SESPE
CONSULTING, INC.
468 Poli Street, Suite 2E • Ventura, CA 93001
Office (805) 275-1515 • Fax (805) 667-8104

July 13, 2011

Mr. Ken Seumalo
Director of Public Works
City of Lake Elsinore
130 S. Main Street
Lake Elsinore, CA 92530

Re: Pacific Clay and Pacific Aggregates
RP 112 Reclamation Plan Amendment

Dear Mr. Seumalo,

On behalf of Mr. David Hollingsworth of Pacific Clay Products and Mr. Barry Coley of Pacific Aggregates please find attached a revised amendment to Reclamation Plan RP 112 that incorporates the areas covered by RP110 and SMP 108 and addresses your comment letter dated June 9, 2011.

In addition to the revised reclamation plan, we have reviewed and responded to the 'Application Form Surface Mining and Reclamation Plan' requirements attached to your letter as follows:

Item	Submittal Requirement	Response
1	Completed and signed application and filing fees	Included with initial application
2	Signed agreement for cost recovery	Included with initial application
3	Preliminary title report	N/A for minor mod to existing approved plan with no expansion
4	Environmental Information Form	Attached
5	Hazardous Waste and Public Well Site Information	N/A for minor mod to existing approved plan with no expansion
6	Surface Mining Plan	N/A for Vested Site
7	Reclamation Plan	Attached
8	Information to show compliance with RiverSide County DAMP, NPDES, and WQMP	N/A for minor mod to existing site with Industrial NPDES General Permit
9	11"X17"	Attached

Pursuant to LEMC Section 14.04.170 we believe this Amendment can be processed as a minor amendment because this Amendment combines currently approved reclamation plans, and reduces the area covered by those reclamation plans from 3457 acres to 1390 acres. This will not result in disturbance of lands that are not either already disturbed or proposed for disturbance in the previous

applications. In addition, because the new Plan demonstrates compliance with current SMARA reclamation standards, it reduces, and has no potential in increase, any potential effects on the City and the environment.

Please call me at (805) 275-1515 or (805) 320-3211 if you have any questions or if you need additional information.

Regards,

John A. Hecht, P.E.
President
Sespe Consulting, Inc.

Attachments:

Environmental Information Form
Reclamation Plan, dated July 13, 2011
11' X 17" copies of Reclamation Plan

Cc: Mr. Jim Pompy, Office of Mine Reclamation
Mr. David Hollingsworth, Pacific Clay Products
Mr. Barry Coley, Pacific Aggregates
Mr. Jim Good, Gresham Savage

CITY OF LAKE ELSINORE
DREAM EXTREME

ENVIRONMENTAL INFORMATION FORM

Date Filed: July 13, 2011

GENERAL INFORMATION

1. Developer or Applicant: Pacific Aggregates Inc., Pacific Clay Products

2. Contact Person: Chad Warren

3. Address: 28251 Lake Street

   City: Lake Elsinore State: California 92530

   Telephone: (951) 245-2460

4. Address of Project: Same

5. Proposed Use of Site (project described in this form): Existing Mining Operation

6. Surrounding Land Uses: Open space, roadways and residential

7. Site Size (include ALL off-site improvements and off-site grading):
   1390 acres

8. Assessors Parcel Numbers (attach additional sheets as necessary):
   See attached reclamation plan

9. Number of Floors of Construction: N/A no construction as part of application

10. For Residential Development.

    Number of Units: N/A Unit Sizes: N/A

    Units per Acre: N/A Lot Sizes: N/A

    Number of Parking Spaces: N/A

11. For Commercial and Other Development. Reclamation plan combination, no additional land disturbance, reduction in plan area from 3,457 to 1390 acres.

Type of Development: N/A

Scale of Development (neighborhood, City-wide, regional): N/A

Number of Buildings: N/A Size of Buildings: N/A

Number of Parking Spaces: N/A

12. Identify ALL entitlement applications being submitted to the City. Examples would include Residential Design Review, General Plan Amendment, Conditional Use Permit, Specific Plan, etc. Reclamation Plan, minor amendment

ENVIRONMENTAL INFORMATION

IT IS RECOMMENDED THAT PHOTOGRAPHS BE PROVIDED TO SUPPORT ANSWERS #12 THRU #15 BELOW: SEE PAGE 4

13. Describe the project site as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural or scenic aspects.

14. Describe any existing structures onsite, and use of these structures.

15. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects.

16. Describe the typed of surrounding land use, intensity of land use, and sale of development.

17. Identify any other related permits and other public approvals required for this project including those required by the City, regional, State, Federal agencies, not including approvals from the City, fire department, sheriff's department, and Elsinore Valley Municipal Water District:

18. Is any part of the Project, on- or off-site, located within a Criteria Cell pursuant to the Multiple Species Habitat Conservation Plan (MSHCP)? If not known, please enter all APNs at the following website to run a report, and **include the report** with submittal of this form. http://www.rctlma.org/online/content/rcip_report_generator.aspx

If so, what are the Criteria Cell #(s)?

PLEASE NOTE: ***All projects, with the exception of single family homes and those subject to other legal agreements, are REQUIRED to submit an MSHCP Consistency Determination Application regardless of whether the Project is located within or outside of a Criteria Cell. This application must be completed by a qualified biologist familiar with the MSHCP. Please contact the City's Environmental Planner for more information regarding MSHCP requirements and appropriate fees.***

19A. The City is a Lead Agency under CEQA, and is required under State law to ensure compliance. All projects are subject to a review under the California Environmental Quality Act (CEQA). The CEQA review will consist of one (1) or more of the following:

- Determination by the Planning Division that the Project is exempt from CEQA
- If not exempt, preparation of technical studies will be required to support determination of appropriate CEQA process, as described below.
- Determination by Planning Division that all project impacts are less than significant, or can be mitigated to less than significant. As such, the City will direct preparation of a Negative Declaration (ND) or Mitigated Negative Declaration (MND).
- Determination by Planning Division that at least one (1) project impact cannot be mitigated to less than significant levels. As such, the City will direct preparation of an Environmental Impact Report (EIR).

19B. Depending on the environmental impacts potentially resulting from your project, technical studies that <u>may</u> be required, but are not be limited, include:

- Air Quality Analysis
- Noise Study
- Traffic Impact Analysis
- Geotechnical Study
- Phase I Environmental Site Assessment (Hazardous Materials)
- Hydrology Study or Conceptual Drainage Plan
- Conceptual Water Quality Management Plan
- Biological Resources Study (also used to support MSHCP consistency work)
- Cultural Resources Study

Please contact the City's Environmental Planner for more information about CEQA requirements, appropriate City processing fees, and those technical studies needed to support the CEQA requirements.

All CEQA documents must be prepared either by City Staff OR by a qualified, City-approved consultant under direct contract with the City, but funded by the Applicant. Those consultants preparing technical studies may do so directly under contract with the Applicant.

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

SIGNATURE: _____ DATE: 7/13/11

****

FOR OFFICE USE ONLY

Received By: _____ Date: _____

CRS Number: _____ Project Planner: _____

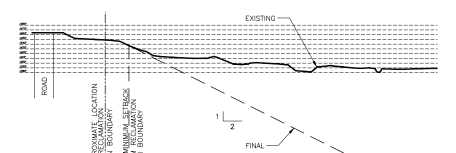
Project Number(s): _____

_____

In response to items 13-18
Approval of this application will not result in any need for new or additional permits or disturbance of lands that are not either already disturbed or proposed for disturbance in the previously approved applications. In addition, because the new Plan demonstrates compliance with current SMARA reclamation standards, it reduces, and has no potential in increase, any potential effects on the City and the environment. We believe that this project is exempt from CEQA as discussed in Section 152301 becau involves no expansion of an existing use. Furthermore, the mining site is a vested operation that was in place prior to the creatior the Multiple Species Habitat Conservation Plan (MSHCP) and the MSHCP Administrator has determined that such vested operatio not requiring a permit, are not subject to compliance with the MSHCP.

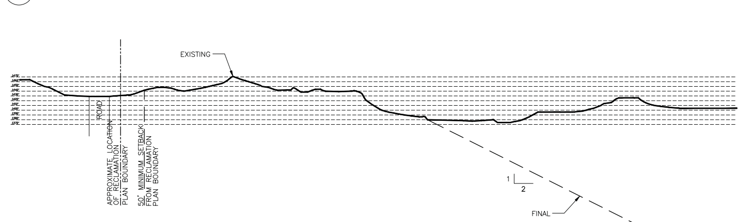
C SECTION
SCALE 1" : 80'-0"

TYPICAL SECTION SHOWING EXISTING AND APPROXIMATE FINAL PROFILE



TYPICAL SECTION SHOWING EXISTING AND APPROXIMATE FINAL PROFILE

B SECTION
SCALE 1" : 80'-0"



A SECTION
SCALE 1" : 80'-0"

NOTES:

- RECLAMATION PLAN ACREAGES PER KWC ENGINEERING CALCULATED PROPERTY LINES.
- BOUNDARY LINE SHOWN ON RECLAMATION PLAN FIGURE SHOWN AS GRAPHICAL REPRESENTATION OF PROPERTY LINE FOR PLANNING PURPOSES ONLY.
- CONTRACTOR TO PROVIDE BERM AT THE TOP OF ALL CUT SLOPES FOR DRAINAGE PREVENTION PURPOSES. BERM TO BE 4-FEET WIDE AND 12-INCHES HIGH. CUT SLOPES TO BE PLANTED WITH APPROVED SEED MIX AND INSTALLED PER THE RECLAMATION PLAN AND MANUFACTURERS RECOMMENDATIONS.
- AT THE COMPLETION OF MINING, STRUCTURES AND EQUIPMENT WILL BE REMOVED AS NOTED FOLLOWING:
  ALL STRUCTURES AND EQUIPMENT IN AREA 1 - "PACIFIC AGGREGATES OFFICES" AND AREA 2 - "PACIFIC AGGREGATES FACILITIES" WILL BE REMOVED.
  TEMPORARY STRUCTURES AND EXTERIOR EQUIPMENT WILL BE REMOVED AND PERMANENT STRUCTURES WILL REMAIN IN AREA 3 - "PACIFIC CLAY FACILITIES".

LEGEND:

RECLAMATION PLAN BOUNDARY (~ 1366 ac)
MINING BOUNDARY (50' MINIMUM SETBACK)
BOUNDARY BETWEEN DIFFERENT END USES
TOPSOIL / OVERBURDEN STORAGE AREA
TOPSOIL STORAGE AREA
(2) EQUIPMENT AND STRUCTURE AREAS (SEE RECLAMATION PLAN AND NOTE TO LEFT)
SP STOCKPILE AREA
ACCESS ROADS (TYPICAL)

SOURCES:

TOPOGRAPHY AND RECLAMATION PLAN BOUNDARY PROVIDED BY KWC ENGINEERS, CORONA CA.
TOPOGRAPHY AND AERIAL FLOWN 3-10-11

CONTOUR INTERVAL = 2'
0 150 300 600
APPROXIMATE SCALE IN FEET

Drawing Name: PA02.RP112.Fig2.dwg
Date: July 12, 2011

RP112 RECLAMATION PLAN
Mine ID #s: 91-33-0073, 91-33-0020, 91-33-0006
Pacific Aggregates Inc. and Pacific Clay Products
Lake Elsinore, California

REGISTERED PROFESSIONAL ENGINEER JEFFERY KENNETH PALMER No. 53535 Exp.6-30-11 CIVIL STATE OF CALIFORNIA

SESPE CONSULTING, INC.

JEFFERY K. PALMER R.C.E. 53535 EXP. 6-30-2011 DATE

FIGURE 2

SESPE
CONSULTING, INC.
468 Poli St., Suite 2E • Ventura, CA 93001
Office (805) 275-1515 • Fax (805) 667-8104

RP112 RECLAMATION PLAN AMENDMENT

Pacific Aggregates Inc. and Pacific Clay Products

28251 Lake Street
Lake Elsinore, California

July 13, 2011

Prepared for:	Pacific Aggregates Inc. Pacific Clay Products 28251 Lake Street Lake Elsinore, California 92530
Prepared by:	Sespe Consulting, Inc. 468 Poli Street, Suite 2E Ventura, California 93001 (805) 275-1515
Technical Assistance:	KWC Engineers Corona, CA

SESPE CONSULTING, INC.
468 Poli St., Suite 2E • Ventura, CA 93001
Office (805) 275-1515 • Fax (805) 667-8104

RP112 RECLAMATION PLAN Amendment

Pacific Aggregates Inc. and Pacific Clay Products

Lake Elsinore, Ca (including RP110, and SMP108)

CA Mine ID Nos.: 91-33-0073, (including 91-33-0020, and 91-33-0006)

July 13, 2011

TABLE OF CONTENTS

RP112 RECLAMATION PLAN
Pacific Aggregates Inc. and Pacific Clay Products
Lake Elsinore RP112, RP110, and SMP108
CA Mine ID Nos.: 91-33-0073, 91-33-0020, and 91-33-0006

July 13, 2011

1.0 INTRODUCTION

This amendment to the RP112 Reclamation Plan has been prepared to combine three reclamation plans and mine ID's s into one document pursuant to a Stipulated Order to Comply effective May 11, 2011. The resulting reclamation plan will be known as RP112, Mine ID # 91-33-0073. Reclamation Plans RP110 and SMP 108 along with mine ID's 91-33-020 and 91-33-006 will no longer be active upon approval of the amendment by the lead agency.

The Pacific Aggregates and Pacific Clay Products Mine and Processing facility (Project) originally consisted of 3,457 acres of an existing clay mine in the Alberhill and Elsinore 7.5 minute U. S. Geological Survey quadrangles in western Riverside County, California. The RP112 Reclamation Plan reduces that amount to approximately 1390 acres and eliminates RP110 and SMP108. Please refer to Figure 1 – Site Location Map and Figure 1A for a graphic depiction of the boundary change. This Reclamation Plan generally adheres to the Department of Conservation Division of Mines and Geology prototype format found in Special Publication 51 "California Surface Mining and Reclamation Policies and Procedures", Third Revision, January 2000.

The Reclamation Plan was prepared in compliance with:

- The Surface Mining and Reclamation Act, as amended (Public Resources Code Section 2710 et seq);
- California Code of Regulation, Title 14, Division 2, Chapter 8, Subchapter 1, Article 9;
- The City of Lake Elsinore Municipal Code, Chapter 14.04 – Surface Mining and Reclamation;
- The City of Lake Elsinore Municipal Code, Chapter 17.144 – Mineral Resources and Related Manufacturing District; and
- The standards set forth in RP 112, RP 110, and SMP 108, approved by the County of Riverside in 1978 and 1979.
- The vested rights that apply to the entire operation

1.1 Project Background/Vested Rights

The project site consists of a comprehensive open pit mining operation in conjunction with a clay brick manufacturing plant, aggregate processing plants, ready-mixed concrete batch plant and associated support, maintenance, and administrative facilities. Pacific Clay Products and its predecessors have had the property since the early 1900's, and mining on the property has been continuous and extensive since 1883.

It was worked by separate operators in the very early years without much thought to future conditions. Those conditions have changed and the intent is to mine out all economic products and backfill the mined out areas with unmarketable material and overburden. The clays that are being mined today

could not be economically mined in the past, and much of the material originally thought of as overburden for the clay mining is now being utilized in the sand and gravel operations. With this in mind, the estimated life of the deposits is for the foreseeable future, likely 44 years or more.

Annual production of clays and aggregates can be expected to fluctuate in response to market demand, however the facility is capable of producing up to approximately 2,000,000 tons per year of combined resources. The general geology of the site is such that sedimentary sand and gravel (aggregate) deposits are situated stratigraphically above sedimentary and residual clay deposits, with isolated outcrops of intrusive igneous rocks and older varied metamorphic and volcanic rock present throughout the site. The mining progresses in a fashion such that the sand and gravel deposits are removed to expose the clay reserves beneath, which minimizes the amount of waste and/or overburden material required to be handled on site. Very little waste is produced from the operation as a whole. Many of the interim residual products from the operations are reused in other processing operations on site. Any resulting waste or overburden materials are used in the backfilling, re-grading, or revegetation aspects of site reclamation. The maximum anticipated pit depths are 250 feet below existing ground surface.

This reclamation plan Amendment continues to apply to mining areas vested under Section 2776 of SMARA and confirmed as vested by Riverside County's approvals in 1978/9. This approval covered areas included in both RP-112 and subsequently in RP-110. SMP-108 was approved as both a Surface Mining Permit and Reclamation Plan by Riverside County for Gladding McBean and Company in 1979 and the land was subsequently acquired by Pacific Clay Products.

1.1.1 Background RP112 Mine ID#91-33-0073

This vested mine site, approved in January 1979, is referred to as the Murdock Alberhill Ranch Mine and consists of approximately 913 acres of Reclamation Plan (RP) 112. Reclamation Plan 112 originally covered approximately 3,457 acres of land within the County of Riverside with an anticipated completion date of 2054 (please refer to Figure 1A for a graphic depiction of the boundary). In May of 1990, approximately 2,667 acres of the original Reclamation Plan was annexed into the City of Lake Elsinore with the County approved Reclamation Plan "grandfathered" into the City. From 1990 until March 2008, the land encompassing RP112 was contained in both the County of Riverside and the City of Lake Elsinore. In March of 2008, the City of Lake Elsinore annexed the last remaining portion of RP 112 west of Lake Street and assumed the Lead Agency role. During the period between 1990 and 2008, changes in ownership and land use plans took place.

Products extracted from within the boundaries of RP 112 include clay for the manufacturing of brick and other architectural items, decomposed granite, sand and rock are mined for construction materials, landscaping, and other uses. Facilities for the manufacturing of the clay products originally located on this site were annexed into SMP108 in 1995 under County of Riverside direction and authority.

A small area to the east of Lake Street known as the ”Hoist Pit” was disturbed by mining activity both pre-SMARA and a small portion (2.1 acres) in 2010. See Figures 1(A,B, and C) for more detail. Additional disturbance of this area occurred as a result of geotechnical investigations for the non mineral development if this property and is not subject to SMARA requirements. All areas but the more recent 2.1 acres have been naturally reclaimed and/or reclamation is not required since the areas were pre-SMARA and have not been disturbed since. The revegetation standards that are presented in this amendment will apply to the 2.1 acre portion as presented in Figures 1A and 1C.

1.1.2 Background RP110 Mine ID#91-33-0020

Mountain Avenue Pit #2 is a vested site approved by the County of Riverside in 1978 as part of Elsinore Ready Mix's operations in the area. This site consists of approximately 80 acres. Originally, this site was operated by Elsinore Ready Mix dating back to at least 1968 with the property under lease from Pacific Clay. Similar to RP112, this site was originally overseen by the County of Riverside and subsequently annexed into the City of Lake Elsinore in March of 2008. Pacific Aggregates began operating the site in approximately 2004 under lease from Pacific Clay to mine in RP 112 and process in RP 110. The subject site is surrounded by the RP 112 on the south, east, and west sides of the site and SMP 108 on the north. Please refer to Figure 1A for a graphic depiction of the boundary.

The site produces and processes aggregate materials in the form of sand and gravel. Equipment present on the site includes a rock crushing plant, wash plant, ready-mix concrete batch plant, maintenance shop, and 6 small outbuildings and storage sheds (see Figures 2 and 3). Reclamation standards for the site generally consist of refilling mined-out pits as necessary to maintain positive drainage and safe slopes, leaving permanent slopes in a stable and safe condition, revegetation of disturbed areas with native vegetation, and removing any residual hazards that could pose a risk to public health or safety.

The County of Riverside Planning Department imposed Conditions of Approval on operations contained within the RP110 boundary which is now contained wholly within the RP112 Reclamation Plan boundary. A matrix with the Conditions of Approval and a figure showing the area subject to said conditions is included in Appendix 3.

1.1.3 Background SMP108 Mine ID#91-33-0006

The site currently using the name Pacific Clay Pits and Mine ID# 91-33-0006 operates under SMP108 on approximately 381 acres. This property was acquired by Pacific Clay from the Gladding McBean Company in July 1979 shortly after approval of SMP 108. The County of Riverside served as the Lead Agency for the site until March, 2008 when it was annexed into the City of Lake Elsinore and the City assumed the lead agency role. Please refer to Figure 1A for a graphic depiction of the boundary.

The northern portion of the site encompasses a large clay brick-making operation that has been active since at least 1925. In 1995, a portion of the site that includes the brick making operation, approximately 61 acres, was added to SMP108 from the adjacent RP 112 mine site. This resulted in a revision of the original Surface Mining Permit 108 to allow permitting authority to the County of Riverside for construction of a new fast-fire brick kiln. No changes in the extraction activities occurred. As approved in 1995, the pre- and post-annexation areas had slightly different reclamation objectives, briefly summarized below.

The approximately 320 acres of the pre-1995 annexation area is to be reclaimed to allow for open space use and will include the backfilling of any mine pits to create positive drainage. The disturbed surface areas will be revegetated to minimize erosion and sedimentation. Reclamation of the approximately 61 acres annexed in 1995 will be to prepare and stabilize the land for a future, undetermined, secondary use after removal of all mine related structures.

The County of Riverside Planning Department imposed Conditions of Approval on operations contained within the SMP108 boundary which is now contained wholly within the RP112 Reclamation Plan boundary. A matrix with the Conditions of Approval and a figure showing the area subject to said conditions is included in Appendix 3.

1.2 Project Phasing

Mining operations will continue on this vested mine site in generally the same manner as it has been since the early 1900s. Because of the nature of the deposits and the varied extraction requirements (i.e. material with specific individual characteristic are removed from many active locations on the site at any given time), phasing of the extraction, and therefore phasing of the reclamation is not practical nor proposed on the entirety of this vested operation. Reclamation will be initiated on areas where mining activities are complete and the initial reclamation area is noted on the attached Figure 2 - Reclamation Plan.

2.0 GENERAL OWNERSHIP/OPERATION INFORMATION

2.1 Mine Operator and Property Owner Information

MINE NAME: RP112

LOCATION OF MINE: 28251 Lake Street
Lake Elsinore, California 92530
(See attached Site Location Map, Figure 1)

ASSESSOR PARCEL #s

389-020-063-9, 390-130-006-8, 390-130-015-6, 390-130-016-7, 390-130-020-0, 390-130-021-1, 390-160-001-6, 390-160-011-5, 390-160-012, 390-170-001-7, 390-170-002-8, 390-190-011-8, 390-190-017-4, 390-190-019-6, 391-170-005-8, 391-170-007-0, 391-200-003-8, 391-200-004-9, 391-200-007-2, 391-200-010-4, 391-200-012-6, 391-230-002-0, 391-230-003-1, 391-230-004-2, 391-230-005-3, 391-230-007-5, 391-230-009-7, 391-230-010-7, 391-240-001-0, 391-800-011-9

LAKE ELSINORE PERMIT NOS.: RP112

MINE OPERATOR: Pacific Aggregates Inc.
Pacific Clay Products
Mr. Chad Warren

CA MINE ID #s : 91-33-0073

TELEPHONE NUMBER: (951) 245-2460

MAILING ADDRESS: 28251 Lake Street
Lake Elsinore, California 92530

OWNERS OF POSSESSORY INTEREST: Pacific Aggregates Inc. and Pacific Clay Products

2.2 Lead Agency Information

LEAD AGENCY: City of Lake Elsinore

STAFF CONTACT: Ken Seumalo

TELEPHONE NUMBER: (951) 674-3124 x244

MAILING ADDRESS: City of Lake Elsinore
130 S. Main Street
Lake Elsinore CA 92530

USE PERMIT NUMBERS: Vested

DATE PERMIT APPROVED: Vested

CUP EXPIRATION DATE: Vested Mining Site – No permit expiration for extraction activities

2.3 General Mining Operation Information

MINED MINERAL COMMODITY: Clay and related clay products, aggregates and related rock products. Coal has also been historically mined from the site.

ESTIMATED ANNUAL PRODUCTION: Up to 2,000,000 tons

ESTIMATED TOTAL PRODUCTION: Operated since late 1800's, total production unknown.

TOTAL NUMBER OF ACRES TO BE DISTURBED: up to 1390 acres

TOTAL NUMBER OF ACRES TO BE RECLAIMED: up to 1390 acres

MAXIMUM ANTICIPATED DEPTH OF MINING: Approximately 250 feet from existing grade.

START-UP DATE: Continuous operation since late 1800's

MINING TERMINATION DATE: The mining site is vested for all operations, however for the purposes of compliance with SMARA Section 2772(c)(3) the expiration of this reclamation plan is in 44 years or, December 31, 2055

RECLAMATION COMPLETION DATE: Five years after termination of reclamation plan unless extended .

TOPOGRAPHIC MAP: USGS Alberhill and Elsinore topographic quadrangles
Portions of Sections: 15, 16, 21, 22, 27, 28
Township: 5 South
Range: 5 West
Meridian: San Bernardino
Baseline: San Bernardino

3.0 ENVIRONMENTAL SETTING

3.1 Topography, Drainage and Geohydrology

The elevation of the Alberhill-Temescal Valley project area ranges from a maximum of about 1,800 feet on the western and eastern sides of the valley to 1,200 feet above sea level at the northern edge of the project area near the bottom of Temescal Wash. The Alberhill project area is in a synclinal trough of a graben commonly described as the Elsinore Trough. The maximum relief is about 600 feet. The area is currently being dissected by Temescal Wash and several minor tributaries.

The site is a part of the Upper Santa Ana Valley watershed. Upstream, the San Jacinto River flows into Lake Elsinore. Prior to the subsidence that produced the Elsinore Trough, the San Jacinto River flowed across the Santa Ana Mountains and entered the Pacific Ocean near San Juan Capistrano. However, during the Quaternary time the Santa Ana Mountains rose faster than the San Jacinto River could down cut, and the river was diverted northward along the Elsinore Trough via Temescal Wash and Santa Ana River to the Pacific Ocean near Newport Beach in Orange County.

During the current dry climatic cycle Lake Elsinore rarely overflows. Despite the artificial recharge of the lake, the wet years of 1969 and 1978 failed to cause overflow of Lake Elsinore.

The main drainage through Walker Canyon and the project site has a gradient of about 15 feet per mile and the principal tributary adjacent and southeast of the site has a gradient of about 30 feet per mile.

Although the mine site is located in the Elsinore Trough and Temescal Wash passes through the area, the mine itself is not located so as to be significantly affected by run-off. Most of the water from areas upstream from the project area drains through the major established drainage such as in Walker Canyon.

3.2 Climate

The climate of the project area is typical of the southern California coastal interior. There are two contrasting seasons, a cool moist winter when nearly all the precipitation occurs, and a mild warm dry summer season. The weather is dominated by the Pacific high pressure system that grows during the summer and effectively blocks storm generation. Light fogs and clouds are common at lower elevations in the late spring and early summer but rarely remain for an entire day. About 85 percent of annual precipitation occurs in a wet season from November through March from cyclonic storms. Average annual rainfall is about 13 inches in the Temescal Valley-Alberhill area to over 28 inches atop Santiago Peak. Precipitation is mostly rainfall, accompanied with light snowfalls above 3,000 feet throughout the winter months.

High velocity winds known as "Santa Anas" develop during the late fall and early winter. These winds are northeasterly or easterly from the desert and obtain velocities in excess of 80 miles per hour as they cross mountain ridges. The regional prevailing wind is westerly averaging 5 to 7 miles per hour; however, the orographic effects of the northwest-southeasterly-trending "Elsinore Trough" have a profound local influence on local wind direction and velocities at Alberhill.

3.3 Vegetation and Wildland Fire

Vegetation is a result of the prevailing Mediterranean climate with intense winter storms. Fire plays an important part in the brushland vegetative sequence. Microclimatic differences have brought about

naturally occurring grasslands and other distinctive plant communities in the Temescal Valley and adjacent hillside areas. The project area is in the transition zone between chamise and broadleaf chaparral of the higher Santa Ana Mountains and more arid sage associations. The natural vegetation along the bottom of the Temescal Valley and in the Alberhill area has been greatly modified by farming, grazing, mining and urbanization.

The fire season can be yearlong. It is more critical from May to December. The July to September period is highlighted by often dry, moderate to severe lightning storms. Mild to severe Santa Ana winds blow in October, November and December. Warm temperatures of 90 to 100 degrees, low humidity (less than 10 percent), critical fuel moistures (less than 5 percent), and strong winds often occur during the summer months. The annual average burned areas within northern Santa Ana Mountains and Temescal Valley area is seldom less than 3,000 acres. The low amount of rainfall, climatic conditions, highly flammable vegetation, rugged terrain and heavy use of the region may make the threat of a fire a continual reality. Much of the wildland fire hazard within the project area has been removed because of the extent of the active mining operation and the accessibility of the area to fire suppression equipment. However, several "natural" chaparral covered areas within the project area represent a high fire hazard comparable to surrounding private and national forest lands. It is interesting to note that since mining has displaced much of the original soil cover during the past 128 years of mining, many of the cuts and fills have developed a climax chaparral cover. The sedimentary "rock" overburden in many dump areas such as in section 21, has developed a near climax "natural" chaparral cover within about 15 years. Some of these "naturally recovered" areas along with areas of undisturbed chaparral could be classified under the State Department of Forestry "Classification for Wildlands", as Class III or extreme fire hazard.

The normal reoccurrence interval for remote wildland fires in the southern California chaparral areas is about 27 to 30 years. Chaparral adjacent to populated areas burns more frequently, perhaps every 9 to 10 years. As it takes about 10 years for the chaparral to re-establish a protective cover, this time frame is not much different than natural revegetation on mine cuts and fills once mining activity has ceased.

3.4 Soils, Erosion, and Slope Stability

As identified in the referenced Reclamation Plan, the project site has 48 different soil types divided into 25 soil series. The majority of these soils have textures ranging from loams to loamy sands to gravelly loams. Soils are generally moderately deep to shallow with low to high erosion hazard. The permeability of the soils ranges from low to high, depending upon texture, relative density, and slope of the ground.

As mentioned above, erosion potential of the soils ranges from low to high. Erosion of the bedrock materials depend upon texture, hardness, chemical composition, degree of fracturing, and dip of the bedding planes. The run-off from the site itself is for the most part channeled to existing collection ponds which are created in the mining process (Storm Water Pollution Prevention Plan attached in Appendix 2). These pits are being used to trap the water allowing it to be used on site for dust control and processing activities. Excess remaining water is allowed to percolate through the soil and/or evaporate. Except in unusually heavy years of precipitation, dust control measures and processing activities have utilized virtually all of the water collected on the site. To the extent practicable drainage not channeled to these collection ponds is channeled to existing drainage channels.

Stability of the slopes cut during the mining operation depends upon numerous factors; among them being, height of cut, relationship of slope to bedding plane attitudes, joints in the material, and

groundwater influence. A stability analysis was conducted in one area of the site and results show that slope stability is easily achieved by using an adequate horizontal to vertical slope ratio (Analysis included in Appendix 1).

3.5 Regional Geologic Setting

The project site is located within the northern part of the Peninsular Ranges Geomorphic Province of California. This province extends from the southern tip of Baja California to the Los Angeles basin and is characterized by a series of northwest trending mountain ranges separated by sub-parallel faults, with a coastal plain of subdued landforms in the western portion. Specifically, the site is situated along the boundary of two structural blocks of the province, the Perris Block to the east and the Santa Ana Mountains Block to the west. The Elsinore Fault Zone, which is located just southwest of the project site, separates these two structural blocks. The regional geology of the project vicinity is shown on Figure 4. The area covered by this map is underlain by plutonic, metamorphic, sedimentary and volcanic rocks that range in age from Jurassic to Quaternary. Crystalline igneous and metamorphic rocks are exposed at many places and underlie the entire region.

The Perris Block is underlain by a combination of batholithic and prebatholithic, primarily metasedimentary, rocks with a cover of Tertiary and Quaternary age sedimentary rocks and deposits. Several erosional and depositional surfaces are developed on the Perris Block, and there is evidence of extreme weathering of pre-Paleocene basement rocks and Paleocene sedimentary rocks during Paleocene time. The oldest rocks are slates, argillites, and quartzites, with lesser amounts of conglomerate and siliceous dolomitic limestone, of the Jurassic Bedford Canyon Formation. These rocks have been invaded by several series of volcanic rocks all probably of Jurassic age. These include (1) the Santiago Peak volcanics, a series of mildly metamorphosed flows, tuffs and breccias which range from latite to andesite and which in the northwestern Santa Ana Mountains unconformably overlie as well as intrude Bedford Canyon rocks; (2) quartz latite volcanic breccia, a shallow intrusive rock related to the Santiago Peak volcanics; and (3) quartz latite porphyry, a dense, blue-black to gray hypabyssal rock with aphanitic groundmass and abundant phenocrysts of quartz and feldspar. The Bedford Canyon metasedimentary rocks also have been intruded by a series of later Mesozoic plutonic and dike rocks, most of which represent the southern California batholith. The oldest plutonic rock is Cretaceous. It ranges widely in composition from a coarse-grained hornblende quartz diorite to hypersthene biotite gabbro, and locally norite. They include the San Marcos gabbro and diorite and gabbro of Engel (1959). The Woodson Mountain granodiorite is typically coarse grained, white to brownish-gray rock, in which biotite is commonly abundant. Oriented inclusions of the San Marcos gabbro, and streaks of dark mineral segregations characterize the Bonsall tonalite, which is ordinarily medium-grained, and light to dark gray. The Estelle tonalite is similar in mineral composition to the Bonsall tonalite, but finer grained and darker colored and lacks the numerous large dark inclusions found in the Bonsall tonalite.

Thin to relatively thick sections of primarily Quaternary age sediments overlie the older rocks described above. Much of these sediments are of non-marine origin and consist mostly of sandstone, conglomerate, and gravelly sands deposited as alluvial fans, fluvial channel fills, and upon broad alluvial plains. Tertiary age sedimentary rocks are present within the region, and generally consist of sandstone, claystone, and mudstone of marine origin. It is these sedimentary rocks that are part of the regional clay deposits.

The structure of the southern Temescal Valley is dominated by the Elsinore fault zone. This fault zone is characterized as a complex of northwest-trending faults that, in general, delineate a group of down-

dropped blocks to form Temescal Valley. Most of the major faults trend northwest and include both left-stepping and right-stepping en echelon faults.

3.6 Site Geology

The clay deposits in the Alberhill area are confined to a single zone which contains clay of both residual and sedimentary origin. The residual clay was formed by the deep weathering of the Mesozoic crystalline bedrock and early Paleocene sedimentary rocks, apparently in Paleocene time. The sedimentary clay was eroded and transported from the ancient surface and is now part of the Silverado Formation, of Paleocene age, which unconformably overlies the residual clay. In the Alberhill and Elsinore quadrangles, this clay bearing zone underlies an area of about one and one-half square miles along the borders of and within the Temescal Valley. It is about 80 feet in average thickness and has a maximum thickness of about 150 to 200 feet.

The residual clay deposits are as much as 130 feet thick, and grade downward and laterally into (1) metasedimentary rocks of the Triassic Bedford Canyon formation, (2) andesitic rocks of the Jurassic Santiago Peak volcanics, (3) Jurassic quartz latite porphyry, and (4) Cretaceous diorite-gabbro. Slaty cleavage, outlines of feldspar phenocrysts and angular fragments, and hexagonal quartz grains are remnant features that indicate that the residual clay was derived from slate, volcanic breccia, and hypabyssal igneous rocks respectively.

Although sedimentary clay occurs throughout the generally 100 foot exposed thickness of the Silverado formation, the layers of clay of commercial importance generally occur only in the lower half. Individual layers are commonly less than 20 feet thick and less than 30 acres in areal extent. Layers of sandy, non-commercial material occur interbedded with the clay throughout the section.

The attitudes of the clay-bearing zone suggest a shallow, northwest-trending synclinal structure that is cut by northwest to northeast-trending high angle faults which in some places mark the boundary between the clays and relatively unweathered crystalline rocks. These faults have observed displacements that range from a few inches to at least several tens of feet. Although the clay beds locally dip as much as 30 degrees, the average dip is less than 10 degrees. The lithologic features of the clay-bearing units are shown in the generalized stratigraphic column of the site geology in Figure 5. The clay-bearing zone is broadly divisible into five units which show marked ranges in thickness, color, and lithology from one clay pit to the next, but which persist throughout the area. The lowermost unit is variably-colored, massive, plastic, residual clay. In some places this unit is overlain by a massive pisolitic "bone clay" (unit D) which is also of residual origin. Unit C, the lowermost clay unit that clearly is of sedimentary origin, consists of lignite and carbonaceous fire clay and lays unconformably either upon unit E or unit D. Unit B, which conformably overlies unit C, is a massive, sandy claystone that is white to pale gray in some areas and red and white mottled in other areas. Unit A conformably overlies and overlaps unit B, and consists of green to gray, waxy clay shale interbedded with coarse-grained, arkosic, micaceous sandstone. Adding to the complexity of the clay bearing zone are numerous faults which truncate and/or displace the particular units sometimes several tens of feet. The quantity and complexity of the faulting tends to increase in a southwesterly trend across the site. Evidence indicates that some faulting took place during deposition and/or lithification of the sedimentary units as well as post-depositional.

The Silverado Formation generally is overlain by a presumed Tertiary-age formation commonly referred to as the Olive Formation. It was originally thought to be a member of the Martinez Formation of

central California, however this unit exhibits characteristics common to the Mount Eden Formation or the Puente Formation, both of which are early Pliocene and Miocene in age and found within the region. Others feel that this unit is simply part of the Silverado Formation (Unit A as described above) as there are discontinuous beds and lenses of red and white mottled claystone present. However, field observations indicate that the presence of these claystone lenses and beds may be related to fault activity. This unit is characterized by dark grayish green plastic claystone and siltstone interbedded with micaceous, fine to medium grained green and gray sandstone and siltstone. The sandstone and siltstone layers typically contain lime-cemented concretions typical of the Mount Eden and Puente Formations. Although the micaceous sandstone and siltstone layers are of little commercial value, the plastic claystone deposits are used commercially in the brick making on site, as well as in low permeability soil applications off site such as sanitary landfill liners and caps.

Quaternary fanglomerate deposits correlated to the regionally pervasive Pauba Formation are found overlying much of the site, generally above the Olive Formation and/or the Silverado Formation. Rarely is this deposit found overlying the older crystalline basement rocks. The Pauba Formation is a prominent geologic unit in areas south of the project site of late Irvingtonian (0.3 – 0.24 ma) to early Rancholabrean (0.24 – 0.2 ma) age. This deposit is about 20 feet in average thickness and locally is as much as 200 feet thick, and provides the source for the sand and gravel operations on site.. This formation is characterized by massive to thinly bedded, fine to medium grained silty sands with lenses of subangular to subrounded gravels, cobbles, and boulders. The gravels, cobbles, and boulders are of varying composition reflecting the wide range of basement rocks in the area. They primarily consist of moderately to intensely weathered granitic rock, slate, shale, and sandstone.

Colluvium and alluvium are present on site in some areas not yet disturbed by mining activites. The colluvium is generally present atop the Pauba Formation, and typically consists of orangish to reddish brown, fine to medium grained silty to clayey sand. The colluvium typically ranges between 3 and 5 feet thick where present. Alluvium represents the youngest natural geologic deposits on site, and is found in the bottoms of some of the natural drainages on site. The alluvium typically consists of light gray to light brown, fine to coarse grained sand with silt. Subrounded to rounded gravels, cobbles, and some boulders are present within the alluvial deposits, and are typically comprised of slightly to moderately weathered granitic rock, with lesser amounts of slate.

3.7 Faults and Seismicity

Figure 6 presents a regional fault location plot as related to the project site. The figure indicates that faults within the immediate vicinity of the site generally do not have historic (past 200 years) displacement. Some faults within a 100 kilometer radius of the site do exhibit historic displacement.

The southwest site boundaries are adjacent to the main trace of the Glen Ivy segment of the Elsinore fault zone, which has a continuous record of seismic activity, but is without historic (past 200 years) displacement. The Newport-Inglewood fault zone, approximately 30 miles from the site, is also seismically active. This fault zone also has not been known to rupture the ground surface in historic time.

The San Jacinto and San Andreas faults, approximately 21 and 31 miles distant, respectively, are seismically active and have exhibited historic displacement associated with surface rupture, fault creep slippage, and/or displaced survey lines.

The principal faults of the Elsinore fault zone range in dip from gently southwestward to essentially vertical. The horizontal component of displacement is principally right lateral, and segments along the southwest side of the trough generally are up vertically to the southwest. The total right lateral displacement of rocks of the southern California Batholith and pre-batholithic rocks is about 6 to 6.5 miles. One observed vertical component of very late Quaternary displacement is about 200 feet near Corona (Webber, 1977).

A moderately large earthquake (estimated Magnitude 6.0) took place in the Elsinore fault zone in 1910 in the Temescal Valley area (Toppozada, 1978), and earthquakes of that magnitude can be expected in the future. Maximum credible earthquakes, based on overall apparent length of the zone, may be in the range of M6.5-7.

Figure 7 presents the site location as plotted on the Alquist-Priolo Earthquake Fault Zoning Map for the Alberhill Quadrangle. The southwestern portion of the site is located immediately adjacent to the northern extent of the mapped Earthquake Fault Zone for the Glen Ivy segment of the Elsinore fault zone. The Alquist-Priolo Earthquake Fault Zoning Act requires that a site specific geologic fault investigation be performed for the proposed construction of structures for human occupancy located within the delineated zones. No structures for human occupancy are located or proposed for the portions of the project site adjacent to the delineated Earthquake Fault Zone.

4.0 MINING AND PROCESSING

4.1 History of Production and Utilization

Historically, the clays of the Alberhill area were used to produce two main types of clay products; heavy clay products such as sewer pipe, face brick, and tile, and refractory clay products such as fire brick, flue lining, and pottery. Currently, clay utilization and production is focused on face brick and brick pavers, with lesser amounts of fire brick, tile, and pottery. Clay sewer pipe use has been superseded by the use of PVC or other plastic compound pipe, and currently there is no clay pipe production on site. Throughout its history, the site and surrounding area have provided much of the clay resources and clay-related products for southern California for over a century. From about 1890 to the mid-1950's, the Alberhill Coal and Clay Company mined coal and clay from their deposits near Alberhill. Although the company did not manufacture clay products, they supplied large tonnages of high-aluminous clay to ceramic plants in the Los Angeles area. By 1923, the Company was mining about 12 varieties of clay, including some red-burning clay with relatively low alumina content. Although in 1923 the clays were being used to make 21 different products, most of it was being sold to producers of face brick and fire brick. In 1922, the Company shipped 2,500 fifty-ton carloads of clay to local and Los Angles producers. By 1945, a large proportion of the 7,000 tons per month of clay that was being mined at Alberhill was the red-burning plastic clay used extensively in sewer pipe. A smaller amount of fire clay was being produced for Kaiser Steel Corporation, Santa Fe Railroad, and various pottery manufacturers.

The Los Angeles Brick and Clay Products Company acquired their clay properties from the former owner, the California Clay Manufacturing Company, and built their plant in 1925. In 1963 Pacific Clay Products, which was founded in 1886 as Pacific Sewer Pipe Company, acquired the Los Angeles Brick and Clay Products Company. This same brick plant originally built in 1925 still stands today in the location of the current Pacific Clay Products plant, and is still used in the ongoing operations. Through the mid 1950's to the late 1970's, much of the clay mined from the site was shipped to various plants throughout the region to be used primarily in the production of sewer pipe and face brick. As the use of sewer pipe declined starting in the 1980's, much of Pacific Clay Products production focused on face brick, brick pavers, and to a lesser extent fire brick and pottery. By the mid 1990's, Pacific Clay was no longer producing clay sewer pipe. The regional pipe plants were closed and operations were focused on brick production at the project site. However in 1996 a new state of the art fast fire brick kiln was put into production making Pacific Clay one of the largest brick facilities in the western United States.

Throughout much of 20th century, however, Pacific Clay Products and its predecessors were not the only mining operations on the site. With its acquisition of the Los Angeles Brick and Clay Products Company in 1963, Pacific Clay Products became the owner of nearly all of the land that is the subject of this report (that being the land west of Lake Street). Gladding McBean, and Company maintained ownership of an approximately 320 acre parcel of land in the central portion of the subject site (previously known as SMP108 or CA Mine ID# 91-33-0006) until July 1979 when this land was acquired by Pacific Clay Products. During its ownership period, Gladding McBean, and Company mined clay from the site for use in their plants throughout southern California primarily for sewer pipe manufacturing. Additionally, beginning on or about 1968 Elsinore Ready Mix began leasing an 80 acre parcel of land in the south central portion of the subject site for the mining and processing of sand and gravel and the production of ready mixed concrete. This 80 acre parcel of land became known as Reclamation Plan 110 or CA Mine ID#91-33-0020 pursuant to the adoption of SMARA and Riverside County Ordinance 555. The lease agreement between Elsinore Ready Mix and Pacific Clay Products ended in 2003, and shortly thereafter in 2004, Pacific Aggregates, Incorporated resumed sand and gravel mining and processing and ready

mixed concrete production operations within this 80 acre parcel.

Today the site is a comprehensive mining and production operation utilizing an abundant and unique geologic resource to provide quality construction materials to the southern California market. Very few, if any, other sites exist that can provide world class ceramic clay products and Portland cement concrete grade aggregates all from one raw material reserve. In the beginning coal and clay were mined by underground methods employing hand tools and man and mule power. Today, modern equipment such as bulldozers, excavators, and scrapers are used to mine the raw materials by open pit methods.

4.2 Land Use, Economic Considerations, Life of Operation

The use of the property for mining since 1883 represents a long-term commitment of the site to the extraction of an important natural resource. Mining is expected to continue for the foreseeable future, 44 years or more. When the deposit was first exploited in the late 19th century, nobody envisioned the market and urban conditions that exist today, over 100 years later. Essentially, all mining was by tunnel or adits. Today all mining is by open pit methods and it is still difficult to estimate with any degree of accuracy the life of any one area within its operations. The reason for this inability is that from any one area or region generally two, and in many cases, several, of the fifteen primary clay ore types found on the property are extracted. Those primary types are then blended into twenty different base materials which are then utilized in the production of several different categories of clay products. These products include fire brick, face brick, decorative brick, brick pavers, floor tile, and bulk material. Each of the preceding product categories is further divided into sub-products based on physical properties and appearance.

In every case, several areas would be involved in making a final product. The use of any one area, therefore, is so dependent on market specification and changes that although the Company believes the entire reserve will ultimately be mined, it is impossible to predict the sequence of mining of the various areas within the mine. The Reclamation Plan must be viewed as covering one deposit. The best estimate is that the life of the deposit, without regard to individual areas, is in excess of 44 years.

5.0 RECLAMATION PLAN

5.1 Statement of Responsibility

As required by Public Resources Code §2772 (c)(10), the owner and operator of the Pacific Aggregates Inc. and Pacific Clay Products operations listed above accepts responsibility for reclaiming the mined lands in accordance with the provisions of this Reclamation Plan. Please refer to Section 8 of this Reclamation Plan for a signed copy of the statement.

5.2 Proposed End Use

Per SMARA, Article 1 General Provisions, §2712(a) this Mining and Reclamation Plan has been designed to reclaim the project site to a usable condition which is readily adaptable for alternative land uses. As such, the mine operator is proposing that the end use for this reclamation plan be primarily Open Space with a northern portion of the project to be prepared for a subsequent industrial land use as yet to be determined (alternate manufacturing, industrial, or other commercial facility). Please see Figure 2 – Reclamation Plan.

5.3 Proposed Time Schedule of Reclamation

Reclamation activities, other than monitoring, will be completed within five years after the completion of mining. Monitoring will be conducted as described in this Reclamation Plan by a qualified third party representative appointed by the mine operator and will continue until standards are met. Reclamation of portions of the site will be completed in the near future, see Section 1.2 and Figure 2 for additional detail.

5.4 Impact of Reclamation on Future Mining

Although the intent is to mine all economically feasible material, this would not necessarily preclude future mining on the site. Future economic and market conditions may warrant future mining at the site and the proposed end-use of Open Space would not restrict that activity.

5.5 Public Health and Safety

Since the Project site is located on a relatively remote parcel of private property with limited public access, existing and probable future public exposures to the site are limited.

The site is fenced and/or bermed with signs to prevent public access. Security personnel are onsite when the facility is not operating. Entrance and exit gates are locked when not in use and equipped with video surveillance systems.

5.6 Control of Potential Contaminants and Non-Marketable Material

On and off road equipment is fueled from aboveground diesel tanks located at the Pacific Aggregates facility area and underground gasoline and diesel tanks at the Pacific Clay plant area. Mobile fueling trucks are used to fuel the heavy equipment when it is being used in an area remote from the stationary tank. The existing mining operations require the use and onsite storage of fuel, lubricants and other materials. These materials are delivered by truck and stored at the site in appropriate drums/containers which are kept in the shop and facilities located in Area's 2 and 3 on Figure 2.

Unsalable overburden and excess fines removed by processing are stockpiled in locations as noted on Figure 2 – Reclamation Plan.

Pacific Aggregates and Pacific Clay products maintain applicable Spill Prevention Control and Countermeasures Plans, Hazardous Material Business Plans, Storm Water Pollution Prevention Plan, and necessary Department of Environmental Health and/or Hazmat permits as appropriate. These plans and permits are filed with the appropriate agencies and posted on site as required.

6.0 SMARA RECLAMATION STANDARDS

This combination of three individual approved reclamation plans into one document has been completed at the request of the OMR and the City. This consolidation has been completed primarily to simplify administrative aspects of SMARA compliance monitoring and it is not a substantial deviation as described in CCR § 3502 (d), see additional discussion in Section 7.0. The approved and proposed new reclamation standards as they relate to each regulatory section are presented in the following sections and illustrated on Figure 2 attached.

6.1 Wildlife Protection, CCR §3703

The vested site has been in operation since the late 1800s and most extraction and operation areas have been disturbed for decades, therefore existing wildlife habitat on the project site is limited or nonexistent. Revegetation of disturbed areas as described in section 6.3 below will be completed to return disturbed habitat it a natural state using native plant species to provide habitat for wildlife.

6.2 Backfilling, Regrading, Slope Stability, and Recontouring, CCR §3704

Upon the termination of each phase of the operation, final slopes, overburden stockpiles, abandoned spoil piles, and the general premises shall be graded and smoothed so as to control erosion, prevent the creation of potentially dangerous areas and present a neat and orderly appearance. All spoil piles shall have a stabilized angle of repose. No pit excavation shall remain with a slope exceeding one vertical to two horizontal unless shown to be stable with a factor of safety of 1.5 by an engineering, geology, or soils engineering evaluation. All grades and slopes shall be oriented to control drainage and to conform to the natural drainage and natural slopes for the area.

The Engineering Geology Report prepared for the site prepared in 1978 (Appendix 1) concludes that fill slopes to remain after the completion of mining can be left at a slope ratio of 1:1 (horizontal to vertical) up to 50 vertical feet with a factor of safety exceeding 1.5:1, however as stated above, this reclamation plan proposes final slopes no greater than 2:1.

An analysis of the 1978 Engineering Geology Report discussed above was performed by a State of California Certified Engineering Geologist during the preparation of this Reclamation Plan Amendment (please refer to Appendix 1). The analysis confirmed that the 1978 report can be considered a valid assessment of the general slope stability across the subject site with respect to the mining and reclamation activities. In addition, project slopes are inspected by a Certified Engineering Geologist on a routine basis; copies of such certifications are also included in Appendix 1.

Any backfill that remains on the site will be placed in a manner consistent with the end us of the site. Back fill in areas that will remain industrial will be placed in accordance with appropriate UBC standards and City Building Official oversight. Backfill in open space areas will be non-engineered, but will be placed in generally small lifts and be compacted by the rolling force of heavy equipment used to place the material.

6.3 Revegetation Plan CCR §3705

A vegetative cover suitable for the proposed end use and capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer shall be established on disturbed

areas of the site. Revegetation of the disturbed areas will be performed utilizing a combination of broadcast seeding and hydroseeding. Disturbed areas with topography ranging from flat to gently sloping (< 3:1 h:v) will be reseeded with a broadcast spreader while slopes in excess of 3:1 (h:v), and up the maximum allowed inclination of 1:1 (h:v), will be hydroseeded. Portions of the site where surface mining activities have resulted in compaction of the soil will be scarified by ripping, disking, or other appropriate means to eliminate compaction to an adequate depth to establish a suitable root zone in preparation for planting.

Irrigation is not proposed because it will increase the likelihood of invasive weed species becoming established on the site. Consequently, the plant palette chosen for the site is comprised of drought-resistant species that if planted at the correct time of year, can survive and spread on natural precipitation alone. Seeding activities will be conducted in late October through November, just prior to the onset of the rainy season.

The seed mix will consist of the following native, locally-occurring species in the following quantities:

6.3.1 Table 1 - Seed Mix

Species	Typical Purity (%)	Typical Germination Rate (%)	Pure Live Seed (%)	Application Rate (lbs/acre)
Native California Brome *(Bromus carinatus)*	95	80	76	8
Small Fescue *(Vulpia microstachys)*	90	80	72	6
California buckwheat *(Eriogonum fasciculatum)*	50	20	10	12
Golden yarrow *(Eriophyllum confartiflorum)*	30	60	18	4
California poppy *(Eschscholzia californica)*	98	80	78	1
California Goldfields *(Lasthenia californica)*	70	50	35	1
Deerweed *(Lotus scoparius)*	90	60	54	4
Desert mallow *(Sphaeralcea ambigua)*	90	70	63	1
Brittlebrush *(Encelia farinosa)*	40	60	24	4
TOTAL				41

6.3.2 Control of Non-native Vegetation

Mining activities create and maintain disturbed conditions suitable for the growth and reproduction of a variety of non-native invasive weeds. Competition from exotic or native weedy species is a major problem in the success of most reclamation projects. Use of amendments, other than the initial inclusion of fertilizer in the hydroseed mixture, will be discouraged due to the rapid response of weedy species to such soil treatments.

A combination of mechanical and chemical methods will be used to remove and control non-native, invasive plants. Mechanical treatment will involve the use of weed trimmers, where necessary, to remove large stands of tall invasive plants, such as castor bean or fennel. The cut stems of these plants will immediately be sprayed with Roundup. This herbicide is nonvolatile and the active ingredient quickly biodegrades. Chemical control of herbaceous invasive plants will occur by aerial application of Roundup with portable tank sprayers.

Mechanical and chemical removal of non-native weeds will be conducted twice each year (late spring and late fall) for three to five growing seasons following initiation of the revegetation effort, or until native vegetation has attained a ground cover and reproductive rate sufficient to out-compete non-native weed species.

6.3.3 Soil Analysis

A topsoil salvage and redistribution program will be developed to ensure that soil conditions at the time of revegetation will be adequate to support the native plant palette. Soil analysis will be conducted to evaluate the nutrient levels in the topsoil and will be compared to soil test results from adjacent, undisturbed areas. Topsoils will be augmented if growth-inducing deficiencies in essential nutrients are noted. Some topsoil stockpiles are currently present on site as shown on Figure 2 – Reclamation Plan.

6.3.4 Performance Standards

Performance standards quantitatively evaluate the success of the revegetation effort and weed control in relation to similar native, undisturbed habitats.

Success of the revegetation will be judged based upon the effectiveness of the vegetation for the approved end use, and by comparing the quantified measures of vegetative cover, density and species-richness of the reclaimed mined-lands to similar parameters of naturally occurring vegetation in the area. Reclamation will be considered complete for a given area when these standards have been achieved or the subsequent land uses are ready to begin operation.

6.3.5 Table 2 - Revegetation Performance Criteria

Native Cover Seed Mix	
Goal	Native vegetation attaining similar cover, density and composition as nearby areas.
Performance Criteria	*Overall Cover:* 60 percent of baseline *Density:* 80 percent of baseline *Species Richness:* 80 percent of baseline. (Baseline studies will be conducted prior to clearing native vegetation for mining activities to fully identify percent cover, density and species richness).
Contingency Action	Reseed if densities and/or diversity of plants are low.
Weeds/Invasive Species	
Goal	Less than 25 percent of any 20 square foot area.
Performance Criteria	Weeds present in the revegetation area will be removed if more than 25 percent of any 20 square foot of the area is occupied by weeds greater than six inches in height.
Contingency Action	Remove manually and spray cut stems of large invasive species, such as castor bean or fennel with Roundup.

*No single species shall constitute more than 50% of the vegetative cover

6.3.6 Test Plots

A Revegetation Test Plot program will be established to determine the effectiveness of the proposed

seeding methods and species composition, and seeding rates. The test plots will be used to determine the necessary germination rate of the proposed seed palette, the ultimate vegetative cover of native plants and weeds that may emerge.

Table 1 shows the seed mix that would be used. This mixture would be hydroseeded or broadcast by hand over the test plots. Results of the test plots would be matched against baseline information gathered from a representative, undisturbed area. Density, cover and diversity of a representative site would be measured. If necessary, monitoring criteria of the seeding prescription would be altered to conform to the naturally occurring species composition and distribution.

Test Plots would be monitored for at least five years. Results of the Test Plots would be matched against the baseline conditions previously gathered from a representative, adjacent, undisturbed area. If necessary, the seed palette and/or planting procedures would be adjusted to be similar to the adjacent naturally occurring species composition and distribution. Results would be memorialized and used at the time of reclamation.

6.3.7 Monitoring and Reporting

Monitoring is designed to evaluate the success of the seeding procedures and subsequent native plant growth over time and to implement contingency measures in the event the specified performance criteria are not achieved. Pursuant to § 2773(a) of SMARA, the success of reclamation will be monitored annually for three years, or until performance standards are met, provided that, during the last two years, there has been no human intervention, including weeding. Monitoring will be conducted by a qualified applicant appointed representative after seed introduction to gauge the success of the revegetation effort. Remedial measures will be implemented, as necessary, to achieve the performance criteria presented in Table 2 above.

A stratified random sampling program for monitoring vegetative recovery will be implemented. An adequate number and size of sampling plots to achieve an 80% confidence and precision level (not less than 14 for most vegetation types) as required by Article 9 of the SMGB regulations will be determined based on the monitoring biologist's identification and mapping of uniform landscape units or ecological sites delineated at the time of revegetation monitoring.

The monitor will evaluate the need for weeding as well as plant establishment. Annual reports and recommendations will be submitted to the SMARA Lead Agency. Follow up monitoring will continue for three years, as described above, and will not cease until performance criteria have been met.

6.4 Drainage, Diversion Structures, and Erosion Control, CCR §3706

The operator will ensure that during mining operations the offsite storm run-off through the property outfalls at substantially the same location as exists under natural conditions.

The site is subject to the General Industrial Storwmwater permit and has filed a Notice if Inititaion (NOI) with the Regional Water Quality Control Board. A Storm Water Pollution Prevention Plan (SWPPP) has been prepared for and is currently in use at the Project site. The SWPPP (attached in Appendix 2) will be updated and amended by Pacific Clay Products and Pacific Aggregates, Inc., whenever there is a change in site drainage, significant materials used at the facility, material handling areas or practices, or in response to changes in permit requirements. The SWPPP utilizes recognized Best Management

Practices and the site will meet the standards identified within the approved SWPPP at the completion of reclamation activities.

The SMARA guideline requires a 20 year, 1 hour design flow rate and volume while the SWPPP (attached in Appendix 2) guideline requires containment and treatment of the 10 year 24 hour design volume. An analysis conducted by a State of California Registered Civil Engineer confirmed that the existing site controls for collection and retention of stormwater flows under the SWPPP guidelines exceed the SMARA required flow rates and design volumes. Please see Appendix 2 for the analysis discussed above including figures showing site specific drainage maps depicting all erosion control and drainage facilities.

Upon Project completion, the site will be a depression that collects and retains storm water run on. In the reclaimed state, erosion control will be provided by revegetation and berms at the top of slopes as noted on Figure 2 - Reclamation Plan.

Erosion rills and other erosional areas that are greater than 12" in depth, 24" in width or 12' in length will be filled prior to the rainy season and identified and corrected as part of the routine stormwater inspections. Correction may include placement of graded rock receptors and or straw bales to slow concentrated runoff within 1 week following a rainfall event.

Stockpiles will be managed to minimize wind and water erosion by stabilizing with water spray on an as needed basis. Clay stockpiles in the brick plant area are also bermed and runoff is controlled to capture sediment runoff. Stockpiles are also shaped to provide a minimal amount of surface area for a given pile size, and graded to minimize the potential for ponding water on the surface of the pile that could lead to concentrated runoff and/or erosion of the pile itself.

Regarding water quality and recharge, the existing setting for this analysis is the site as it exists today. since the site is a vested operation. The overall impact of the site on water recharge is to slow and retain stormwater from the project and adjacent upstream sites. On a qualitative basis, this provides equal or greater recharge potential than the current and pre-mining (1880s) condition. Additionally, Pacific Aggregates and Pacific Clay products maintain a Spill Prevention Control and Countermeasures Plan to provide protection from recharge water impacts.

6.4.1 Detention Pond Maintenance

The facility has multiple detention and retention basins along with mining pits that capture storm water and sediment. The Stormwater Pollution Prevention Plan (SWPPP) attached in Appendix 2, includes the location of all facility basins. The water collected in the basins and pits stays on-site and is used in industrial processes. The basin facilities are cleaned and maintained on an as needed basis with the sediment regularly excavated and stockpiled for future use. The facility visually inspects each outfall, detention basin and retention basin prior to forecast storm events to ensure that the appropriate BMPs described in the plan have been implemented. The SWPPP (Appendix 2) further defines an inspection program which includes weekly manager inspections, wet season manager inspections and annual comprehensive site compliance evaluations as described in Sections S. and Q. of the SWPPP.

6.5 Prime Agricultural Land Reclamation, CCR §3707

Not applicable to this Project.

6.6 Other Agricultural Land Reclamation, CCR §3708

Not applicable to this Project.

6.7 Building Structure and Equipment Removal, CCR §3709

Equipment, supplies and other materials shall be stored in designated areas. Waste shall be disposed of in accordance with state and local health and safety ordinances. All buildings, structures, and equipment shall be dismantled and removed prior to final mine closure except those buildings, structures, and equipment approved in the reclamation plan as necessary for the end use. Areas 1, 2, and 3 are noted on Figure 2 - Reclamation Plan. A description of the building and structures to be removed in each of these areas follows:

Area 1 – Pacific Aggregates Offices – All structures in this area will be removed when mining is complete.

Area 2 – Pacific Aggregates Facilities – This area currently provides material processing and maintenance functions. Equipment currently in place includes the rock plant, wash plant, ready mixed plant, maintenance shops, fuels tanks and other support structures. All structures in this area will be removed when mining is complete.

Area 3 – Pacific Clay Facilities – This area currently provides clay processing and manufacturing functions. All portable and temporary structures would be removed and permanent structures will remain and be available for the industrial/commercial end use when mining is complete.

Remainder of Site – Portable and temporary equipment and structures are utilized as needed on the remainder of the site. All equipment and structures needed for drainage and erosion control will be removed when mining is complete.

6.8 Stream Protection, Including Surface and Groundwater CCR §3710

Streams on the Project site have been disturbed due to previous vested mining operations and no change in these operations is proposed for this Reclamation Plan Amendment. The SWPPP attached in Appendix 2 provides the methods and means for onsite protection of downstream water quality.

In active flow areas that were previously mined, the on-site collection of mineable materials is controlled and monitored as part of the SWPPP document and operations. Flow controls and basin management provide several areas for material management. In several of these areas where flows enter the site, previous mining operations were conducted to collect and process the material. Excavation has ceased in these areas and they are part of an adaptive management program to establish and stabilize the natural flow areas.

These adaptive management controls currently consist of basins configured using natural onsite materials to collect the aggregate materials, slow the storm flows and retain the flows to prevent stormwater discharges. Regular removal and basin maintenance is performed to maintain the basin capacity and control flow rates. Annual monitoring of storm flows, storm intensities and volume calculations of new material entering the site is documented. The annual variation of material collected and stabilization of the natural flow areas determines the operational changes for the site, and assess

potential for offsite impacts. The SWPPP is updated with annual topographic data changes to provide additional information in the adaptive management approach to the natural areas.

6.9 Topsoil Salvage, Maintenance, and Redistribution CCR §3711

As part of the Revegetion Program discussed in Section 6.3 above, a topsoil salvage and redistribution program will be developed to ensure that soil conditions at the time of revegetation will be adequate to support the native plant palette. Soil analysis will be conducted to evaluate the nutrient levels in the topsoil and will be compared to soil test results from adjacent, undisturbed areas. Topsoils will be augmented if growth-inducing deficiencies in essential nutrients are noted. Some topsoil stockpiles are currently present on site as shown on Figure 2 – Reclamation Plan. Future topsoil stockpiles will be segregated from overburden, see Figure 2 for the topsoil storage areas.

6.10 Tailing and Mine Waste Management CCR §3712

While the operator may ultimately be able to sell much of the material generated on site, a portion of the unmarketable excess mined material will be used in the reclamation revegetation efforts. Additional excess material will remain on site and will be backfilled into mined out portions of the pits as described below.

The waste materials onsite resulting from the mining and processing operations consist primarily of grog which is inert broken fired clay materials, and fine grained soils generated from the washing of aggregates. Much of the grog is actually reused in the clay products as filler by Pacific Clay, or is sold to other clay products manufacturers. A minor amount is backfilled into the pits or used for on-site drainage control. Fine grained soils resulting from the aggregates processing consists of silts and clays with minor amounts of sand. These materials can be reused on site in the brick-making process, as well as being sold off site for use in low permeability applications such as landfill liners and covers. The overburden on site primarily consists of colluvium and other surficial soils that develop atop the formational materials. These materials vary in composition across the site reflecting the different underlying geology, but generally consist of sands, silts, clays and gravels and combinations thereof. Lesser amounts of overburden occur within the geologic units as interbeds of non-marketable materials, typically between the commercial grade clays. These are removed by ordinary earthmoving equipment and would be classified as soils in the Unified Soil Classification System. These materials are far from sterile and do not compare to tailings or similar processed mine wastes. They are usually covered with grasses and other plants after the first rainy season. Mature natural vegetation recovers once the material is undisturbed. Climax chaparral is found on many stockpiles as young as 15 to 20 years old.

As discussed in Section 6.2. any backfill that remains on the site will be placed in a manner consistent with the end us of the site. Back fill in areas that will remain industrial will be placed in accordance with appropriate UBC standards and City Building Official oversight. Backfill in open space areas will be non-engineered, but will be placed in generally small lifts and be compacted by the rolling force of heavy equipment used to place the material.

6.11 Closure of Surface Openings CCR §3713

No surface openings as described in CCR §3713 (b) have been or will be produced during mining or reclamation activities.

7.0 LAKE ELSINORE MUNICIPAL CODE (LEMC), CHAPTER 14.04 – SURFACE MINING AND RECLAMATION CHAPTER 17.144 – MINERAL RESOURCES AND RELATED MANUFACTURING DISTRICT

This Reclamation Plan Amendment has been prepared for this vested mining site in compliance with applicable portions of SMARA and Lake Elsinore Municipal code.

Pursuant to LEMC Section 14.04.170 this Amendment can be processed as a minor amendment because this Amendment combines currently approved reclamation plans, and reduces the area covered by those reclamation plans from 3457 acres to 1388 acres. This will not result in disturbance of lands that are not either already disturbed or proposed for disturbance in the previous applications. In addition, because the new Plan demonstrates compliance with current SMARA reclamation standards, it reduces, and has no potential in increase, any potential effects on the City and the environment.

8.0 STATEMENT OF RESPONSIBILITY

I, the undersigned, hereby agree to accept full responsibility for reclamation of all mined lands as described and submitted herein and in conformance with the applicable requirements of Articles 1 and 9 (commencing with Sections 3500 et seq. and 3700 et seq., respectively) of Chapter 8 of Division 2 of Title 14 of the California Code of Regulations, the Surface Mining and Reclamation Act commencing with Section 2710 et seq., and with any modifications requested by the administering agency as conditions of approval.

Signature _____

Name DAVID HOLLINGSWORTH

Signed this 10 day of MAY, 2011

9.0 FINANCIAL ASSURANCES

The project is currently in operation and financial assurances in place per SMARA requirements. An updated Financial Assurance Cost Estimate has been prepared and is included in Appendix 4 of this Amendment.