SUNSHINE CANYON LANDFILL

A REPUBLIC SERVICES COMPANY

July 30, 2010

Ms. Gail Farber
Director - County of Los Angeles Public Works
Integrated Waste Management Task Force
P.O. Box 1460, 900 South Fremont Street
Alhambra, CA 91802-1460

Re: BFI Sunshine Canyon Landfill Status Report, 2nd Quarter 2010

Dear Ms. Farber,

Please find the quarterly status report for the second quarter of 2010 as required by Condition 18 of the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force Findings of Conformance (FOC) for the Sunshine Canyon Landfill City/County Project dated December 18, 2008.

A. <u>Progress of City/County Project:</u>

The site has been operating as a Joint City/County Landfill as of January 2009. Waste acceptance averaged between 8,500 to 9,300 TPD (M-F), and between 2,600 to 3,000 TPD (Sat.) as of June 30th. The site is permitted to accept 12,100 TPD maximum daily capacity (M-F).

Month	Non-buried, recyclable and beneficial reuse material (Tons)	Total landfilled material (Tons)
April	13,900.10	204,006.71
May	14,654.40	193,660.43
June	22,579.72	212,977.94

14747 San Fernando Rd., Sylmar, CA 91342 (818) 833-6500 Office (818) 362-5484 Fax

B. <u>Progress of the site's landscaping activities and RE-vegetation of the permanent slope areas:</u>

We have enclosed with this report a copy of our "Quarterly Vegetation Project Status Report–Second Quarter 2010." This report outlines the vegetation activities for the 3rd quarter of 2009 and the activities expected to take place in the 3rd quarter 2010.

In general, the site continues to comply with the County CUP Condition 44 which requires the site to vegetate areas that will remain inactive for greater than 180 days. Sage Mitigation areas on permanent slopes continued to be monitored and maintained.

Hard copies of the vegetation report have also been provided to the following individuals and departments as of July 30, 2010:

Ms. Emiko Thompson-County of Los Angeles Department of Public Works
Dr. Wayne Aller-LA County Community Advisory Committee
Mr. Stefan Klemm-C2Rem
Mr. Ralph Kroy-City of Los Angeles Community Advisory Committee
Ms. Ly Lam-City of Los Angeles Department of Planning
Mr. Wayne Tsuda-SCL-LEA
Dr. Wen Yang-LA Regional Water Quality Control Board

If you have any questions regarding this status report, feel free to contact me at 818-833-6500.

Sincerely,

Becky Van Sickle

Becky Van Sickle
Environmental Compliance Specialist

Cc:

Emiko Thompson, County DPW
Linda Lee, County DPW
Larry Hafetz, County Counsel
Susan Jennings, Republic Services
Becky Van Sickle, Republic Services
Linda Lee, County DPW
Rafael Garcia, Republic Services
Maria Masis, Zoning Permit II Supervisor
Carlos Ruiz, County DPW
Gerry Villalobos, County DPH
Cindy Chen, SCL LEA
Dave Thompson, City LEA
Becky Bendickson, CAC

Quarterly Vegetation Project Status Report

2nd Quarter 2010

SUNSHINE CANYON LANDFILL
14747 San Fernando Road
Sylmar, California 91342
General Information: (818) 833-6500
www.SunshineCanyonLandfill.com
24 hour hotline: (800) 926-0607

SUNSHINE CANYON *Landfill*

BFI

Sunshine Canyon Landfill

Quarterly Vegetation Project Status Report

Second Quarter 2010

Revised 7/28/2010

Table of Contents

1.0 Introduction and Executive Summary

This summary report has been prepared in order to keep interested parties informed of Sunshine Canyon Landfill's (SCL's) ongoing vegetation projects. Though operated as one contiguous landfill, SCL has two land use permits, one from the County of Los Angeles' jurisdiction, and one from the City of Los Angeles' jurisdiction.

Typically the planting projects covered by this report fall into one of three categories: Sage, Final Landfill Cover, or Interim Planting. Sage planting is typically done on slopes that are at grade and may or may not be part of designated mitigation areas. Final Landfill Cover planting applies to slopes that area at final grade that are not designated a sage mitigation area. Interim planting treatments are primarily for short term dust and erosion control and are used on to slopes that will not be disturbed for 180 days or more, but that ultimately will be disturbed.

SCL is committed to taking the best approach possible to its planting projects. In the fall of 2007, SCL interviewed multiple potential expert consultants to assist with vegetation specifications. After an extensive review process, The Chambers Group Inc. (Chambers) was retained for their technical expertise and restoration experience. To date, Chambers has prepared detailed master plans for sage and interim planting. The document "Coastal Sage Scrub and Interim Cover Revegetation Plan for Sunshine Canyon County Landfill" (Chambers, 1/08) is available upon request. In the fall of 2009, the primary vegetation specialist from Chambers, Dr. Ted St. John, was hired by the company AECOM. SCL has since retained AECOM for vegetation monitoring and consultation, in order to continue working with Dr. St. John.

Beginning with this quarterly report, comments from Los Angeles County Department of Regional Planning (May 19, 2010 letter) have been addressed. This has resulted in some changes to the format and contents.

SCL does additional work with tree planting both on and offsite. Examples of this include oak tree planting, or restoration of vegetation in fire damaged areas off the landfill footprint. This work is described in separate reports and will not be addressed in this document.

2.0 Work Underway, 2nd Quarter 2010

2.1 Interim Cover

In the second quarter of 2010, interim areas on the City Side of the landfill were seeded and amended by SCL staff. The seed mix and amendments from Chambers' 1/08 plan and mulch were used.

This project area is shown on the map in Appendix A.

2.2 Final Cover

The landfill has two areas of final cover that were approved under previous permitting on the City side of the landfill, these are generally referred to as City Unit 1, North and City Unit 1 South. The majority of these areas are part of the future landfill footprint of the currently permitted City/County Landfill, however a large portion of the area of City Unit 1, South that is above the future liner grades has been designated as a Coastal Sage Mitigation Area (City Sage Mitigation Area) and therefore the work is discussed in Section 2.3 below. At present there are portions of the site nearing final cover elevations and these are discussed further in section 3.2, work for these areas will be proposed in future vegetation reports.

Areas of final cover that are within the future permitted landfill are occasionally reworked based on surface monitoring for cracks and or gas emissions as part of our regular maintenance of these areas. If the cover is disturbed as part of this kind of activity, the site will hydroseed and mulch the area to encourage growth and reduce erosion.

2.3 Sage Mitigation

On the County Sage Slope, test plots were installed in areas of problematic soils. These plots were designed by Dr. Ted St. John of AECOM, and were described in a May 4, 2010 letter report from AECOM (see Appendix B.) The plots were physically treated in three different ways that may help mitigate for the salts occurring in the soils:

1) Wood chips under jute mat
2) Trench to catch washed soil
3) Ridges to facilitate salt wicking

There are three replicates of each treatment on the slope. Soil monitoring will occur quarterly for one year to determine the effects on salinity.

In addition, the site began testing some salt-tolerant plants in pots of the difficult soil from the County Sage Slope. Some of the pots were left untreated, and some were treated with amendments. The plants will be monitored to see if a certain sage-compatible species does well in the soil that has presented challenges so far.

The sage mitigation areas are currently being monitored quarterly. Copies of the monitoring reports from the second quarter of 2010 are found in Appendix C.

3.0 Projected Installations, 3rd Quarter 2010

3.1 Interim Cover

Pursuant to County Conditional Use Permit (CUP) Condition 44A, hydroseed vegetation cover is required on any slope or landfill area that is projected to be inactive for great than 180 days, and the County LEA and the Department of Public Works must be notified of such areas.

The site is projecting that the areas shown in yellow (see map in Appendix A) on the County side are the only unvegetated slopes that will be inactive for greater than 180 days. In the 3rd quarter of 2010 these slopes will be seeded, amended and mulched per Chambers' 1/08 plan. The City Side interim areas have already been seeded but mulch will be added in the 3rd Quarter 2010.

Note that construction, contractor delays or rainfall conditions may dictate a change in projected planting schedules at any time. Landfill operational demands may also alter the work areas.

3.2 Final Cover

Pursuant to CUP Condition 44B, SCL is entering the preliminary planning phase for partial closure because waste is anticipated to be placed within 10 feet of the horizontal or vertical limits of fill in the northwestern corner of the landfill. These locations are shown on the Fill Sequencing Plan provided in Appendix D which includes approximately 60 acres. The areas outlined are currently expected to undergo significant settlement over the next few years and the area also to be the anticipated location of a stockpile (below final grades) to speed the settlement and for use as cover and final cover soils. The area is not anticipated to be officially at closure elevation for several years.

The site plans to submit an alternative cover design for the City/County Landfill which includes the areas described in Appendix D. The proposed design is anticipated to be similar to the design that was approved in January 2009 for City Unit 1, North and South with minor modifications. The modifications the site plans to pursue are based on lessons learned over the last few years during in the Coastal Sage Mitigation City Side, and are intended to help the rapid growth of the current approved final cover seed mix.

Because of current mandatory landfill closure cap designs, care must be taken that the vegetative cover does not interfere with the landfill cap and cause gas migration. Similarly, cap designs may limit root depth which means large-profile trees and shrubs and even deep-rooted natives may not grow. SCL is interested in proposing several options for final cap and final vegetative cover to the regulatory agencies, and, if possible, testing alternatives that result in both protection of health and safety and an attractive closed landfill. Technical work and regulatory approvals may take a significant amount of time and the date of approval cannot be projected. However, SCL's goal is to have a draft final cover vegetative plan, as part of a closure plan by the end of 2010.

Other than the generalized final cover discussion above, please note that the sage mitigation areas are also at "final grade" though they will receive only sage mitigation treatment.

3.3 Sage Mitigation

In the 3rd Quarter of 2010, the site will continue sampling the on-slope test plots on the County Sage Slope, and monitoring the pot tests. The site will initiate technical work and seek approvals for importing soil onto the compacted areas of the City Sage mitigation, to see if better growth on the flat upper decks can be achieved. This will require regulatory approvals as it is an alteration of the approved landfill cap.

No vegetation or weeding work is expected in the 3rd Quarter of 2010, weeding is anticipated for the 4th quarter of 2010.

4.0 Status Update on Other Vegetated Areas

4.1 General

As shown on the map in Appendix A, all areas of the landfill have been vegetated with the exception of the active areas, roadways, and buildings. Vegetative treatments meet both industry standards and the vegetation plans in place at the time plantings were conducted. The site is in compliance with CUP Condition 44. Due to the dry conditions, at the present time most vegetation is dormant and will likely remain so except when winter rains are plentiful. Current and planned activities are described in previous sections of this report.

Pictures illustrating samples of the different vegetated areas on site are provided in Appendix E.

4.2 Cut Slopes

Cut slopes are addressed in CUP Condition 44C. The only final cut slope at present time is the County Sage Slope. The steepness is 2.1:1, which is less steep than the 1.5:1 mandated in the CUP. The slope design was approved by the Department of Public Works. There are no pending cut slopes at this time. Condition 44D of the CUP mandates vegetation designs for final fill slopes, not final cut slopes, however SCL is committed to ensuring attractive and stable slopes for all permanent parts of the landfill topography. The current cut slope is designated as a sage habitat mitigation area, and status of that planting is discussed elsewhere in this report.

5.0 Additional Information

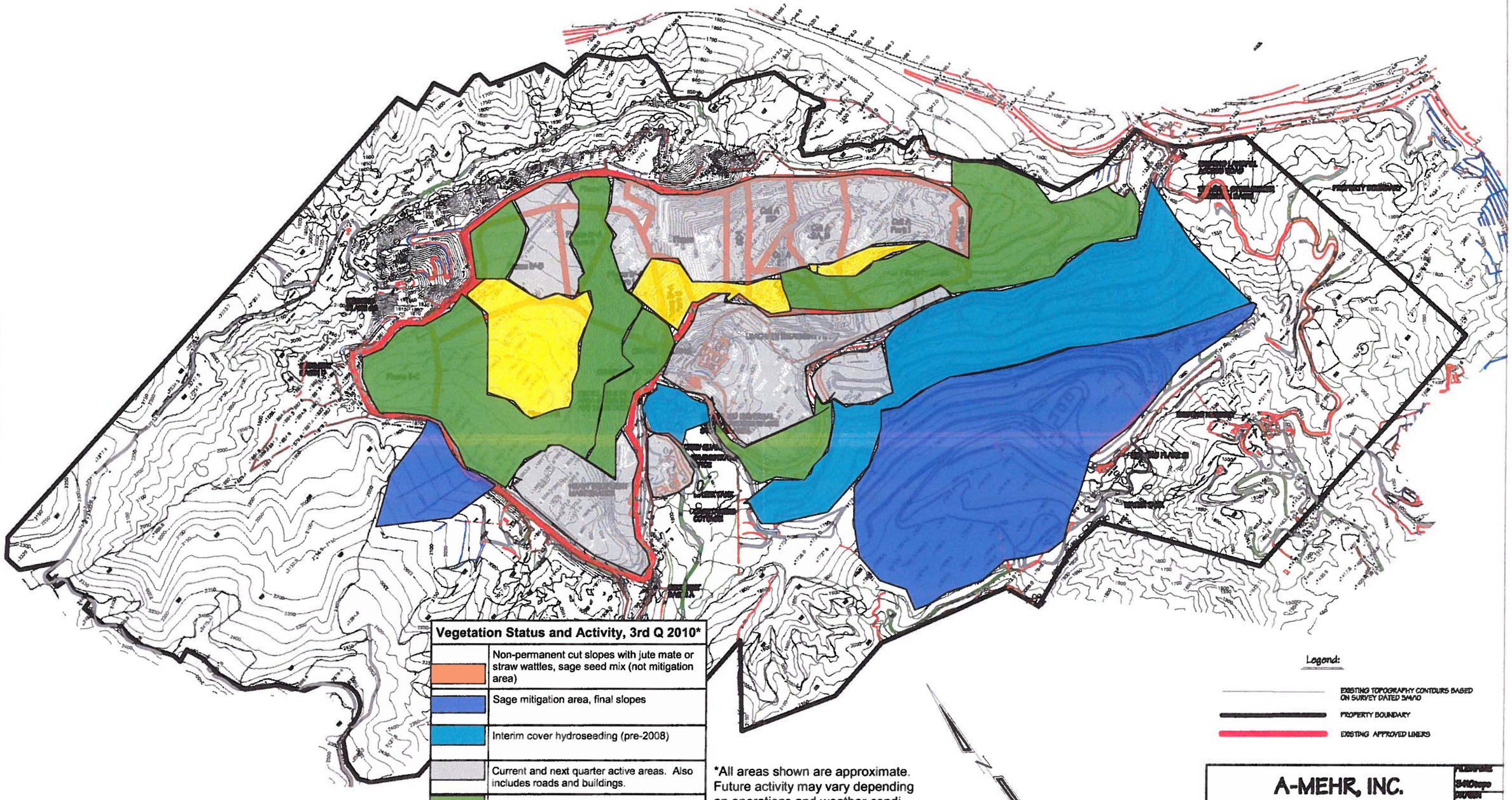
5.1 Vegetation Experts

Currently the consulting vegetation expert is Dr. Ted St. John of AECOM. Dr. St. John was chosen for his extensive work on restoration in difficult conditions. Dr. St. John has a research background in plant and ecosystem ecology, with numerous scholarly publications about mycorrhizal symbiosis, a factor that is often the key to successful restoration. He has helped introduce several of the methods that are now routine in restoration practice. He often works in difficult environments, including deserts, weed-infestations, and exposed subsoils. Portions of the planting area at Prima Deshecha Landfill were chemically very similar to the subsoil planting areas at Sunshine Canyon Landfill.

5.2 Soil Sampling, Amendments, and Plant Types

Soil sampling was done for the initial master revegetation plan (Chambers, 1/08.) Amendments were selected by the vegetation expert that were consistent with those soil sampling results, and since that time they have been used as directed. Plant types are also based on the revegetation plan, which addressed both soil quality and permit conditions for both interim and sage mitigation areas. For more information, please refer to the revegetation plan.

Appendix A



Vegetation Status and Activity, 3rd Q 2010*	
	Non-permanent cut slopes with jute mate or straw wattles, sage seed mix (not mitigation area)
	Sage mitigation area, final slopes
	Interim cover hydroseeding (pre-2008)
	Current and next quarter active areas. Also includes roads and buildings.
	Interim cover hydroseeding, amendments, and compost and/or mulch (post-2008)
	Upcoming Interim cover. County side = seed/ amend/mulch planned for 3rd quarter 2010; City side was seeded/amended in May 2010, adding mulch 3rd quarter 2010
Note:	Balance of property is native and/or mitigation tree plantings.

*All areas shown are approximate. Future activity may vary depending on operations and weather conditions.

Legend:

EXISTING TOPOGRAPHY CONTOURS BASED ON SURVEY DATED 3/4/10

PROPERTY BOUNDARY

EXISTING APPROVED LINERS

GRAPHIC SCALE 1"=800'

0 800 1600 2400

A-MEHR, INC.

Sunshine Canyon Landfill

City/County

Topographic Survey Map as of 3/4/2010

3/4/2010 Topography

FILENAME 3410topo

DRAWN RM

CHECKED

DATE 6/24/10

SHEET 1

Appendix B

AECOM
1461 E. Cooley Drive
Suite 100
Colton, CA 92324
www.aecom.com

909 554 5062 tel
909 424 1924 fax

May 4, 2010

Ms. Susan Jennings
Environmental Manager
Sunshine Canyon Landfill,
Republic Services
14747 San Fernando Road
Sylmar, CA 91342

Subject: Design of experimental tests of planting methods

Dear Ms. Jennings:

As part of our contract for restoration work at Sunshine Canyon Landfill (SSL) AECOM has agreed to conduct field trials on County Sage Hill. The objective is to find planting methods that will lead to successful revegetation of those slopes.

AECOM restoration specialists will design and oversee installation of four potential methods to address soil-related problems that have historically prevented successful revegetation of the cut slopes known as County-side sage hill. The methods will include provisions to trap rain-washed soil, amendments, mulching under an erosion control blanket, planting on a land configuration used in agriculture to combat high salinity, and tests of plants possibly tolerant of site conditions. This task includes evaluation and reporting on results of the trials.

It is clear from experience and from soil analyses that the sub-grade on the County Sage Slope is very difficult material for plants. We have attributed the problems to a combination of several factors, some brought out by observation and some by laboratory analysis of soil samples:

- The slopes are steep and that makes water run across the surface rather than soak into the soil.
- Much of the surface is exposed bedrock with no place for roots to grow.
- The soil tests showed most of the area to have high salinity (caused by salts other than sodium chloride).
- Soil pH was generally quite low, potentially causing aluminum and other ions to become available for plant uptake.
- Since the worst plant growth is actually on the soil that had more favorable pH than the others, there is likely to be a factor that we have not yet identified. The most likely problem in that category would be some naturally-occurring hydrocarbon, as is known to exist in some areas of Towsley Formation.

The material that forms the County side slope is Towsley Formation, with two subtypes. The coarser subtype is whitish in color and has supported some plant growth. The blue or gray fine material has produced much less plant growth. Some of our tests will focus on this more difficult component.

Trapping rain-washed soil: We have learned that residue washed down slope by erosion becomes suitable for plant growth. Such material is less compacted, more level, and has been rinsed free of

possible chemical problems. Ways to trap rinsed sediment include trenches allowed to fill during the rainy season, terraces that would trap sediment from above, or straw wattles that can trap sediment into shallow level beds. For our tests we will use a trench to capture rinsed soil. Soil will be washed into the trap artificially for test purposes. We propose three-by-three foot test plots with a trench across the lower boundary. The trench will be one foot deep and one foot wide, with the soil from the trench firmed into a level terrace just down slope from the trench. We expect that rainfall will fill the trench with sediment during a rainy season, but for the test we will ask the landscaper to use a water truck at the time of installation to rinse upslope soil into the trench. The hose should be directed at least 20 feet uphill from the trench to assure that the soil particles move far enough to be thoroughly rinsed.

This experiment has in essence already been done with the coarse sub-type of the Towsley Formation. We do not know whether rinsing will make the finer-textured siltstone subtype hospitable to plants. Three of these three-by-three foot trenched plots will be installed on exposed areas of the siltstone subtype. No plants will be immediately installed on the field plots because planting would have to be out of season. Sample soil material will be collected for chemical analysis when the trenches fill and again at quarterly intervals. See the separate soil sampling section for soil collection methods.

Mulching under an erosion-control blanket: Mulch for this purpose will be green waste material that would be available in quantity for large-scale application. The erosion control blanket for the test will depend on our ability to obtain 27 square feet of blanket made of an organic material. These blankets are normally sold in large quantities and we will have to design this component around pieces that our landscaper may have on hand or that we can remove from existing installations at the landfill. A three-inch layer of mulch will be applied evenly over each of 3 three-by-three foot plots and the erosion control blanket stapled over the mulch. The plots will receive initial watering to initiate decomposition of the mulch. No plants will be immediately installed on the field plots because planting would have to be out of season. Soil will be collected for chemical analysis before installation and again at quarterly intervals. See the separate soil sampling section for soil collection methods.

Land configuration to combat high salinity: This procedure, which has been used in agriculture, requires horizontal furrows in rows with peaked beds between the furrows. Salts in the soil wick upward as moisture evaporates from the top of each bed. The result is that the highest soil collects most of the salts and the mid-level soil is more hospitable for plant growth. In our tests the raised beds will be formed across the width of each three-by-three foot test plot with two furrows and two raised beds in each plot. The trenches should be dug deep enough to provide soil for beds raised one foot above the lowest part of the trenches. Evaluation will consist of comparing soil conductivity of initial soil samples with those taken at quarterly intervals as the wicking process proceeds. Soil samples will come from the mid-elevation of each bed. See the separate soil sampling section for soil collection methods. There will be three test plots for this method.

Tolerant plant species: A final test will use pot tests to evaluate growth of candidate plant species that may have high resistance to unfavorable soil conditions. Candidate species include *Iva axillaris* (poverty weed) and *Atriplex lentiformis* (salt bush). A third species will come from locally available horticultural species and has yet to be determined. While these species are typically only a small component of local native vegetation they may be useful if they prove tolerant of conditions on the

AECOM

slope. Tests will be carried out in one-gallon nursery pots of the siltstone subtype of Towsley Formation. Nursery-grown plants will be transplanted into the test soil and kept outside over the summer for easy care by landfill staff. The suggested species are tolerant of summer water and will be maintained with watering as maintenance staff determine necessary. Each pot will drain into a secondary container; the water in the lower container will be periodically poured back onto the top of the pot to prevent loss of salts from the soil. There will be three pots of each test species.

Plot layout: The nine plots required for these tests will be laid out horizontally in the siltstone (bluish) subtype of Towsley Formation with plots at least three feet apart. All will be within reach from the lower portion of the slope and in no case will a plot be positioned in such a way as to drain into any other plot. The treatments will be assigned randomly to the plots.

Schedules: Experiments are to be installed too late in the spring to allow growth of native plants. Evaluation will depend on changes in soil chemistry over the course of the trials. Six months after installation an evaluation will be made to determine which of any treatments will be installed over a larger area or extended for additional time. If extended, native test plant species will be planted at that time.

Soil sampling: Each soil sample will consist of six subsamples taken with a soil sampling tube or other device that can evenly sample the layer of soil from surface to 10 cm (four inches) in depth. The six subsamples will be combined and labeled then air-dried for storage. The samples will be submitted to a soil laboratory for determination of conductivity and pH in accordance with the laboratory's standard procedures.

Thank you for your consideration.

Ted St. John, Ph.D.
Senior Ecologist
AECOM

CC: Kurt Bratton, Republic Services

Compliance Plus
Ms. Maria Gutzeit
24463 Shadeland Drive
Newhall, CA 91321

Appendix C

AECOM
1461 E. Cooley Drive, Suite 100
Colton, California 92324
(909) 554-5062, Fax (909) 424-1924

PROGRESS REPORT
for the Sunshine Canyon Landfill Mitigation Sites
City Side Mitigation Area
Prepared by AECOM
on behalf of Browning-Ferris Industries and Compliance Plus.

Date: 5/7/10 Completed by: Ted St. John

Inspection Date: 5/5/10
Inspected by: Ted St. John

Original to: Maria Gutzeit, Kurt Bratton, Becky Van Sickle
Copies to: Tiffany Leo, Kun Liu

STATUS OF HYDROSEEDING

CONDITIONS:

☐ Fully covered ☒ Moderately covered ☐ Barely covered

COMMENTS:

Weedy grasses and lamb's quarter (*Chenopodium album*) have been trimmed and native plant species are steadily replacing them. Natives from the seed mix are much more evident throughout the seeded area than was true even six weeks ago. It is not likely that there has been a great deal of new germination. More likely, natives were released from competition by trimming and have now increased dramatically in both size and cover. There has not been much native growth on the top deck, but a large patch of annual wildflowers is still evident and preparing to set seed.

SEED MIX

CONDITIONS:

☐ No germination yet
☐ No cover of native plants from seed mix
☐ Sparse cover of native plants from seed mix
☐ Dense cover of native plants from seed mix
☒ Moderate cover of native plants from seed mix

COMMENTS:

In contrast to earlier observations, it does appear that there has been germination this year. However, it was disguised by weedy grasses during earlier inspections.

OVERALL NATIVE PLANT CONDITIONS

PLANT COVER:	PLANT HEALTH ISSUES	HEIGHT	SPECIES RICHNESS
☐ Dense	☐ Disease/pests	☒ 0" – 12"	☐ Low
☒ Patchy	☐ Plant stress	☐ 12" – 24"	☒ Medium
☐ Minimal	☐ Excessive herbivory	☐ 24" +	☐ High

COMMENTS:

Native vegetation is still patchy but appears to be spreading because individual plants are growing. This suggests that soil problems are much less pronounced on city side than on county side. In an earlier effort to diagnose the reasons for poor native establishment I discovered that little or no

mycorrhizal colonization had taken place. During a check on this visit of roots in the newly-evident native plant growth, it was gratifying to see that roots are now mycorrhizal. The sequence of events offers support to the earlier speculation that shading by weeds prevented sufficient photosynthesis to support the mycorrhizal symbiosis. Now that the weeds have been trimmed, the natives have become mycorrhizal and have grown enough to appear much more prominent on the slope.

WEED CONDITIONS

CONDITIONS:

- ☐ Dense weed coverage
- ☒ Moderate weed coverage (seedlings in high density)
- ☐ Minimal weed coverage
- ☐ Weeds germinating
- ☐ Weeds flowering
- ☐ Weeds setting seed

COMMENTS:

Weedy grasses have dominated the city-side slopes but have been greatly reduced by weed trimming. The resulting rapid growth of native species has thoroughly changed the outlook for the slope.

MISCELLANEOUS

CONDITIONS:

☐ Trash ☐ Vandalism ☐ Erosion ☐

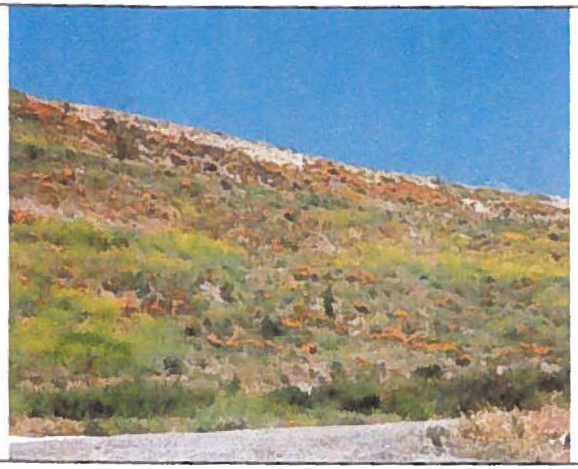
COMMENTS:

In contrast to county-side slopes, little erosion has taken place on the city-side slopes. This is presumably due to the cover by weedy vegetation, only now being replaced by natives.

RECOMMENDATIONS

COMMENTS:

I recommend regular mowing during the next rainy season to allow natives to spread further. If the current program is applied faithfully there is every reason to expect that the city-side slope will become dominated by natives rather than weeds.



Native plants are becoming increasingly evident on city-side slopes .

Native patches include several species but are visually dominated by California poppy.

An area of the top deck is shown here with native wildflowers getting ready to set seed. Most of the native vegetation on the top deck consisted of annuals rather than shrubs.

Native plant patches on the slopes have become mycorrhizal, apparently aided by extensive weed trimming.

AECOM
1461 E. Cooley Drive, Suite 100
Colton, California 92324
(909) 554-5062, Fax (909) 424-1924

PROGRESS REPORT
for the Sunshine Canyon Landfill Mitigation Sites
County Side Mitigation Area
Prepared by AECOM
on behalf of Browning-Ferris Industries and Compliance Plus.

Date: 5/7/10 Completed by: Ted St. John

Inspection Date: 5/5/10
Inspected by: Ted St. John

Original to: Maria Gutzeit, Kurt Bratton, Becky Van Sickle
Copies to: Tiffany Leo, Ted St. John

STATUS OF HYDROSEEDING

CONDITIONS:

☐ Fully covered ☒ Medium covered ☐ Barely covered

COMMENTS:

Seeding and container planting took place in spring of 2008, but it is not longer possible to distinguish plants that started from seed. Vegetation remains patchy, with reasonably good native growth on the coarse sub-type of Towsley Formation, and no growth at all on the silty sub-type.

SEED MIX

CONDITIONS:

☐ No germination yet
☐ No cover of native plants from seed mix
☐ Sparse cover of native plants from seed mix
☐ Dense cover of native plants from seed mix
☒ Moderate cover of native plants from seed mix

COMMENTS:

The site is a patchy mixture of native and non-native vegetation, although areas remain that will not allow growth even of weeds.

OVERALL NATIVE PLANT CONDITIONS

PLANT COVER:	PLANT HEALTH ISSUES	HEIGHT	SPECIES RICHNESS
☐ Dense	☐ Disease/pests	☐ 0" – 12"	☐ Low
☒ Moderate	☐ Plant stress	☒ 12" – 24"	☒ Medium
☐ Minimal	☐ Excessive herbivory	☐ 24" +	☐ High

COMMENTS:

The difficult conditions have been partially overcome in some areas. Other areas continue to resist growth of any plants, even weeds.

WEED CONDITIONS

CONDITIONS:

- ☐ Dense weed coverage
- ☐ Moderate weed coverage (seedlings in high density)
- ☒ Minimal weed coverage
- ☐ Weeds germinating
- ☐ Weeds flowering
- ☐ Weeds setting seed

COMMENTS:

Most of the slopes are either supporting a mixture of natives and weeds or support no growth at all. Weeds are not a serious problem in the growing areas and are continuing to be overtaken by natives.

MISCELLANEOUS

CONDITIONS:

☐ Trash ☐ Vandalism ☐ Erosion

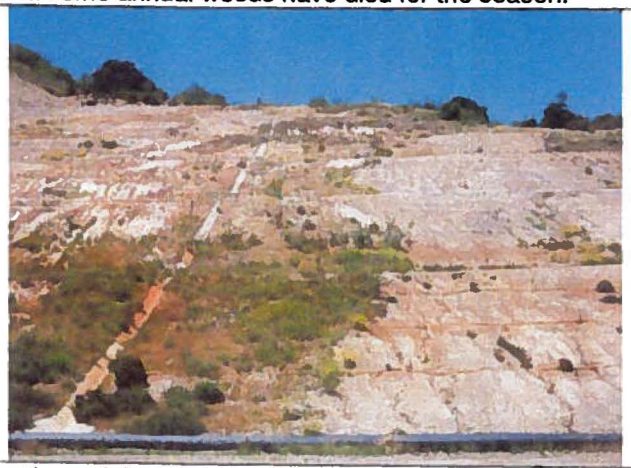
COMMENTS:

RECOMMENDATIONS

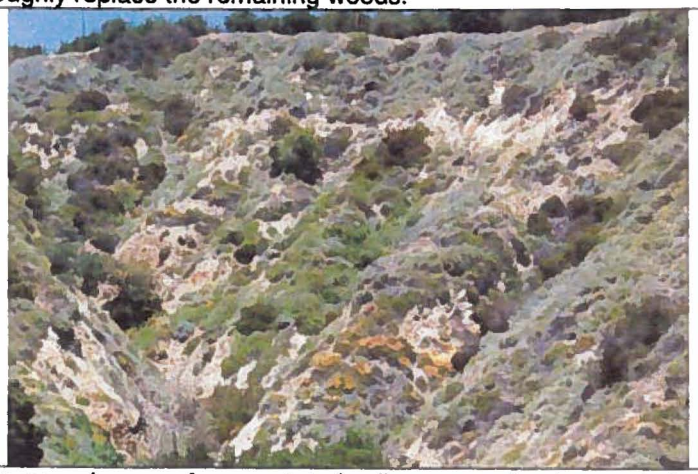
Recommendations to date have been met. New experimental methods are being installed and planting recommendations for next fall will be based on those.

There has been little change since March on the county-side slopes except that some annual weeds have died for the season.

Within vegetation patches native vegetation appears destined to thoroughly replace the remaining weeds.



Some portions of the hillside appear to be absolutely resistant to plant growth of any kind.



The exposed areas of unvegetated soil appear not only on cut slopes, but also on nearby undisturbed slopes.

SCL Comments and Responses to Sage Monitoring Reports:

City: Prior to the rainy season, a contract will be secured with a landscape company so that on-demand mowing can occur so that weeds can be rapidly abated after rains and multiple times per rainy season if warranted.

County: As noted, test plots are installed and work continues to find a solution, if possible, to the difficult soil areas on the slope.

Appendix D

Legend:

EXISTING TOPOGRAPHY CONTOURS BASED ON SURVEY DATED 3/4/10

PROPERTY BOUNDARY

EXISTING APPROVED LINERS

LIMIT OF LANDFILL WITHIN 10 FEET OF FINAL ELEVATION

GRAPHIC SCALE 1"=800'

0 800 1600 2400

A-MEHR, INC.	FILENAME: 3410topo
	DRAWN: RM
Sunshine Canyon Landfill	CHECKED:
City/County	DATE: 7/12/10
Topographic Survey Map as of 3/4/2010	SHEET:
3/4/2010 Topography	1

Appendix E

Photo Key
2nd Quarter 2010 Vegetation

Legend:

EXISTING TOPOGRAPHY CONTOURS BASED ON SURVEY DATED 5/4/10

PROPERTY BOUNDARY

EXISTING APPROVED LINERS

N

GRAPHIC SCALE 1"=800'

0 800 1600 2400

A-MEHR, INC.

Sunshine Canyon Landfill

City/County

Topographic Survey Map as of 5/4/2010

5/4/2010 Topography

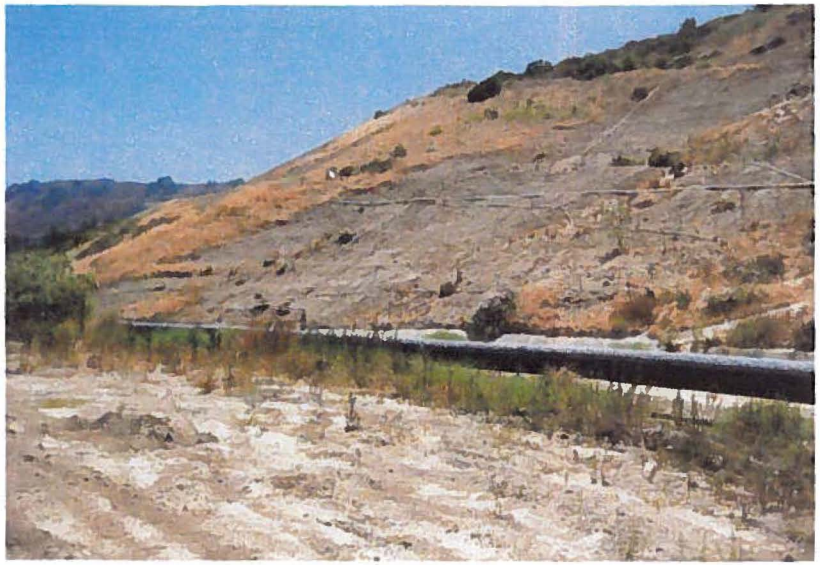
5/4/10aps

RM

6/24/10

1

1



2

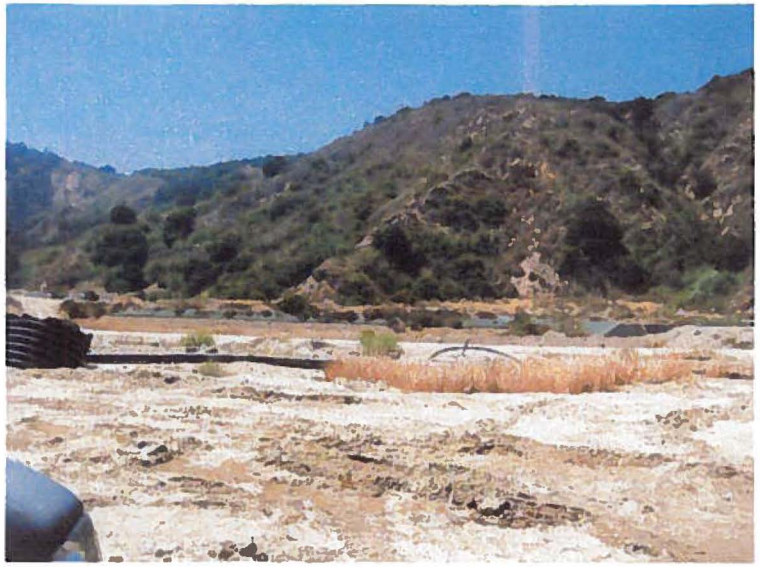
3

4

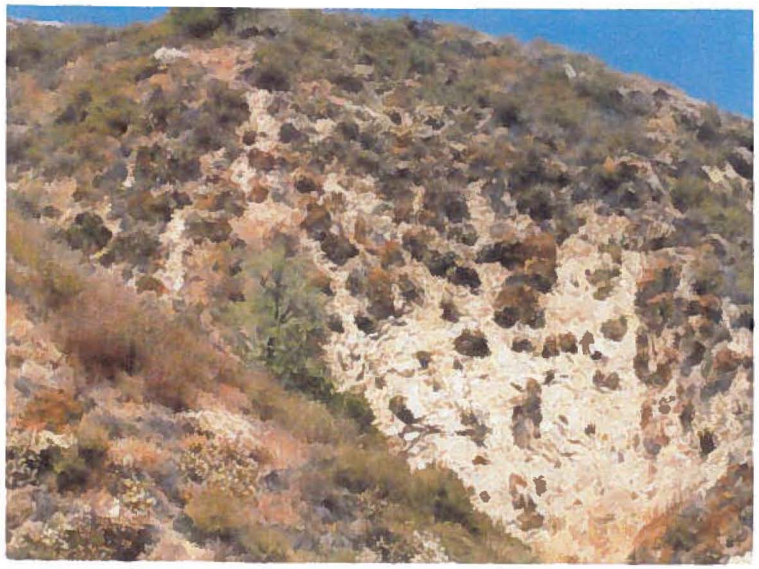
5

6

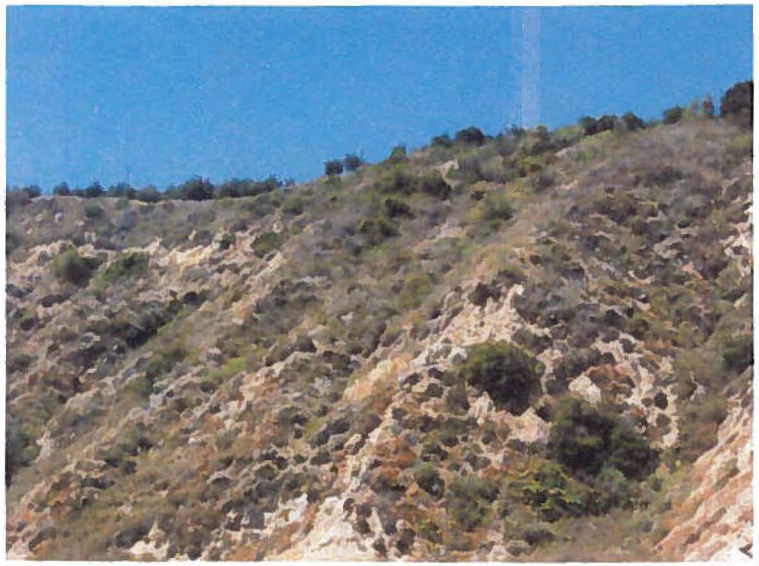
7



8



9



10

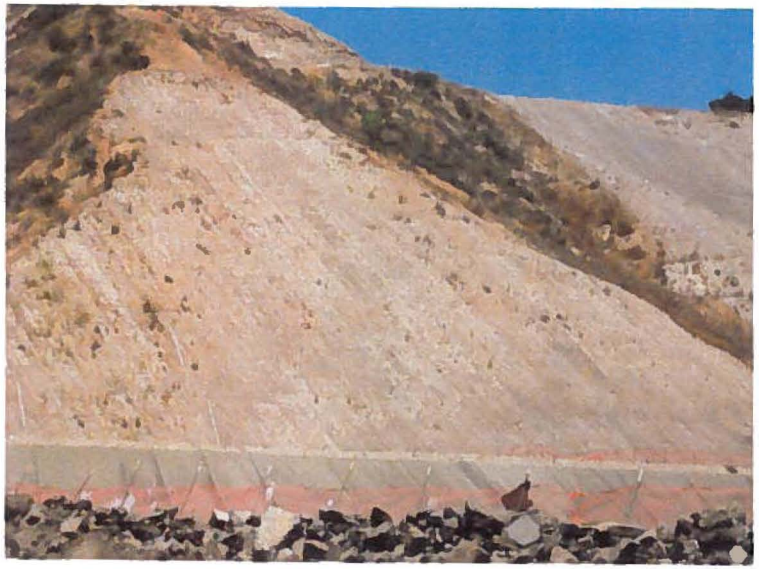
12

Note: No #11

13

14

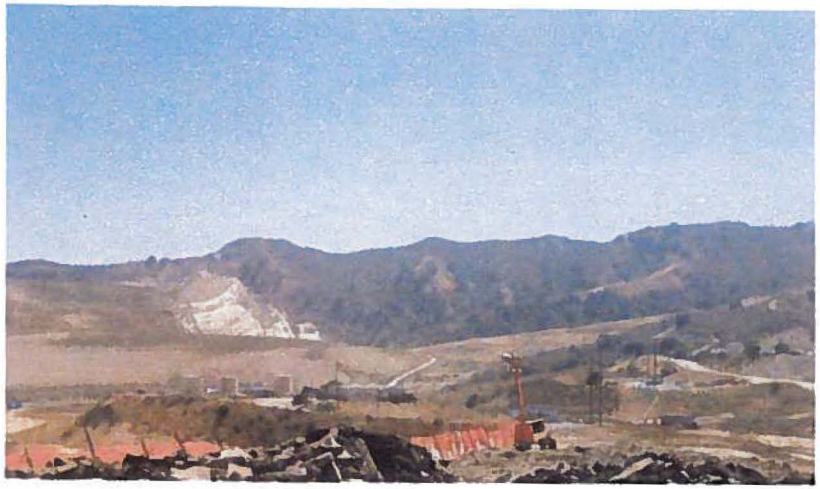
15



16

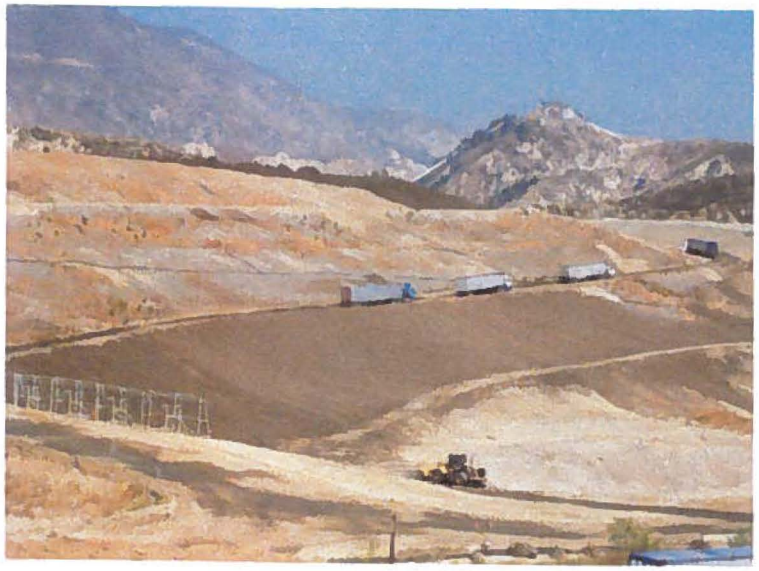
Note: No #17

18



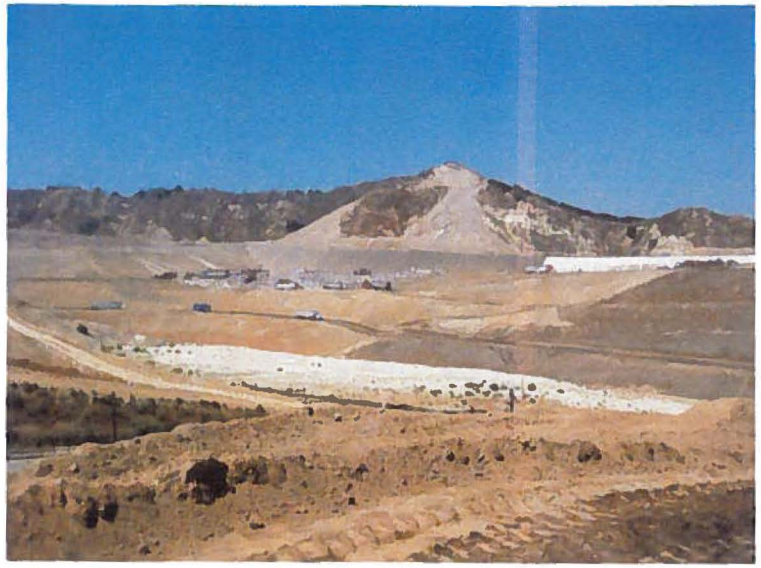
19

20

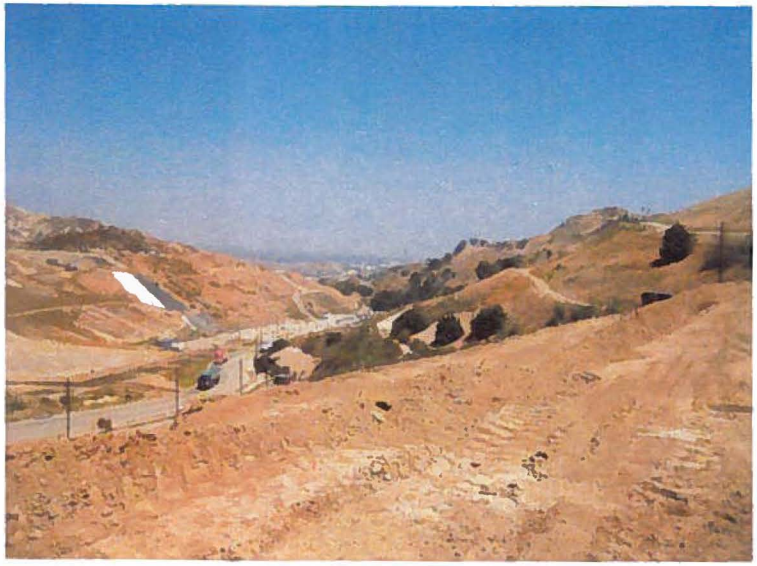


23

Note: No #21,22

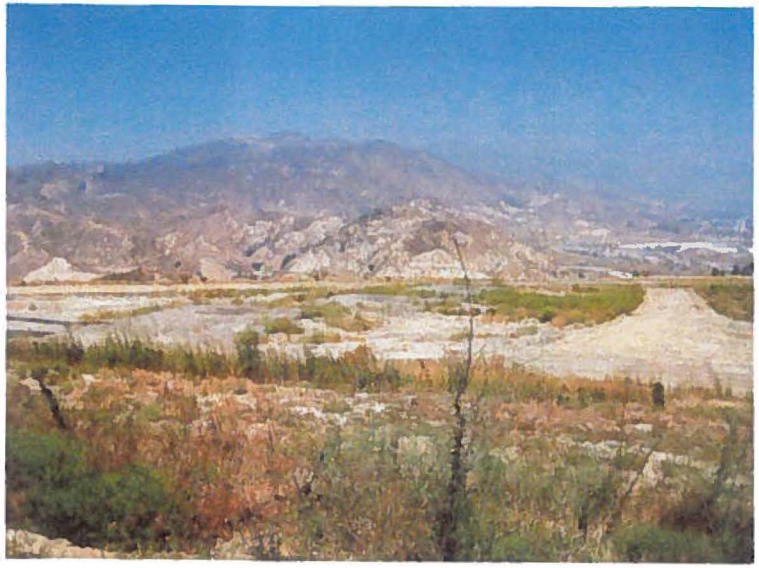


24



25

26



27

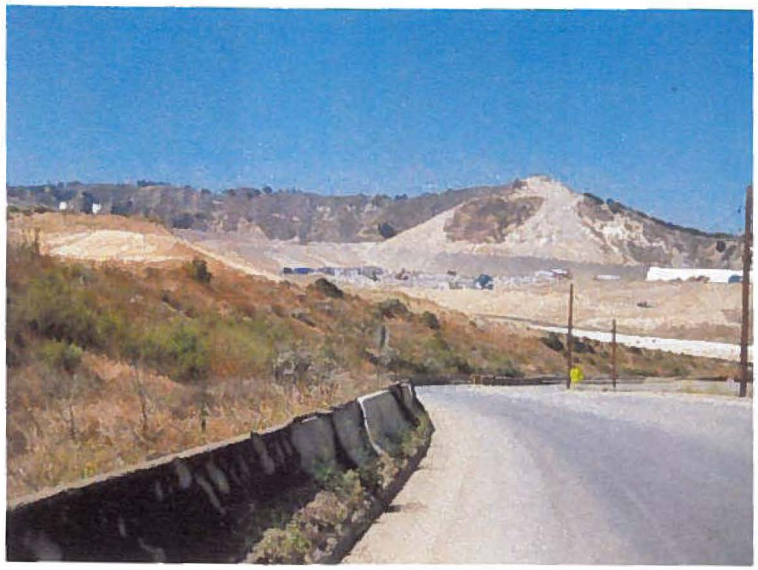
28

29

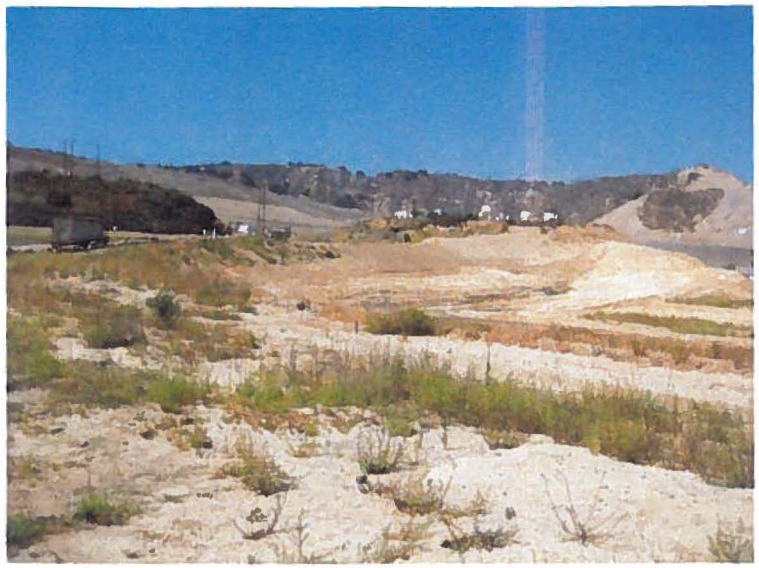
30

31

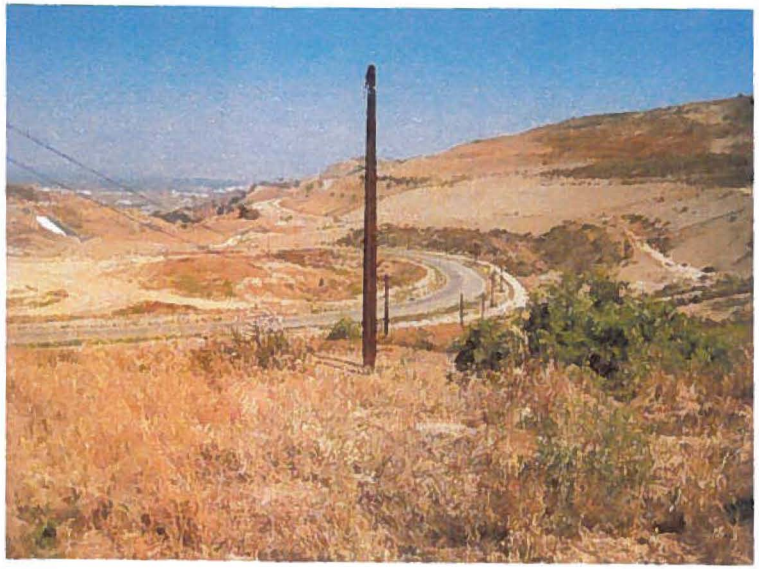
32



33



34



35

36

Test Pots

Test Plots on Slope