowest most drain, outlet and connections are inspected for leakage prior to filling and departure.

FIELD-CONSTRUCTION ABOVEGROUND CONTAINERS [112.7(I)]

There are no field-construction aboveground containers at this facility

CONFORMANCE WITH APPLICABLE REQUIRMENTS AND STATE REGULATIONS [§112.7(j)]

This Plan is prepared in accordance with 40 CFR, Part 112, *Oil Pollution Prevention.* Part 112 establishes the requirements for procedures, methods, and equipment to assist in preventing an accidental discharge of oil or any material containing oil from entering into or upon the navigable waters of the United States or adjoining shorelines, or waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act

or Deepwater Port Act or affecting certain natural resources. These procedures, methods, and equipment are referred to as the SPCC Plan. Part 112 applies to those owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using, or consuming oil or oil products. The applicable facility must also be in a location such that if an oil spill event occurred, the oil spill would be expected to reach navigable waters and the amount of oil discharged would be in harmful quantities as defined in 40 CFR, Part 110[1]. This SPCC Plan has been revised and developed in accordance with the guidelines set forth in 40 CFR, §112.7 and is based upon site visit in November 13, 2002 and interview with facility personnel in November 2002.

The references used for SPCC Plan preparations are listed in Attachment J and include the "Spill Prevention, Control, and Countermeasure Information Guide," published by Region III Office of the Environmental Protection Agency and the "Suggested Procedures for development of Spill Prevention, Control, and Countermeasure Plans," published by the American Petroleum Institute.

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[1] A harmful quantity is defined as a quantity that has been determined to potentially harmful to the public health or welfare of the United States, except as provided in § 110.7. The discharges include those that: (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines (40 CFR, § 110.3).

FACILITY DRAINAGE [§112.8(b)]

Drainage from secondary containment or diked areas are restrained by valves or other positive means to prevent a spill or excessive leakage of oil into a drainage system not designed to handle spills. Valves used to drain the containment areas are normally locked closed and manually operated. Before discharging occurs the storm water accumulation that may be present is examined to ensure no oil is discharged into navigable water.

Flapper-type drain valves are not employed for the drainage of the containment area.

Facility drainage from undiked areas are graded or diked in a manner to prevent discharges from reaching navigable waters.

Facility drainage systems are adequately engineered to prevent oil from reaching navigable water in the event of equipment failure or human error.

Nearest Navigable Water

The nearest navigable water to the site is Pacific Ocean, approximately 200 feet from the facility. The direction of flow from equipment that could produce a release of oil is diverted to a containment area. If an oil spill event occurs, the containment area is drained of the oil in accordance to company procedures outlined in this SPCC Plan and all federal, state, and local requirements.

BULK STORAGE [112.8(c)]

The materials and construction of all storage tanks and containers are compatible with the oil products they contain and conditions of storage.

Secondary containment for all aboveground storage tanks is provided to contain the entire contents of the largest tank plus sufficient freeboard to offset the accumulation of any potential precipitation into the containment area.

When the containment area requires draining due to accumulation of storm water or an oil spill event, the accumulated material is examined by the Superintendent or his designee to observe for any indication of oil contamination (e.g. oil sheen). If no evidence of oil is present the drain valve is manually opened to release the storm water accumulation. If there is evidence of oil, a pump contractor will be called to drain the containment area. The waste is then shipped to Long Beach, CA and disposed of in accordance with federal, state and local regulations. Adequate records of such events must be kept whenever the secondary containment area is drained. Refer to Attachment "B" for the Dike/Containment Drainage form to record drainage of the secondary containment areas.

There are no underground or partially buried storage tanks at this facility.

ASTs and other equipment (e.g., foundations and supports) are visually inspected on a regular basis for indications of deterioration, leaking equipment, or accumulation of oil inside the containment area.

If an inspection reveals a visible oil leak from a tank seam, gasket or bolt sufficiently large enough to cause accumulation of oil in the containment area, the problem will be promptly corrected where feasible. A record of the correction actions are kept for a minimum of three years as discussed in Inspections and Records of this SPCC Plan. Refer to Attachment "C" for the Facility Inspection form to record the tank inspection information.

There are no internal heating coils at this facility.

Each tank is equipped with:

a) Liquid level sensing devices should be tested regularly to insure proper operation.

b) Tanks are equipped with direct vision gauges or their equivalent to determine high liquid levels.

There is no plant effluent discharge into navigable waters.

Oil leaks which result in a loss of oil from tank seams, gaskets, rivets, and bolts are promptly corrected.

Portable oil storage tanks such as 55-gallon drums are positioned within a secondary containment system to prevent spilled oil from reaching navigable water.

The secondary containment is designed to contain the largest single drum or compartment and is located in an area not subject to periodic flooding.

FACILITY TRANSFER OPERATIONS, AND IN-PLANT PROCESS [§112.8(d)]

Buried piping from the diesel AST (Tank Area #1) to the diesel transfer tank (Tank Area #2) is coated and cathodically protected as warranted to protect against corrosion. Whenever a buried pipe is exposed the pipe is inspected for deterioration. If indications of severe pipe deterioration are found additional examination and corrective action will be conducted to mitigate the potential for an oil spill

Pipelines not in service or on standby for an extended period are capped or blank flanged and marked as to their origin.

There is no aboveground piping at the facility. Refer to Attachment "C" for the Facility Inspection form to record pipe inspections.

There is no aboveground piping that would be endangered by normal vehicular traffic.

ATTACHMENTS

ATTACHMENT A

CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION FORM

Facility Name: _____

Facility Address: _____

_____

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   YES_____ NO_____

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

   YES_____ NO_____

3. Does the facility have a total oil storage capacity greater than or to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR Part 112, Appendix C for a comparable formula[2]) such that a distance from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III of the "Guidelines for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (40 CFR Part 112, Appendix E, Section 10, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act.

   YES_____ NO_____

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake[2]?

   YES_____ NO_____

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   YES_____ NO_____

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

_____ _____

Signature Title

_____ _____

Name (please type or print) Date

[1] If a comparable formula is used documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2] For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

ATTACHMENT B

DIKE / CONTAINMENT DRAINAGE RECORD

This form is used to record the inspection and drainage of rainwater discharged from dike/ containment areas. Drainage is to be effected when necessary, not at pre-set intervals. If upon inspection the accumulated rainwater visually appears to be free of oil sheen or mixture, drainage may be accomplished. The drain valves are to be secured in the closed position and re-sealed following each drainage event.

To be filled out by inspector

Date:_____
Dike / Containment Area:_____

Time Drainage Started:_____

Time Drainage Finished:_____

Physical Observations (check appropriate descriptions of the water in the containment area)

Color	( ) clear ( ) other, specify	( ) black/gray	( ) brown	( ) green
Clarity	( ) clear ( ) other, specify	( ) slightly cloudy	( ) muddy	
Odor	( ) none ( ) other, specify	( ) sewage	( ) musty ( ) petroleum	( ) chemical
Sheen	( ) none ( ) other, specify	( ) slightly sheen	( ) significant sheen	
Floating debris	( ) none ( ) other, specify	( ) garbage/litter	( ) constr. debris	( ) sewage

Is a Pump Contractor Required? ( ) Yes ( ) No

Inspector's
Signature:_____Date:_____

ATTACHMENT C

FACILITY INSPECTION RECORD

This form is used to conduct monthly facility inspections. Facility inspections should be conducted on a regular basis as preventative measures against the potential of an oil spill event. Place an **"X"** in the appropriate box for each item. If any response requires elaboration, do so in the descriptions and comments space provided. Further descriptions and comments should be attached on a separate sheet of paper.

Date:_____

Areas	YES	NO	Descriptions and Comments
Tank surface show signs of leakage	☐	☐	
Tanks are damaged, rusted, or deteriorated	☐	☐	
Bolts, rivets, or seams are damaged	☐	☐	
Tank support are deteriorated or buckled	☐	☐	
Tank foundations have eroded or settled	☐	☐	
Liquid Level gauges or alarms are inoperative	☐	☐	
Vents are obstructed	☐	☐	
Valve seals or gaskets are leaking	☐	☐	
Pipelines or supports are damaged or deteriorated	☐	☐	
Buried pipelines are exposed	☐	☐	
Loading/unloading area is damaged or deteriorated	☐	☐	
Connections are not capped or blank-flanged	☐	☐	
Secondary containment is damaged or stained	☐	☐	
Dike drainage valves are open	☐	☐	
Oil/water separator is functioning properly	☐	☐	
Oil/water separator effluent has a sheen	☐	☐	
Fencing, gates or lighting is non-functional	☐	☐	

Remarks: _____

_____

Inspector's Signature:_____ Date:_____

ATTACHMENT D

SPILL PREVENTION BRIEFING RECORD

This form is used to conduct Spill Prevention Briefings. These briefings will be conducted at intervals frequent enough to assure adequate understanding of the SPCC Plan for this facility. These briefings should also highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures. Personnel should be instructed in operation and maintenance of equipment to prevent the discharge of oil and applicable pollution control laws, rules, and regulations.

Date:_____

Attendees: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Topics and Issues: _____
_____
_____
_____
_____

Recommendations and Suggestions _____
_____
_____
_____
_____

Briefing Conducted By: _____ Date: _____

ATTACHMENT E

TRAINING RECORD

This form is used to record training activities. Training should only be conducted by qualified individuals. The training secessions should be administered on a regular basis to update facility personnel in the use of equipment and procedures to minimize oil discharges, mitigate or abate any oil spill events.

Date:_____

Attendees: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Topics: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Training Conducted By: _____ Date: _____

ATTACHMENT F

SPILL INFORMATION RECORD

This form is used to record spill information from an oil discharge or release in harmful quantities into or upon navigable waters of the United States or adjoining shorelines as defined in 40 CFR Parts 110 & 112.4.

Facility Address and Telephone Number: _____

_____

Spill Date and Time: _____

Type of Material Spilled (for example, No. 2 Fuel Oil): _____

_____

Estimated Quantity Spilled: _____

Estimated Quantity Entering Navigable Waters (not facility drainage): _____

Source of Spill: _____

Description of Affected Area (for example, spill covered dirt area 80 feet long by 20 feet wide):

_____

Cause of Spill: _____

Injuries or Damages: _____

Corrective Actions Taken: _____

Evacuation Needed? _____

Names of Other Parties Contacted: _____

Names of Other Parties to be Contacted: _____

ATTACHMENT G

AGENCY NOTIFICATION REPORT

This form is used to provide written notification to the U.S. EPA Regional Administrator of an oil discharge of more than 1,000 U.S. gallons into or upon navigable waters of the United States or adjoining shorelines in a single event or discharged oil in harmful quantities, as defined in 40 CFR Part 112.4 into or upon navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA occurring within any twelve month period. This report and a copy of your SPCC Plan with any amendments are required to be submitted to the U.S. EPA Regional Administrator within sixty (60) days from the date of the spill event.

Name and Address of Facility: _____

_____

Owner Name and Address Information: _____

_____

Date of Initial Facility Operation: _____

Facility Maximum Fuel and Oil Storage Capacity _____

Facility Average Daily Fuel and Oil Throughput _____

Provide a Description of the Facility, Including Maps, Flow Diagram and Topographical maps:

_____

_____

Date of Spill: _____ Cause(s) of Spill or Release (include a failure analysis of system or subsystem in which the failure occurred): _____

_____

Quantity and Type of Material Spilled: _____

Corrective Action(s) Taken: _____

_____

_____

Preventive Measure(s) Taken to Minimize Possibility of Recurrence: _____

_____

ATTACHMENT H

AVAILABLE EMERGENCY EQUIPMENT

Emergency equipment is available at the facility to assist in controlling a spill event or cleaning up a spill. The following emergency equipment is available at the facility:

- Absorbent material (pads, booms, etc.)
- Portable lighting
- Fire extinguishers or foam extinguishing system
- Stockpiled material fines
- Front end loaders
- Excavation equipment

ATTACHMENT I

PAST SPILL EVENT HISTORY

The facility has not experienced one or more spill events within the past twelve months or during the twelve months prior to January 10, 1974.

CONNOLLY-PACIFIC CO. FACILITY SPILL HISTORY				
Date	Description of Spill	Quantity Spilled	Reported to	Corrective Action

ATTACHMENT J

REFERENCE INFORMATION

CALIFORNIA ABOVEGROUND PETROLEUM STORAGE ACT
Chapter 6.67, Aboveground Storage of Petroleum
Health and Safety Code §§25270-25270.13

Above Ground Storage Tanks
This regulation has three basic requirements:

1) All facilities that have an aggregate AST storage capacity of over 1,320 gallons of oil or a single storage AST of more than 660 gallons must register with the state. Excluded from this reporting are fuel tanks on farm, nursery, logging site, or construction site

2) Requires all facilities with 10,000 gallons or greater of oil in AST's to implement a Spill Prevention Program to minimize the potential for environmental damage in the event of a leak or tank rupture.

3) Specifies the requirements for an Oil Discharge Contingency Plan if an individual AST exists that is at least 10,000 gallons or if the total AST capacity at the facility is 10,000 gallons or greater.

4) Requires all facilities with 1,320 gallons or greater of oil in either one AST or by a combination of ASTs to conduct a Groundwater Characterization Study, implement monthly groundwater sampling, and apply more stringent reporting requirements.

Currently Connolly-Pacific Co. does have AST over the 1320-gallon limit. For these reasons Connolly-Pacific Co. does have to report and register with the state.

Note: If a change in regulations or in Connolly-Pacific Co. petroleum product management occurs and these regulations become effective, then this SPCC Plan will be amended to comply with the additional California requirements.

REFERENCE INFORMATION

Spill Prevention, Control, and Countermeasures (SPCC) Information Guide August 1993.
United States Environmental Protection Agency Region III Office of the Environmental Protection Agency, Superfund Removal Branch.

Suggested Procedures for Development of Spill Prevention Control, Countermeasure Plan.
Published by the American Petroleum Institute.

TRAINING MATERIALS

EXAMPLE EMPLOYEE TRAINING MATERIALS

The following materials contain information that may be used in an employee-training program. These pages could be reproduced and used for overhead transparencies. Training should only be conducted by qualified individuals. These materials are provided only as guidance and should be used at the discretion of each company.

REGULATIONS

CONTAINMENT INFORMATION

CONTAINMENT INFORMATION

Connolly-Pacific Company – Pebbly Beach Facility

Area	Location	Amount of Storage	Dimensions of Storage Area		
			L	W	H
Tank Area #1	Just North of Derrick Barge S-50	1-63,000 Gallons Vertical AST (Diesel)	32.75'	32.75'	10'
Tank Area #2/ Transfer Tank Unloading Area	Just North and Next to Tank Area #1	1-4,000 Gallons Horizontal Double Wall AST Transfer Tank (Diesel)	12.5'	7.5'	8'
Tank Area #3	Just East of CAT Shop	8-500 Gallon Portable Horizontal AST (Oil). Each Tank is Individually Contained.	7.5'	4.5'	3'
Tank Area #4	Just South of CAT Shop	1-500 Gallon Horizontal AST (Waste Oil) 8-55 Gallon Drums (Oil & Used Oil Filter)	30'	6'	1'
Drum Area #1	Just North of CAT Shop	12-55 Gallon Drums (Oil)	16'	6'	1.5'

Note: Refer to Figure 2 for containment area locations.

ATTACHMENT G –

HMBP

Date run : 11/1/2011 1:09:04PM

FA0020435

Los Angeles County Fire Department

Owner/Operator Identification

Beginning Date: 1/1/2012 Ending Date: 12/31/2012

Report #5314

V111021

OWNER FILE INFORMATION

Please clearly make changes/corrections.

Owner ID: OW0020435

Owner Name: CONNOLLY-PACIFIC CO. Dvr Lic No: State:

Owner DBA: PEBBLY BEACH QUARRY Tax ID : 46-0349158

Owner Address: 1925 PIER D ST, BERTH D40 Owner Date of Birth:

LONG BEACH, CA 90802

Work/Business Phone: 562-437-2831

Billing/Mailing Address: 1925 PIER D STREET

LONG BEACH, CA 90802

ATTN/Care of:

FACILITY FILE INFORMATION

On Site Regulated Substances : Yes ___ No ___

Facility ID: FA0020435

Facility Name: PEBBLY BEACH QUARRY

Site Location: 901 PEBBLY BEACH RD

~~CATALINA, CA 90704~~ Avalon, CA 90704

Phone: 310-510-0626

Mailing Address: 1925 PIER D ST

LONG BEACH, CA 90802

Operator/Care of: SUPERINTENDENT **E-Mail Address:**

SIC Code: 1429

Operating Hours: Days: M-F Hours: 6:30-15:00

Station: 055

Date First Became Operational:

ENVIRONMENTAL CONTACT INFORMATION

Contact Name: DAVE SCOTT Phone : 562-437-2831

1925 PIER D. STREET

LONG BEACH CA 90802

Dun & Bradst.: 10-816-8485

EMERGENCY CONTACT INFORMATION

	PRIMARY CONTACT:	SECONDARY CONTACT:
Name :	PAUL ROMO	STEVEN A SCHRYVER
Title :	SUPERINTENDENT	VICE PRES.GEN MGR
Business Phone :	310-510-0626	562-437-2831
24 - Hour Phone :	562-577-0728	562-577-0721
Pager # :	Not Specified	Not Specified

ADDITIONAL INFORMATION

ASSESSORS PARCEL NUMBER: N/A

H 6-May-10

No Site Map on File

Certification: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this inventory and believe the information is true, accurate and complete.

Print Name of Document Preparer : David Scott

Signature of Owner/Operator : Steven A. Schryver

Date: 12/12/11

CCP Status: 2011 12/7/2009 Received 12/8/2010

Date: 11/2/2011

Hazardous Materials Inventory Statement

Report #5316
Run By : lundwall

Business Name: PEBBLY BEACH QUARRY
(Same as Facility Name or DBA) 901 PEBBLY BEACH RD CATALINA

Chemical Location: Unit # 2
(Building/Storage Area) FIXED CONTAINERS ON SITE

Facility ID # : FA0020435

1. Haz. Class / Grid Coordinate / Common Name	2. Trade Secret	3. Hazardous Components (For mixture only) Chemical Name	% Weight	EHS	CAS #	4. Type and Physical State	5. Quantities Max. Daily	Average Daily	Largest Cont.	6. Curies: (If radioactive)	Days On Site:	Storage Container:*	7. Units	8. Storage Codes Storage Pressure	Storage Temp.	9. Hazard Categories
THINNER Sub - Location CONTAINMENT AREA SHOP #2 If EPCRA, sign : HZ0063732 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	110	55	55.00		365	D	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	A	Y fire reactive presure rels. Y acute health chronic heal. radioactive
MINERAL SPIRITS Sub - Location DRM STORG AREA-NW CRNR OF YRD If EPCRA, sign : HZ0021118 RS: N CAS #	MINERAL SPIRITS		90.0		64475-85-0	M M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	110	0			365	L	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic		Y fire reactive presure rels. Y acute health chronic heal. radioactive
DET CORD-ALL GRAINS Sub - Location EAST OF MAIN SHOP If EPCRA, sign : HZ0063728 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste S L: Liquid S: Solid G: Gas	500	100	10.00		365	R	C A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	A	Y fire reactive presure rels. acute health chronic heal. radioactive
CAPS, ELECTRICT & NON ELECTRIC Sub - Location EAST OF MAIN SHOP If EPCRA, sign : HZ0063729 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste S L: Liquid S: Solid G: Gas	800	250	5.00		365	R	C A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	A	Y fire reactive presure rels. acute health chronic heal. radioactive
MOTOR OIL Sub - Location EAST OF MAIN SHOP If EPCRA, sign : HZ0063730 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	4,000	2,500	500.00		365	A	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	A	Y fire reactive presure rels. acute health chronic heal. radioactive

* Code / Storage Type

Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type
A	Aboveground Tank	D	Steel Drum	G	Carboy	J	Bag	M	Glass Bottle or Jug	P	Tank Wagon
B	Belowground Tank	E	Plastic/Non-metallic Drum	H	Silo	K	Box	N	Plastic Bottle or Jug	Q	Rail Car
C	Tank Inside Building	F	Can	I	Fiber Drum	L	Cylinder	O	Tote Bin	R	Other

Business Name: PEBBLY BEACH QUARRY
(Same as Facility Name or DBA) 901 PEBBLY BEACH RD CATALINA

Chemical Location: Unit # 2
(Building/Storage Area) FIXED CONTAINERS ON SITE

Facility ID # : FA0020435

1. Haz Class	2. Grid Coordinate	3. Common Name	4. Hazardous Components (For mixture only) Trade Secret	Chemical Name	% Weight	EHS	CAS #	5. Type and Physical State	6. Quantities Max Daily	Average Daily	Largest Cont.	7. Units	8. Storage Codes Storage Pressure	Storage Temp.	9. Hazard Categories
		CASTING PROTECTION Sub-Location: EAST OF MAIN SHOP If EPCRA, sign : H00063737 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	55 Curies: (If radioactive)	55 Days On Site: 365	55.00 Storage Container:* E	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic Amt:		fire reactive presure rels. acute health chronic heal. radioactive
		WASTE OIL Sub-Location: EASTOF #2 SHOP If EPCRA, sign : H00063731 RS: N CAS #						W M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	2,000 Curies: (If radioactive)	200 Days On Site: 365	500.00 Storage Container:* R	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: 221	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic Amt: 7,000.0	A	Y fire reactive presure rels. acute health Y chronic heal. radioactive
		DYNAMITE Sub-Location: MAIN MAGAZINE #1 If EPCRA, sign : H00063737 RS: N CAS #						M M: Mix P: Pure W: Waste S L: Liquid S: Solid G: Gas	40,000 Curies: (If radioactive)	5,500 Days On Site: 365	55.00 Storage Container:* R	C A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic Amt:	A	Y fire reactive presure rels. acute health chronic heal. radioactive
		UNOCAL GUARDOL MOTOR OIL 30 Sub-Location: N CENTRAL PART OFYRD If EPCRA, sign : H00021119 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	220 Curies: (If radioactive)	0 Days On Site: 365	Storage Container:* D	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code:	A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic Amt:		Y fire reactive presure rels. acute health Y chronic heal. radioactive
		OXYGEN Sub-Location: N/W SIDE OF MAIN SHOP If EPCRA, sign : H00063735 RS: N CAS #		Components Not Necessary for Pure Chemical				P M: Mix P: Pure W: Waste G L: Liquid S: Solid G: Gas	5,055 Curies: (If radioactive)	3,370 Days On Site: 365	337.00 Storage Container:* L	B A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code:	B A: Ambient B: > Ambient C: < Ambient D: Cryrogenic Amt:	A	fire reactive Y presure rels. acute health chronic heal. radioactive

* Code — Storage Type

Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type
A	Aboveground Tank	D	Steel Drum	G	Carboy	J	Bag	M	Glass Bottle or Jug	P	Tank Wagon
B	Belowground Tank	E	Plastic/Non-metallic Drum	H	Silo	K	Box	N	Plastic Bottle or Jug	Q	Rail Car
C	Tank Inside Building	F	Can	I	Fiber Drum	L	Cylinder	O	Tote Bin	R	Other

Business Name: PEBBLY BEACH QUARRY
(Same as Facility Name or DBA) 901 PEBBLY BEACH RD CATALINA

Chemical Location: Unit # 2
(Building/Storage Area) FIXED CONTAINERS ON SITE

Facility ID # : FA0020435

1. Haz. Class / Record ID	2. Grid Coordinate	3. Common Name / Trade Secret	4. Hazardous Components (For mixture only): Chemical Name / % Weight / EHS / CAS #	5. Type and Physical State	6. Quantities: Max. Daily / Average Daily / Largest Cont.	7. Units	8. Storage Codes: Storage Pressure / Storage Temp.	9. Hazard Categories
ACETYLENE Sub-Location: N/W SIDE OF SHOP If EPCRA, sign : H20063736 RS: N CAS #			Components Not Necessary for Pure Chemical	P M: Mix P: Pure W: Waste G L: Liquid S: Solid G: Gas	1,600 / 1,200 / 400.00 Curies: (If radioactive) / Days On Site: 365 / Storage Container:* L	B A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	B A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	Y fire reactive Y presure rels. acute health chronic heal. radioactive
DIESEL FUEL Sub-Location: ON SITE If EPCRA, sign : H20021170 RS: N CAS # 68476-30-2			Components Not Necessary for Pure Chemical	P M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	14,500 / 7,500 / 14,500.00 Curies: (If radioactive) / Days On Site: 365 / Storage Container:* A	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	Y fire reactive presure rels. acute health Y chronic heal. radioactive
NITROGEN Sub-Location: ON SITE If EPCRA, sign : H20063710 RS: N CAS #			Components Not Necessary for Pure Chemical	P M: Mix P: Pure W: Waste G L: Liquid S: Solid G: Gas	1,200 / 304 / 304.00 Curies: (If radioactive) / Days On Site: 365 / Storage Container:* L	B A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	B A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	Y fire reactive presure rels. acute health chronic heal. radioactive
PETROLEUM LUBE GREASE Sub-Location: ON SITE If EPCRA, sign : H20063734 RS: N CAS #			Components Not Necessary for Pure Chemical	P M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	220 / 110 / 55.00 Curies: (If radioactive) / Days On Site: 365 / Storage Container:* D	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	Y fire reactive presure rels. acute health chronic heal. radioactive
ANTIFREEZE COOLANT Sub-Location: ON SITE If EPCRA, sign : H20063726 RS: N CAS #				M M: Mix P: Pure W: Waste L L: Liquid S: Solid G: Gas	165 / 110 / 55.00 Curies: (If radioactive) / Days On Site: 365 / Storage Container:* D	A A: Gallons B: Cu Feet C: Pounds D: Tons Waste Code: Amt:	A A A: Ambient B: > Ambient C: < Ambient D: Cryrogenic	Y fire Y reactive presure rels. Y acute health chronic heal. radioactive

* Storage Codes

Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type
A	Aboveground Tank	D	Steel Drum	G	Carboy	J	Bag	M	Glass Bottle or Jug	P	Tank Wagon
B	Belowground Tank	E	Plastic/Non-metallic Drum	H	Silo	K	Box	N	Plastic Bottle or Jug	Q	Rail Car
C	Tank Inside Building	F	Can	I	Fiber Drum	L	Cylinder	O	Tote Bin	R	Other

Date: 11/2/2011

Hazardous Materials Inventory Statement

Report #5316
Run By : lundwall

Business Name: **PEBBLY BEACH QUARRY**
(Same as Facility Name or DBA) 901 PEBBLY BEACH RD CATALINA

Chemical Location: Unit # 2
(Building/Storage Area) **FIXED CONTAINERS ON SITE**

Facility ID # : **FA0020435**

1. Haz. Class	2. Grid Coordinate	3. Common Name	Trade Secret	4. Hazardous Components (For mixture only) Chemical Name	% Weight	EHS	CAS #	5. Type and Physical State	6. Quantities Max. Daily	Average Daily	Largest Cont.	7. Units	8. Storage Codes Storage Pressure	Storage Temp.	9. Hazard Categories
		ANFO						M	50,000	25,000	55.00	C	A	A	Y fire
								M: Mix P: Pure W: Waste	Curies: (If radioactive)	Days On Site:	Storage Container:*	A: Gallons B: Cu. Feet C: Pounds D: Tons	A: Ambient B: > Ambient C: < Ambient D: Cryrogenic		reactive
								S							presure rels.
								L: Liquid S: Solid G: Gas		365	R				acute health
															chronic heal.
												Waste Code:	Amt:		radioactive

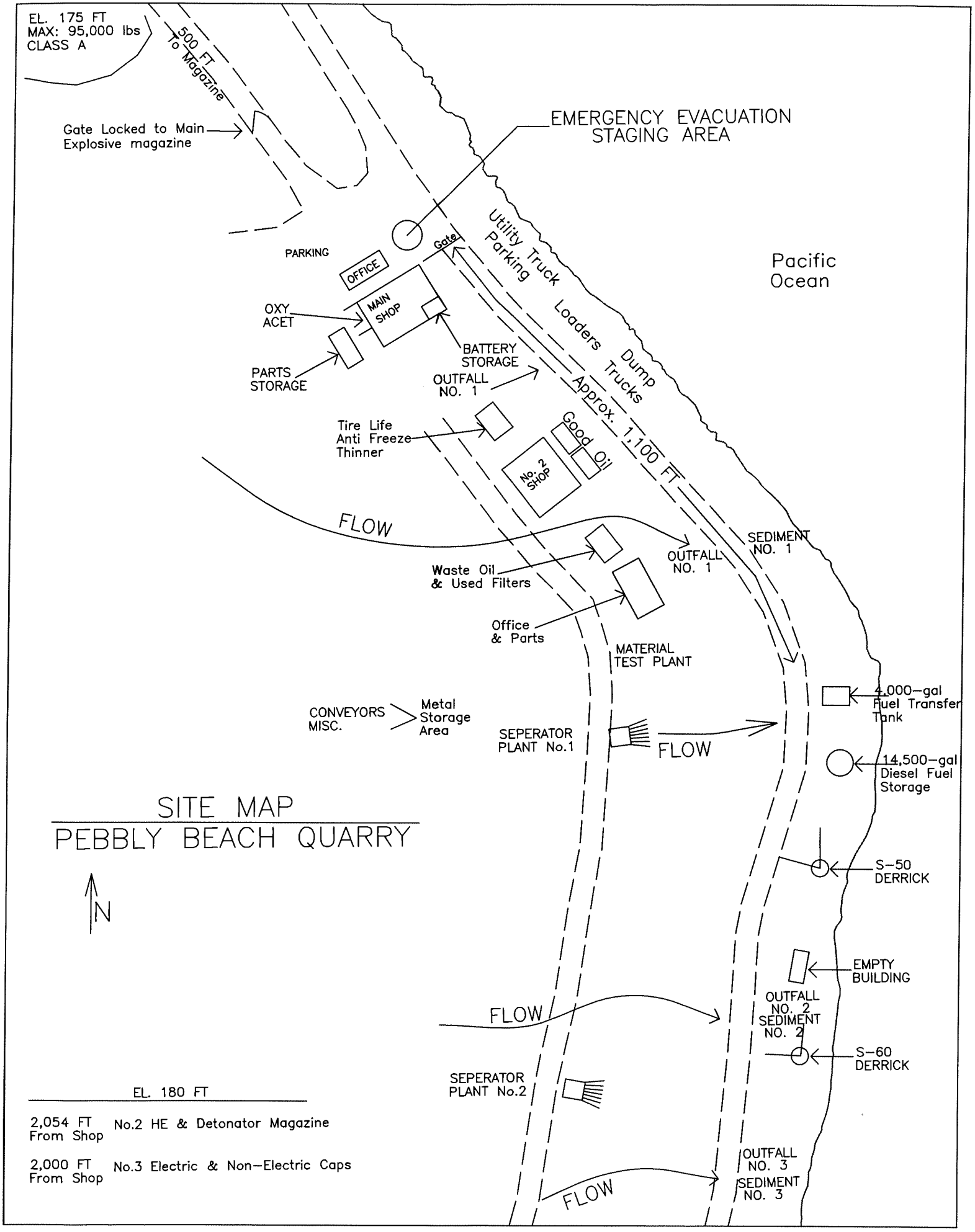
Sub - Location ONSITE

If EPCRA, sign :

RE0043733 RS: N CAS #

* Code Storage Type

Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type	Code	Storage Type
A	Aboveground Tank	D	Steel Drum	G	Carboy	J	Bag	M	Glass Bottle or Jug	P	Tank Wagon
B	Belowground Tank	E	Plastic/Non-metallic Drum	H	Silo	K	Box	N	Plastic Bottle or Jug	Q	Rail Car
C	Tank Inside Building	F	Can	I	Fiber Drum	L	Cylinder	O	Tote Bin	R	Other


EL. 175 FT
MAX: 95,000 lbs
CLASS A
500 FT To Magazine
Gate Locked to Main Explosive magazine
EMERGENCY EVACUATION STAGING AREA
PARKING
OFFICE
Gate
Utility Truck Parking
Loaders
Dump Trucks
Approx. 1,100 FT
Pacific Ocean
MAIN SHOP
OXY ACET
PARTS STORAGE
BATTERY STORAGE
OUTFALL NO. 1
Tire Life
Anti Freeze
Thinner
No. 2 SHOP
Good Oil
FLOW
SEDIMENT NO. 1
OUTFALL NO. 1
Waste Oil & Used Filters
Office & Parts
MATERIAL TEST PLANT
CONVEYORS MISC.
Metal Storage Area
SEPERATOR PLANT No.1
FLOW
4,000-gal Fuel Transfer Tank
14,500-gal Diesel Fuel Storage
S-50 DERRICK
EMPTY BUILDING
OUTFALL NO. 2
SEDIMENT NO. 2
S-60 DERRICK
FLOW
SEPERATOR PLANT No.2
OUTFALL NO. 3
SEDIMENT NO. 3
FLOW
SITE MAP
PEBBLY BEACH QUARRY
N
EL. 180 FT
2,054 FT From Shop
No.2 HE & Detonator Magazine
2,000 FT From Shop
No.3 Electric & Non-Electric Caps

ATTACHMENT H –

REFERENCES

References

Aquatic Bioassay & Consulting. 2006. Chronic Toxicity Testing.

Cotton/Beland/Associates Inc. 1986. Reclamation Plan for Pebbly Beach Quarry, Santa Catalina Island, SMP Case No. 86136-4 Connolly Pacific Company.

CRG Laboratories. 2006. Microbiology Analyses.

CRG Laboratories. 2006. Stormwater Analyses.

California Department of Fish and Game. (DFG). 2001. California's Living Marine Resources: A Status Report.

Los Angeles County, Department of Regional Planning. 1983. Local Coastal Plan, Santa Catalina Island.

Los Angeles County, Department of Regional Planning, GIS maps, http://planning.lacounty.gov/gis

Los Angeles County Title 22 – Planning and Zoning

Raimondi. P. May 2012. Characterization of the rocky intertidal ecological communities associated with Southern California Areas of Special Biological Significance. UC Santa Cruz

Southern California Coastal Water Research Project (SCCWRP). 2003. Final Report: Discharges into State Water Quality Protection Areas. Final Report to the State Water Resources Control Board, Contract 01-187-250. 26pp.

SCCWRP. September 2010. Status of California's Marine Water Quality Protected Areas. Technical Report 631

SWRCB. 1979. California Marine Waters Areas of Special Biological Significance Reconnaissance Survey Report: Santa Catalina Island Subareas One-Four, Los Angeles County Water Quality Monitoring Report No. 79-6. 192 pp.

SWRCB. 1981. California Marine Waters Areas of Special Biological Significance Reconnaissance Survey Report: Santa Catalina Island Subarea II North End of Little Harbor to Ben Weston Point and Subarea IV Binnacle Rock to Jewfish Point, Los Angeles County Water Quality Monitoring Report No. 81-10. 190 pp.

SWRCB. 2009. California Ocean Plan

SWRCB. 1997. Water Quality Order, 97-03-DWQ, NPDES General Permit No, CAS000001, WDR for Discharges of Stormwater associated with Industrial activities excluding construction activities
SWRCB February 2012. Program Final Environmental Impact Report, SCH# 2011012042, Exception to the California Ocean Plan for Areas of Special Biological Significance Waste Discharge Prohibition for Stormwater and Nonpoint Source Discharges, with special Protections

SWRCB. March 2012. Resolution 2012-002: Approving Exceptions to the California Ocean Plan for selected discharges into areas of special biological significance, including special protections for beneficial uses and certifying a program environmental impact report.

The American Waterways Operators. 2012. Responsible Carrier Program.

ATTACHMENT I –

AMENDMENTS

AMENDMENTS

This Waterfront Plan will be reviewed and recertified by the Responsible Person (as indicated in the implementation team) annually and whenever it is amended. Recertification will be documented below.

Amendment No.	Summary of Amendment	Name/Title	Signature/Date

ATTACHMENT D

AIR PERMITS AND AIR PROGRAM
SEE ATTACHMENT D OF WATERFRONT PLAN

Alta Environmental
November, 2013

ATTACHMENT E

SWPPP

SEE ATTACHMENT E OF WATERFRONT PLAN

Alta Environmental
November, 2013

ATTACHMENT F

SPCC

SEE ATTACHMENT F OF WATERFRONT PLAN

ATTACHMENT G

RECLAMATION PLAN

Alta Environmental
November, 2013

III. Reclamation Plan

III. RECLAMATION PLAN

A. Goal of Plan

The nature of the quarry operation is such that the site will not be reclaimed until the source materials are depleted or until the landowner chooses not to lease the property for quarrying purposes. Source materials are extracted directly from the cliff face, and quarrying proceeds into and along the cliff face. Therefore, final grading and revegatation will not occur until quarrying activities cease altogether.

The method of reclamation via final grading and revegetation is described in detail in this section. In general, reclamation will occur in four zones as follows:

Zone 1: Production Areas

Production areas will be graded to direct surface water runoff toward swales along the inner edge of the beach. The swales will serve to slow surface flow and thereby minimize surface runoff into the ocean.

Zone 2: Unconsolidated Bench Faces

The outer edges of slope faces will be graded at a 1:1 slope and planted with native vegetation. Slopes steeper than 2:1 will be bordered at the tops and toes by armor rocks and thorny barrier plants, and the slopes themselves will be revegetated.

Zone 3: Shoreline Slope

Shoreline slopes will be protected from erosion and unwarranted trespass by larger armor rocks.

Zone 4: Production High Walls

Upon cessation of mining, a final blast will be taken to loosen debris, and the high wall will be scaled to remove any loose rocks or overhangs. The resultant muck pile will be left at the base of the high wall at its natural angle of repose. Both the high wall and muck pile will be revegetated, and thorny barrier plants may be used along the muck pile base to discourage access.

Exhibit A, contained in the back pocket of this report, provides a visual representation of the reclamation plan. The plan is described in detail on the following pages.

B. Ultimate Use of Land

Since 1934, some form of quarrying activity has occurred on the subject site. Initially, the lease boundaries included a smaller land area, but additional acreage has since been added to the quarry. It now encompasses approximately 208 acres of land.

The current operator, the Connolly-Pacific Company, began mining the site in 1934 and may continue to do so beyond the year 2001. When the current lease expires, a new lease may be granted to Connolly-Pacific or a similar concern, or the Santa Catalina Island Company, the organization which owns the site, may choose to revert the property to its original open space state or to develop the property in accordance with long-range plans.

The Santa Catalina Island Local Coastal Plan, a Los Angeles County document which guides island development, calls for quarry operations to continue on the site. This plan has no specific target date, but it could be amended at any time. (See reference 2, Bibliography)

Since the quarry activities and reclamation procedures will leave the site in a condition approximating natural conditions, the best use of the reclaimed site would be open space. In fact, the reclamation plan has been designed to revert the site to its original condition and to incorporate the site into the adjacent Open Space and Conservation Easement area.

Any other land uses proposed in the future would need to conform to land use policies and restrictions in effect at that future date. All potential land uses can not be anticipated at this time, but for the purpose of this report, it can be stated that open space uses should prevail.

Proposed Reclamation Methods

1. Soil Salvage

A very thin soil layer covers the cliff tops above the quarry operation. The soils are held together by the grassy chaparral vegetation.

During the actual blasting and mining of the site, the soil is incorporated into the rubble pile which forms at the base of the cliff, and it is therefore unsalvagable. As the rocks are crushed into pebble and sand sized grains, the soil becomes part of the gravel mixture. The soil cannot be recovered, and even if it could, it would be necessary to preserve it for unreasonable periods of time due to the nature of the mining operation and the projected date for quarry reclamation.

Since the soil is unsalvagable, rapid soil growth will have to be encouraged on the barren slopes and benches during the reclamation process. Slopes may be graded in a stair-step manner to allow root systems to develop quickly. Hydroseeding is the proposed method of revegetation. The hydroseeding process mixes fertilizers and legumes with plant seed material so that new plants on infertile areas are provided with vital nutrients. These nutrients enable the plants to establish themselves more rapidly and thereby begin the process of soil reconstruction.

2. Grading

The nature of the rock quarry operation is such that very little backfilling of material will be required. Since this quarry is on the Catalina Coast, all

quarrying is done above the high tide elevation to avoid possible intrusion of water into any pits created in conjunction with the quarrying operation. The standard method of operation is to create benches or shelves as the quarrying operation progresses inland. This results in a stair-step effect which can be utilized in the ultimate reclamation of the land at the termination of the quarry operation. Nominal grading of these benches or shelves will be required to establish a more natural appearance and to control runoff from the slopes and benches.

Stabilization of the site will be undertaken in two basic ways. First, the production high walls will be subjected to a final blast at the termination of the operation. This final blast will result in a natural rockfall which can be anticipated to have an angle of repose of approximately 1.5:1. This action will remove any overhangs and will create a face somewhat akin to that found in the natural terrain adjacent to the site. Other areas will be stabilized through grading to accomplish basic slopes no steeper than 2:1. Where slopes of necessity may exceed 2:1, special armor rock barriers will be positioned to discourage access and reduce hazard. These techniques are described in greater detail in the following material contained in the Connolly-Pacific Pebbly Beach Quarry Reclamation Plan originally completed in 1976.

As indicated above, there will be four distinct zones subject to future rehabilitation upon cessation of mining and production activity. The zones are indicated graphically on Exhibit A (contained in the back pocket of this report) and are described as follows:

Zone 1 Production Work Areas With Unconsolidated Crushed Rock Subbase. These areas are used for stockpiles, haul roads, loading areas, conveyors, crushers and miscellaneous equipment and structures.

Zone 2 Unconsolidated Bench Faces.

Zone 3 Shore Line Slope.

Zone 4 Production High Wall.
"Muck Piles" of broken rock may or may not be present at the toe of the highwall.

The quarry will be reclaimed as undeveloped open space to make it topographically and vegetatively compatible with the surrounding natural sea coast environment of this portion of Santa Catalina Island.

Grading Plan

Zone 1 Production Areas.

Production areas will be left at a grade that will direct surface water runoff back from the outer edges of the benches into swale areas constructed along the inner edge of the benches. The swale areas will be depressed about 12 inches and filled with a layer of

graded (3 inch to 12 inch) crushed rock. Surface runoff flowing through the swales will be slowed. This will result in longer retention time with correspondingly greater downward percolation into the unconsolidated material of the benches, thereby minimizing surface runoff to the sea. Larger retarding basins will be placed in areas which may receive greater concentrations of water.

Zone 2 Unconsolidated Bench Faces.

The slope faces of the outer edges of the unconsolidated benches will be graded to a slope no steeper than 2:1, or as approved by the County engineer.

Zone 3 Shore Line Slope.

The shore line slope will be graded to a slope no steeper than 1:1 and then, as necessary, protected from excessive erosion by armor rock. The slope will discourage public boat access to the site.

Zone 4 Production High Walls.

Upon cessation of mining, a final blast will be taken and the subsequent muck pile will be left as a barrier at its natural angle of repose (about 1.5:1). To further discourage access to the toe of the high wall, an armor rock berm with thorny barrier plants will be constructed along the toe of the muck pile.

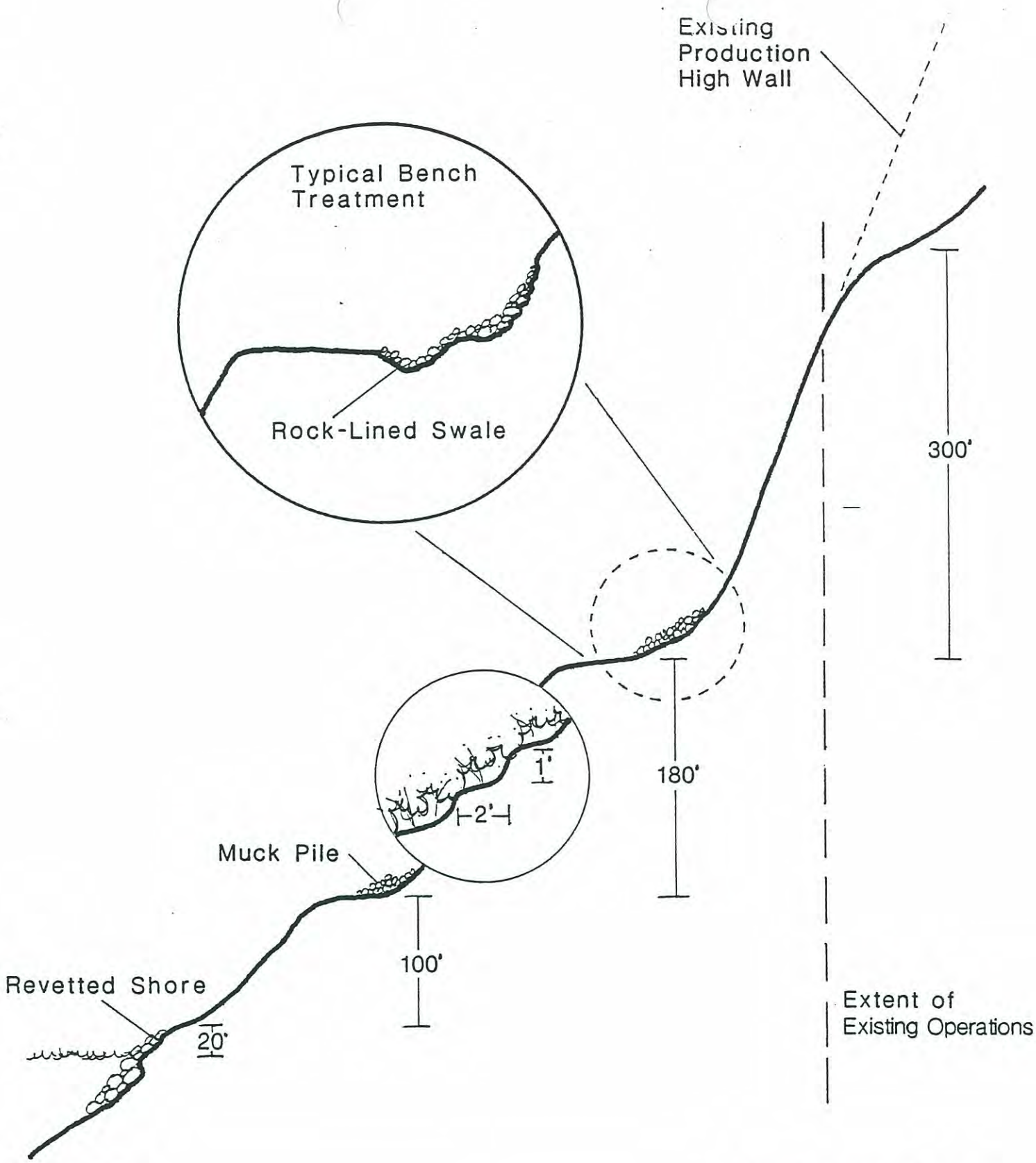
The crest of the high wall will be scaled to remove any overhangs or loose rock. The armor rock berm will also be useful as a barrier in stopping most loose rock that might, in the future, break loose and fall from the high wall.

It may be possible to grade the bench faces in a stair-step fashion as shown on Figure III-1 on the following page. This grading technique will encourage rapid plant growth by providing a series of level surfaces. Plants will be able to develop root systems more quickly on the level areas.

Drainage, Runoff, and Sediment Control

Because the material which will remain following the quarry operation is largely unconsolidated, it will be relatively porous in nature. Extensive runoff, therefore, is not anticipated and would only occur in periods of intense rainfall. However, rapid runoff from the slope faces onto the bench areas could result in substantial accumulation of water on these benches. This would then flow along the benches to predetermined drainage courses and then into the ocean.

In order to control the conduct of sediment into the ocean, special retention areas will be created using low-level berms. Rock weir structures will provide for overflow of the retention basins. The basic purpose of the pond is to allow sediment contained in the water to drop out of suspension as the



Pebbly Beach Quarry

No Scale

Figure III-1
Typical Cross Section
Final Topographic Conditions

water is stilled in the pond. The velocity of flow of the runoff on the benches will be controlled through the gradient or through the creation of cross berms on the benches designed to reduce the velocity of water running down these benches. Where the gradient of the bench will permit, swales will be installed on the inner edge of the bench. Since these swales will be filled with a layer of 3 to 12 inches of crushed rock as described above, little sediment is expected to reach the lower benches. However, any sediment which does reach the lower benches will be contained within the basins described above and the sediment allowed to settle before the water is overflowed into the ocean. A typical basin cross-section is shown on the following page. Proposed basin locations are displayed on Exhibit A (located in the back pocket of this report).

Minimization of Residual Hazards

To reduce any residual hazards at the site, removal of overhanging faces will be undertaken as described in the stabilization section above. Access to the site may be controlled through fencing and locked gates to reduce any attractiveness the site may have for the curious. All equipment will either be removed from the site or buried or otherwise disposed of. Any structures or buildings will be dismantled and, any remaining stockpiled material or tailing material will be levelled to eliminate any cone or steep-sided pile shape.

Land and Water Interface

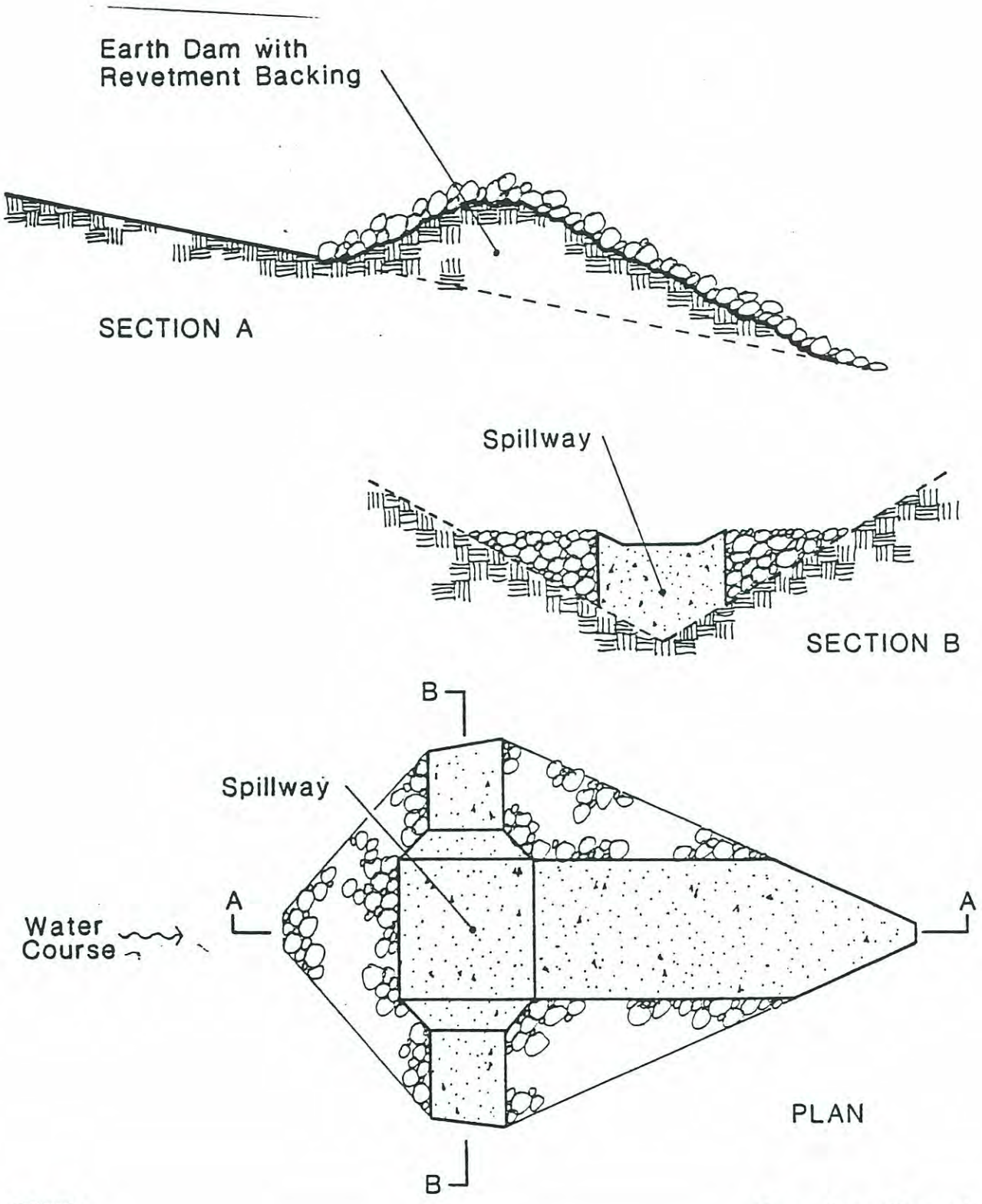
During quarrying operations, the interface between land and water is protected through the placement of heavy revetment stone. This stone will remain in place following the termination of quarry operations. Additional stone will be placed on top of existing stone revetment, if required, to raise the level of the top of the revetted slope to at least +12 mean lower low water.

Sequence and Timing

Creation of benches and shelves will occur as the quarry operation continues. During the quarry operation, control of runoff and sedimentation will occur as appropriate to reduce erosion and sedimentation. At the conclusion of the quarry operation, the permanent improvements described above will be undertaken. For a two-year period following the cessation of operations, the site will be periodically inspected and repairs made to any damage which has occurred to the erosion and sedimentation control features. If any major erosion is experienced as a result of failure of any of the features or unusually heavy storm conditions, equipment will be brought in to eliminate gullies and other flow areas and to reestablish adequate control measures.

3. Revegetation

Several factors must be taken into consideration in the selection of plant materials and planting methods for the five zones described above. The climate exposure zones, soils characteristics and planting objectives all help to determine the revegetation strategies to be used.



Catalina Quarries

Figure III-2
Sedimentation Trap Concept

Climate Exposure Zones

The site can be separated into two distinct plant climates, and these climates are divided further into three exposure zones.

The Thermal Belt Coastal Line lies inland of the coast, above the seacliffs, and it is influenced by inland conditions 15 percent of the time. The Marine Influence Coastal Climate ranges from tide line to the base of the high wall, and this area is subject to ocean breezes and high winds.

The three exposure zones can be described as follows:

First Zone: This is the shoreline zone. Plants within this zone must be able to adapt in salty soil and must be able to withstand salty driven spray.

Second Zone: This zone lies inland from the surf line and is protected from ocean spray. Both soil and air, however, contain considerable salt.

Third Zone: This zone lies above the surf yet still contains alkaline soils. Humidity prevails.

Soil Characteristics

The quarrying activities and final grading operations will leave a variety of soil types which individually will be able to support only certain plant materials. Alkaline soils will prevail along the coastal zone. The unconsolidated benches, production areas and muck piles will consist of gravelly materials. These new soils will be sterile and in need of balanced nutrients.

Planting Objectives

Certain plant materials will be needed to bind gravelly soils and prevent erosion. Other plants will be planted to discourage trespass. In all cases plants will be chosen for their ability to grow quickly and to blend in with the surrounding native vegetation.

Method Proposed

Hydroseeding would be the most efficient and cost-effective means of revegetating the various slope areas. Hydroseeding is a process in which plant seeds, hormones, fertilizers, wood fiber and water are combined into a slurry which is sprayed onto the benches and slopes, thereby insuring even distribution of seeds, available plant nutrients and some protection from erosion. Hydroseeding could be supplemented with some planting.

It should be noted that the potential life of the quarry and the projected date for reclamation prevent precise hydroseeding procedures from being detailed at this point in time. Replanting techniques may become more sophisticated over time. It may be stated, however, that the best method of hydroseeding will be used at the time of reclamation.

The hydroseeding procedure will permit the selection of specific plant species and other materials for particular climate zones, soil types and planting objectives. The chart on the following pages outlines the four zones of concern and the characteristics and planting requirements of these zones. Appendix E contains a list of plant species which may be included in the hydroseed mixtures.

The following plants are typical varieties found in the Coastal Sage Scrub community:

Artemisia californica	(California sagebrush)
Encilia californica	(California encelia)
Eriogonum fasciculatum	(California buckwheat brush)
Eriophyllum confertiflorum	(Golden yarrow)
Happlopappus squarrosus	(Sawtooth goldenweed)
Horkelia cuneata	(Wedge-leaved horkelia)
Sallvia leucophylla	(Purple sage)
Salvia mellifera	(Black sage)
Rhua integrifolia	(Lemonade sumac)

Any of these plants would grow well and would blend in with existing native vegetation.

To ensure that the plants establish themselves quickly, a temporary irrigation system will need to be provided. This system should be operated for at least six months, depending on the season in which the slopes are revegetated.

REVEGETATION SCHEME

1: Production Work Areas

Sterile soils, gravelly soils, alkaline soils, sheet flow water runoff, limited water supply

Grasses and shrubs with ability to survive in sterile soils
Plants with extensive root systems
Sumacs and other species with alkaline tolerance
Soil binding species
Drought tolerant species

2: Unconsolidated bench slope faces

Sterile soils, gravelly soils, slopes, erosion, limited water supply, human encroachment

Grasses and shrubs with ability to survive in sterile soils
Plants with extensive root systems
Soil binding species
Drought tolerant species
Armed plants

3: Shoreline slope

Alkaline soils, human encroachment

Sumacs and other species with alkaline tolerance
Armed plants

4: Production high walls and slump pile at base

Solid bedrock material, sterile soils, gravelly soils, slopes, erosion, limited water supply, human encroachment

Plants with extensive root systems
Grasses and shrubs with ability to survive in sterile soils
Soil binders
Drought tolerant species
Armed plants

C. Relationship to General Plan and Land Use

1. General Plan Considerations

The Santa Catalina Island Local Coastal Plan serves as the adopted County planning document for Cataline Island. This Local Coastal Plan forms part of the County of Los Angeles General Plan Coastal Element and it has been formulated to adhere to general planning policies set forth by the County General Plan. If a proposed project is found to be consistent with the Santa Catalina Island Local Coastal Plan, it may be considered consistent with the County General Plan.

The Local Coastal Plan's New Development section describes existing land uses within specified planning areas and outlines the type of new development which should occur during the life of the Plan. The Pebbly Beach Quarry lies within the Pebbly Beach-Seal Rocks Plan area, and the Plan recognizes the quarry area as "an important source of breakwater armor rock and rubble". Land use policies recommend that these mineral extraction activities be continued, and the related land use map indicates the area in which these operations should be located.

Based on the above findings, it can be concluded that the existing quarry is consistent with the Santa Catalina Island Local Coastal Plan and is therefore consistent with the County General Plan.

Since the quarry has a lifetime of at least 25 more years, its long term use is consistent with a long range planning document. Land use policies may change over time, and it is anticipated that reclamation activities will be consistent with these changes. In any case, the reclamation plan may be amended to conform to prescribed land use policies.

2. Zoning Considerations

At present, the subject site is zoned M-3, as are the majority of surrounding properties. The M-3 zone is a multi-use zone, and several uses are permitted upon the granting of a conditional use permit. The open space uses proposed by the reclamation plan do not require conditional use permit approval. If at any time during or after reclamation a new use is proposed, it must be reviewed for conformance with the requirements of the M-3 zone.

D. Cost of Reclamation

The County Surface Mining Permit Ordinance requires that the cost of reclamation activities of completion be estimated. Costs should be computed at the estimated cost of the project at the time it is accomplished; that is, the actual end date of quarry operation must be stated, and cost estimates should include an assumed inflation rate from the present date to the end date.

The quarry still contains great quantities of material and may continue to be in operation well into the next century; therefore, estimation of reclamation costs becomes a difficult task. Cost figures would be highly speculative and would not take into account reclamation process advances at the time of actual reclamation, therefore future costs cannot be estimated at this point in time.

The anticipated costs, however, can be divided into reclamation costs and maintenance costs as follows:

Reclamation Procedures

- Final blasting for loose materials
- Final grading to achieve desired topography
- Construction of erosion and sedimentation control facilities
- Slope stabilization
- Revegetation via hydroseeding

Maintenance

- Periodic site inspection
- Regrading or revegetation as necessary
- Cleaning of sedimentation traps.

Table 1 provides estimates of these costs in 1986 dollars.

E. Assessment of Plan on Future Mining Operations

The operator of the Pebbly-Beach Quarry, the Connolly-Pacific Company, has leased from the Santa Catalina Island Company 208 acres of land for mineral extraction purposes. The property incorporates approximately 7605 feet of shoreline, and it extends over 2000 feet up the seacliff. The existing lease agreement permits Connolly-Pacific to mine the site beyond the year 2001.

As of January of 1986, 40 million tons of rock had been removed from the quarry. The quarry maps included in this report indicate those portions of the site from which material has been extracted and furthermore, they reveal which areas will be mined during the period of the existing lease agreement. The quarry operators plan to proceed in accordance with this plan, and reclamation will occur in accordance with the procedures outlined herein.

Ultimately, all quarried areas must be reclaimed, and the barren slopes will be revegetated with native plant materials so as to blend in with existing untouched slopes. Due to the nature of the site and the quarrying operation (see description in the sections of this report titled "Geology" and Mining Operations"), these slopes and adjacent slopes could readily yield additional rock materials without significant impact on the environment. Any reopened quarry areas would be subject to later reclamation similar to that proposed by this report.

The foreseeable obstacles to future mining operations on reclaimed cliffs include changes in existing lease agreements which might restrict mining operations and alterations to County land use policies which could limit the extent of the use. Current lease agreements and General Plan policies encourage the existing extraction operations. As long as these policies are in effect, and given the nature of reclaimed slopes, the reclamation plan as proposed should not hinder future mining operations.

COST ESTIMATES

ACTIVITY	ESTIMATED COST
Reclamation Procedures	
1. Final blast for loose material 2. Grading 3. Erosion and sedimentation control 4. Slope stabilization	$ 50,000.00
5. Revegetation	$ .03-.11/sq.ft.
Maintenance	
1. Site Inspection	$ 1,000.00/visit (6 to 8 visits per year)
2. Regrading or revegetation	Varies as needed
3. Cleaning of sedimentation traps	$ 3,000.00 (once a year)

Appendices

APPENDIX A

ENVIRONMENTAL SETTING

APPENDIX A

ENVIRONMENTAL SETTING

This section has been prepared as a discussion of the environmental setting of the Pebbly Beach Quarry site. No initial study has been prepared for the project because it is possible that the project is exempt from the requirements of CEQA. Prior court rulings (Han-Joachim Dehne vs County of Santa Clara) have established CEQA exemptions for the expansion and improvement of existing land uses. The quarry is a pre-existing land use.

1. Biology

Plant Life

Pebbly Beach Quarry lies within the Coastal Sage Scrub plant community, and numerous woody and grassy plants grow in this community. Extensive field studies have been performed in the area for the Santa Catalina Island Local Coastal Plan, and these studies reveal that no endangered plant species grow onsite.

The quarried seacliffs contain no vegetation, but typical members of the sage scrub community cover the unquarried areas within the least boundaries. Natural revegation has occurred along the toes of slopes and muck piles and around the base of material stockpiles within the quarry production area.

Animal Life

The Coastal Sage Scrub community supports a variety of animal life, from small birds and reptiles to large grazing mammals. Mostly small mammalian, reptilian and avian species populate the vegetated cliffs above the quarry, and seagulls can be found using the graded benches for stopovers. No rare or endangered species are found onsite.

2. Archaeology

Santa Catalina Island has been surveyed thoroughly for archaeological artifacts. In 1970, the UCLA Archaeological Research Unit conducted a study which included the Pebbly Beach area. The actual quarry was not surveyed but the unquarried clifftops within the lease boundaries were. Only one site was recorded within the lease boundaries, and this 20' x 90' site contained shell fragments and a fire cracked rock.

Several recorded sites lie within a one mile radius of the quarry and these sites contain similar shell and rock fragments. No burial grounds or village areas were discovered.

3. Water Resources

No major watercourses traverse the subject site. A small stream does outlet onto the cliff face, but this stream does not drain a substantial watershed. It contains water during periods of rainfall.

The San Pedro Channel lies directly offshore, and it serves as the searoute between Catalina Island and the mainland. Boating activity occurs regularly in the channel.

4. Natural Resources

The quarry serves as an important source of material for breakwater construction and the construction of other marine and land-based projects. Since early this century the quarry has provided rocks for needed projects, and it will continue to do so for some time, given the large volume of material still contained within the seacliffs.

5. Visual Resources

Most of Catalina Island has been set aside for the conservation of resources, including visual resources. The steep seacliffs provide a dramatic view from the channel and, on clear days, from the mainland.

The Pebbly Beach Quarry has been a part of this seascape since the early part of the twentieth century, and although it does not add to the scenic qualities of the island, it is a familiar part of that seascape. The reclamation procedures applied to the quarry will result in the reduction of the visibility of the quarry. Subsequent plant growth should reduce the scar features.

6. Noise

Quarrying activities necessarily generate noises, including heavy equipment operation and blasting. Equipment operation occurs on a daily basis, but explosive blasting takes place very infrequently, perhaps once every six to eight months.

The site is removed from developed areas, therefore day-to-day noise is not problematic. The infrequent blastings, however, can be heard from some distance. Upon the cessation of mining operations and the subsequent reclamation of the site, only naturally occurring noises will be heard.

7. Transportation/Circulation

The quarry is accessible from both land and sea. Graded, unimproved private roadways bring automobile and truck traffic from Avalon to the site and back again. Access is restricted to quarry workers and related quarry personnel. The San Pedro Channel serves as the searoute between the quarry and construction sites on the mainland. Mooring bouys lie offshore and at the quarry loading areas.

As requested by Cotton/Beland/Associates, a records search was conducted at the Archaeological Survey, located at UCLA, on March 12, 1986. The appropriate 7.5 minute quadrangle maps for each study area were consulted to determine if any archaeological sites were recorded within the study area boundaries or within a half-mile radius of each study area. Archaeological site records were then consulted to obtain the descriptions of those sites within and near the study areas.

According to the records, housed at the Archaeological Survey, a survey of Santa Catalina Island was conducted in 1970 by UCLA from which areas surveyed and sites located are mapped and recorded. This record shows that both quarries have not been systematically surveyed, and portions of the surrounding areas of each quarry have not been surveyed.

The sites which are located in and around a half-mile radius of each quarry are predominately shell and lithic scatters, with some stone tools and other evidence of human presence. The records indicate that no burials or occupation sites have been found thus far in or near the two study areas, and that both quarries were sites of prehistoric quarrying activities and lithic modification.

Santa Catalina Island is one in a series of offshore ridges forming the Channel Islands. The island has a long and rich cultural history as evidenced by the archaeological record. Throughout the prehistoric periods, Santa Catalina Island was the largest source of steatite in the state of California. The quarrying of steatite began during the Late Archaic Period of 4000-2000 B.C. (Chartkoff and Chartkoff 1984: 135). The steatite was traded often as finished vessels and ornaments to other Indians (Moratto 1984: 119).

SOURCES

Chartkoff, Joseph L. and Kerry Kona Chartkoff
The Archaeology of California
1984 Stanford: Stanford University Press

Moratto, Michael J.
California Archaeology
1984 Orlando: Academic Press, Inc.

EMPIRE QUARRY

SITE #	AREA	DESCRIPTION	COMMENTS
598	na	Soil discoloration, Shell scatter	Core tools, mortar and body sherd found
392		Surface scatter	Flakes of various materials found
391		Surface scatter	Cores, flakes, flake tools, choppers, and basalt cores found
440	10 x 5m	Shell scatter	Unmodified material
439	10 x 10m	Soil discoloration Shell scatter	Flake tool found; disturbed
441	17 x 20m	Soil discoloration Shell scatter	Erosion, bulldozing and potted
390	16 x 20m	Shell scatter	Volcanic core found
393	na	Surface-flakes	
399	na	Soil discoloration Shell scatter	Quartz and volcanic flakes, volcanic flake tools
398	12 x 16m	Soil discoloration Shell scatter	Crude unmodified volcanic flakes; slate tools pestle and mano found
397	20 x 12m	Soil discoloration Shell scatter	Cobble core tool, volcanic core and hammer stone found
395	15 x 12m	Shell scatter	Flakes, scraper blade found
402	10 x 10m	Shell-surface	Unmodified flake found
401	5 x 3m	Lithics-surface	Cobble core tools, utilized flake found
400	10 x 12m	Shell scatter	Flaked slate implement, scraper-chopper found
486	6 x 10m	Shell and Lithics	Core tool; disturbed by animals
485	20 x 17m	Shell midden, lithics	Core tools, cobbles, and

			flakes found
151	25 x 20m	Shell scatter	Core and flake tools
149	20 x 12m	Shell scatter	Core tools and debitage found
150	na	Shell scatter Stone tools	Core tools, flakes found
152	na	Shell scatter Stone tools	Core tools, flakes found

PEBBLY BEACH QUARRY

SITE	AREA	DESCRIPTION	COMMENTS
306	3 x 10m	"Roasting pit"	Site bulldozed
307	na	Soil discoloration, flake and tool scatter	Animal disturbance
381	10 x 15m	Soil discoloration, Lithic material	Erosion, bulldozed
380	8 x 8m	Tool, flake scatter Soil discoloration	Erosion
389	20 x 90Ft	Soil discoration, Shell scatter	Bulldozing fire-cracked rock
388	10 x 20Ft	Soil discoloration,	Bulldozing; fire-cracked rock feature
362	5 x 10m	Soil discoloration	Bulldozing
363	7 x 14m	Soil discoloration, Shell scatter	Erosion; flakes,lithic tools
364	3 x 3m	Tool scatter	Erosion; core and flake
341	na	Rock scatter, soil discoloration	Bulldozing; possible roasting pit feature
365A,B,C		Soil discoloration, Cobble scatter	Erosion; flake tool on B

366	10 x 10m	Soil discoloration, Cobble scatter	Erosion, bulldozing flake tools and cores unmodified flakes
367	25 x 20m	Soil discoloration, Shell scatter	Bulldozing, erosion
368	8 x 5m	Soil discoloration, Shell scatter	Bulldozing, erosion
369	8 x 5m	Soil discoloration, Cobble scatter	Erosion
370	3 x 3m	Lithic scatter	Erosion; core tool, unmodified flakes
319	3 x 3m	Shell scatter	Erosion; fired rock, flakes, lithic tools

APPENDIX B

APPLICANT'S
STATEMENTS OF RESPONSIBILITY

APPENDIX C

QUARRY LEASE

Rec Copy

ORIGINAL

ASSIGNMENT OF QUARRY AGREEMENT

THIS AGREEMENT, dated the 29th day of August, 1977, by and between Connolly-Pacific, Co., a California corporation (herein "Connolly"), Santa Catalina Island Company, a Delaware corporation (herein "SCICo"), and L. G. Everist, Inc., an Iowa corporation, (herein "LGE"):

W I T N E S S E T H:

WHEREAS, SCICo and Connolly heretofore entered into an Agreement dated January 1, 1976, a copy of which is attached hereto marked Exhibit A and by this reference made a part hereof (herein "Quarry Agreement") by which SCICo granted to Connolly the right, pursuant to the terms of said Quarry Agreement, to quarry and remove rock from the Empire-Haldemaier and Pebbly Beach rock quarries on Santa Catalina Island, California;

WHEREAS, LGE has acquired all of the assets of Connolly, including but not limited to the name Connolly-Pacific, and wishes to continue the operation of the quarries under the name "Connolly-Pacific, a Division of L. G. Everist, Inc."; and

WHEREAS, Connolly wishes to assign the Quarry Agreement to LGE and, subject to SCICo's consent thereto, LGE wishes to accept such assignment;

NOW, THEREFORE, in consideration of the mutual promises hereinafter set forth, the parties hereto agree as follows:

1. Assignment of Quarry Agreement

Connolly assigns to LGE the Quarry Agreement, together with all of Connolly's right, title and interest therein, subject to the payment of royalties provided thereby, and the performance by LGE of all of Connolly's covenants, conditions, and stipulations contained therein.

2. Release of Connolly by SCICo

SCICo acknowledges that to the best of its knowledge and belief Connolly is not as of the date hereof in breach of any of the obligations, covenants, conditions and stipulations contained in the Quarry Agreement by it to be performed. SCICo consents to the assignment by Connolly of the Quarry Agreement to LGE and releases and forever discharges Connolly from any and all liability in

EMPIRE-HALDEMAIER AND PEBBLY BEACH QUARRIES

THIS AGREEMENT, executed in duplicate at Avalon, California, as of the 1st day of January 1976, by and between SANTA CATALINA ISLAND COMPANY, a Delaware corporation, (herein "SCICo"), and CONNOLLY-PACIFIC CO., a California corporation, (herein "Contractor").

W I T N E S S E T H:

1. RECITALS:

(a) Contractor has been conducting quarrying operations at the Empire-Haldemaier quarry and the Pebbly Beach quarry belonging to SCICo on Santa Catalina Island for more than ten years under an agreement dated July 1, 1964, as amended, for operations at the Empire-Haldemaier quarry and under an agreement dated July 1, 1964, as amended, for operations at the Pebbly Beach quarry.

(b) It is the mutual desire of the parties to extend the term of the agreements between them for such quarry operations upon the terms and conditions set forth below.

(c) It is intended that this agreement shall completely restate the agreement of the parties and shall supersede the earlier agreements referred to above.

2. QUARRY RIGHTS:

SCICo hereby extends the exclusive right, privilege and license of Contractor to quarry and remove rock from the:

1. Empire-Haldemaier Quarry described in Exhibit A; and

2. Pebbly Beach Quarry described in Exhibit B;

(hereinafter sometimes collectively referred to as "said quarries")

EXHIBIT A

for the period and upon the terms and conditions set forth in this agreement.

3. TERM:

The term of the rights heretofore given to Contractor is extended for a period of five (5) years commencing January 1, 1976, and ending December 31, 1980, both dates inclusive.

4. OPTION:

Contractor is given the option to further extend the term for three (3) successive periods of five (5) years each upon all of the following conditions:

(a) Contractor gives SCICo notice in writing of the exercise of the options hereunder on or before September 1 of the last year of the then existing term.

(b) Contractor is not in default under any of the terms and conditions of this agreement.

(c) SCICo and Contractor have agreed upon the wholesale price of rock and the minimum payments under paragraphs 6(a) and 6(d) below for the extended term on or before the first day of such extended term.

The failure of Contractor to exercise any one of the successive options within times and in the manner provided above shall automatically terminate all unexercised options and the option or options of Contractor shall thereupon expire.

5. ROCK CLASSIFICATION:

The rock (or stone) removed from said quarries shall be classified as follows:

"A" Stone: shall consist of select quarry rock or stone, all of which shall be larger than a 1-ton size, with at least fifty per cent (50%) by weight, 10-ton or over.

"B" Stone: shall have not less than forty per cent (40%) by weight in pieces of 1-ton or more.

"C" Stone: shall consist of all other classifications of rock or stone produced, including such specifications as quarry run, quarry muck, quarry wase, rip-rap, dike rock, and any products produced by reduction by crusher, grizzly, shaker or other rock plant, and not falling within categories of "A" or "B" Stone, as defined above.

6(a) ESTABLISHMENT OF WHOLESALE PRICE:

Contractor hereby establishes a beginning wholesale price for each classification of rock effective as of January 1, 1976, which price represents the net F.O.B. barge price at both quarry sites on buyers' barges before royalty payment. The wholesale price so established effective January 1, 1976, is as follows:

"A" stone:	$ 4.20 per ton
"B" stone:	$ 3.02 per ton
"C" stone:	$ 2.00 per ton

The established wholesale prices will prevail for the sale of all rock to such buyers and on all rock used by Contractor on any work performed by it. Contractor agrees to make all rock available within limits of quarry capacity to any and all buyers on buyers' barges.

The wholesale price of rock will be reviewed by SCICo and the Contractor prior to December 31 of each year during the term of this agreement, or any extension thereof. It it is necessary to change the wholesale price of the rock to properly reflect the cost of production and economic conditions, Contractor will prior to December 31 establish new wholesale prices to become effective as of the January 1 for the next ensuing calendar year and give SCICo notice of the wholesale prices so established. In the event the wholesale prices established by Contractor are not approved

by SCICo, SCICo may terminate this agreement upon thirty (30) days notice in writing to Contractor.

6(b) ROYALTY:

Contractor will pay to SCICo, as royalty for rock removed by it from said quarries, the sum of six per cent (6%) of the wholesale price established under Paragraph 6(a) above.

All royalty shall be paid to SCICo not later than thirty (30) days after the end of each calendar month, with respect to tonnage taken by Contractor during the preceding month.

With each payment Contractor will report in writing the tonnage taken by job number, scow number and rock classification.

The basis of royalty payments for all rock taken on barges which have not been weighed on scales shall, in each instance, be the weight of the barge calculated by the displacement method, and in such calculation one (1) cubic foot of displacement shall be equivalent to sixty-four (64) pounds.

Contractor, at its own sole expense, shall install on all of its barges and require buyers to do likewise, all facilities which in the opinion of SCICo are necessary for the accurate measuring of displacement and for the determining the relation between draft and tonnage, and the depth of water in the hold and its tonnage.

All barges shall be plainly numbered and shall be loaded as nearly as practicable uniformly over the entire deck area.

Representatives of SCICo shall at all times have the right to check and inspect all loaded barges.

6(c) QUANTITY REQUIREMENTS:

Contractor agrees to take from said quarries not less than sixty-five per cent (65%) (based on Contractor's most accurate estimates of approximate quantities) of the rock required to complete

its obligations under any contract or job it may undertake during the term of this agreement within the Long Beach-Los Angeles Harbor area; and agrees that, in the event and upon the completion of any such contract or job, Contractor has taken from said quarris less than sixty-five per cent (65%) of the rock required, it will pay to SCICo, as consideration for Contractor's use and occupancy of said quarries for the period of this agreement, and for the right, privilege and license granted to it by this agreement, a sum equal to six per cent (6%) of the established wholesale price per ton set forth in Paragraph 6(a) above, for rock required to complete its obligations under any of such contracts or jobs, whether or not such required rock was taken from said quarries.

6(d) MINIMUM PAYMENTS:

Contractor agrees, anything to the contrary notwithstanding, that effective as of January 1, 1976, and for each and every calendar year thereafter during the remainder of the term of this agreement, it will pay to SCICo a minimum royalty of Fifty Thousand Dollars ($50,000.00) per year.

This minimum royalty can be fulfilled by the royalty on rock taken from either of said quarries.

Contractor may carry forward for five (5) years any amount by which the actual royalty paid exceeds the minimum annual royalty and apply such amount against the minimum annual royalty.

Contractor will on or before January 31 of each year, pay the difference between actual royalties paid and the minimum annual royalty after credit is taken for any carry-over amount, as provided above.

7. ROYALTY PAYMENTS ON INCOMPLETED JOBS:

SCICO agrees to accept as full payment of royalty on jobs and orders incomplete as of December 31 of each year during the term

of this agreement, the royalty determined by the wholesale price effective during the year the bid for such order or job was taken. Contractor shall submit to SCICo a list of all incomplete orders and jobs prior to each December 31 during the term of this agree ment.

8. BID INFORMATION:

Contractor agrees to furnish SCICo with a complete copy of all bids submitted by the Contractor covering rock to be supplied from said quarries as soon as possible after submission.

9. COMPLIANCE WITH QUARRYING PRACTICES:

Contractor agrees to comply faithfully and strictly at all times during term of this agreement with the following provisions relative to the quarrying practices to be pursued by it in the operation of said quarries:

(a) STANDARDS: To operate said quarries in accordance with good standards of quarry operation and practices.

(b) DUMPING WASTE: To dump no waste from the shore into the ocean, but to use all waste to raise the quarry floors with adequate revetment at the edge of the shore line.

The purpose of this requirement is to prevent the destruction of or interference with the marine gardens and the operation of glass bottom boats at Santa Cataline Island. In the event the waste exceeds quantities that can conveneiently be used to raise the quarry floors, the disposition of such excess waste shall be made by Contractor at its own risk and expense in such manner and at such place as approved by SCICo.

SCICo agrees that, if Contractor (1) adequately rip-raps the present shore line of said quarries with the rock in a manner satisfactory to and approved by SCICo; and (2) during its

operations hereunder it refrains from dumping any material over that shore line, then, in the event that for reasons beyond its control, such as storm or act of God, the rip-rap so installed by it and approved by SCICo should wash out or be destroyed or damaged without its fault, Contractor will not be held responsible for any damage resulting therefrom. In such case Contractor shall promptly repair and restore the rip-rap on the shore line as nearly as possible in the position of the existing shore line.

(c) BENCHING: Contractor shall prepare the high banks for lower bank operations by establishing an intermediate bench and maintain an average slope from the quarry high point to the quarry low point of not steeper than one-half to one. If, in the process of rock removal, the slope becomes steeper than one-half to one, the top line shall be carried back to restore the flatter grade. Any quarry face under which men are required to work shall be kept free from all obviously loose and dangerously hanging rock or ledges.

Anything in this subparagraph (c) to the contrary notwithstanding, Contractor shall, at its own sole cost, comply with all applicable governmental regulations relating to the operations and safety of said quarries, including without limitation, any requests of the California Safety Commission in respect to benching the quarry face, especially as it affects the height of the quarry face, and other work requested by said Commission for each of said quarries.

(d) CLOSING QUARRY - BERM: Upon any termination of this agreement for any cause, and prior to the removal of any of Contractor's equipment from the quarry sites, Contractor shall construct a berm ten (10) feet in height from the then level of the quarry floor, which berm shall extend along the face of the

quarry, in such position as designated by SCICo, for the purpose of forming a permanent protection against falling stone or rock, and shall leave each of the quarries and premises in a safe, good and workmanlike condition.

(e) FIXED IMPROVEMENTS: Contractor agrees to obtain prior written approval of SCICo for any future fixed improvements, which improvements will become the property of SCICo (along with the existing fixed improvements) upon any termination of this agreement. "Fixed improvements" are defined herein as those improvements which are permanently affixed to the land, such as buildings, utilities, roads, etc., and do not include movable production equipment.

(f) MAINTENANCE: All buildings, water tanks, reservoirs and pipelines, and all docks and wharves constructed by Contractor shall be constructed and operated in compliance with all applicable governmental regulations and shall be maintained and operated at Contractor's sole risk and expense. SCICo agrees that all the personal property, machinery, tools and equipment of Contractor may be removed by Contractor at its sole risk and expense; provided, however, that should Contractor fail so to remove same within three (3) months after any termination of this agreement, then, and in that event, all such personal property, machinery, equipment and other installations shall become the property of SCICo and may be retained by it.

Notwithstanding the provisions of subparagraphs (e) and (f) above, SCICo at its election in writing, mailed to Contractor within four months after any termination of this agreement, may otherwise dispose of any and all improvements or property remaining in the quarries at the cost of the Contractor, and Contractor agrees to reimburse SCICo for all such cost.

ATTACHMENT H

REFERENCES

REFERENCES

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Los Angeles County, Department of Regional Planning. 1983. Local Coastal Plan, Santa Catalina Island.

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Southern California Coastal Water Research Project (SCCWRP). 2003. Final Report: Discharges into State Water Quality Protection Areas. Final Report to the State Water Resources Control Board, Contract 01-187-250. 26pp.

SCCWRP. September 2010. Status of California's Marine Water Quality Protected Areas. Technical Report 631

SWRCB. 1979. California Marine Waters Areas of Special Biological Significance Reconnaissance Survey Report: Santa Catalina Island Subareas One-Four, Los Angeles County Water Quality Monitoring Report No. 79-6. 192 pp.

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SWRCB. 1997. Water Quality Order, 97-03-DWQ, NPDES General Permit No, CAS000001, WDR for Discharges of Stormwater associated with Industrial activities excluding construction activities

SWRCB February 2012. Program Final Environmental Impact Report, SCH# 2011012042, Exception to the California Ocean Plan for Areas of Special Biological Significance Waste Discharge Prohibition for Stormwater and Nonpoint Source Discharges, with special Protections

SWRCB. March 2012. Resolution 2012-002: Approving Exceptions to the California Ocean Plan for selected discharges into areas of special biological significance, including special protections for beneficial uses and certifying a program environmental impact report.

The American Waterways Operators. 2012. Responsible Carrier Program.

ATTACHMENT I

AMENDMENTS

Alta Environmental
November, 2013

AMENDMENTS

This Pollution Prevention Plan will be reviewed and recertified by the Responsible Person (as indicated in the implementation team) annually and whenever it is amended. Recertification will be documented below.

Amendment No.	Summary of Amendment	Name/Title	Signature/Date