

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX 75 Hawthorne Street San Francisco, CA 94105

October 17, 2012

Ms. Jenny Marek U.S. Fish and Wildlife Service 2493 Portola Road, Suite B Ventura, CA 93003

Mr. Jeff Humble California Department of Fish and Game PO Box 1179 Ventura, CA 93002

Ms. Mary Meyer California Department of Fish and Game 226 West Ojai Avenue, Suite 101 PMB 501 Ojai, CA 93023

Subject: EPA Radiological Study of the Santa Susana Field Laboratory Area IV and the Northern Buffer Zone; *Quarterly Biological Monitoring Report #7*

Dear Ms. Marek, Mr. Humble, and Ms. Meyer:

The United States Environmental Protection Agency (US EPA) is continuing its radiological study at Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL) located in eastern Ventura County. EPA is conducting this project pursuant to federal legislative mandate HR2764, the Consolidated Appropriations Act of 2008, and the authority granted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Attached is EPA's Quarterly Biological Monitoring Report #7 dated June 1, 2012. The purpose of this report is to provide a quarterly monitoring update, which summarizes:

- Project Activities and Operations,
- Biological Surveys, Monitoring, and Impacts to Federally Listed Species, and their Critical Habitat, if applicable,
- Biological Surveys, Monitoring, and Impacts, to State listed species, and Species of Special Concern,
- Riparian Area impacts,
- Issues Encountered and Adaptive Management.

The attached report covers EPA project activities during the period from January 1st to March 1st, 2012. EPA intends to issue biological monitoring status reports to document our ongoing compliance with the Biological Opinion concerning the subject project issued by the U.S. Fish and Wildlife Service (USFWS) on May 25, 2010 and our compliance with the substantive technical requirements of the California Endangered Species Act, the California Department of Fish and Game Code Section 1602 (riparian protection), the Federal Migratory Bird Treaty Act

and the California Fish and Game Code Sections 3503 and 3503.5 (for protection of nesting birds).

Please give me a call at (415) 972-3167 if you have any questions regarding the information provided herein.

Sincerely,

Andrew Bain Remedial Project Manager SSFL Site

cc: Stephanie Jennings, Department of Energy Rick Brausch, California Department of Toxic Substances Control

Attachment: Quarterly Biological Monitoring Report #7 dated June 1, 2012

QUARTERLY BIOLOGICAL MONITORING REPORT #7

RADIOLOGICAL STUDY OF THE SANTA SUSANA FIELD LABORATORY AREA IV AND NORTHERN BUFFER ZONE

Prepared for:

U.S. Environmental Protection Agency Region 9 75 Hawthorne Street San Francisco, CA 94105

Prepared by:

HydroGeoLogic, Inc. 5800 Woolsey Canyon Road Building 204 Canoga Park, CA 93104

and

Envicom Corporation 28328 Agoura Road Agoura Hills, CA 91301

June 1, 2012

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INTRODUCTION

The U.S. Environmental Protection Agency (EPA) is conducting a radiological characterization of a portion of the Santa Susana Field Laboratory (SSFL), located in the Simi Hills of eastern Ventura County, California (**Figure 1**). The two areas at SSFL being characterized are Area IV, a 290-acre administrative section where the U.S. Department of Energy and its contractors once operated several nuclear reactors and associated fuel facilities and laboratories, and the Northern Buffer Zone (NBZ), a 182-acre area with no history of development that lies adjacent to Area IV. These two areas comprise the Area IV study area.

Several activities associated with the radiological study of the Area IV Study Area have the potential to impact federally listed species and their critical habitat, as well as biological resources protected under other Federal and State laws. These activities include vegetation cutting, gamma scanning, geophysical survey, surface and subsurface soil sampling, groundwater monitoring well sampling, surface water sampling, and sediment sampling. The scope of these project activities is described in further detail in the Biological Assessment (BA) prepared for EPA by HydroGeoLogic, Inc. (HGL), and Envicom Corporation on February 12, 2010. To minimize the impact to natural resources and riparian habitat within the study area, protection measures were developed and are being implemented as activities progress. These measures are detailed in Appendices E, G, and N of the Site Management Plan (dated September 24, 2010).

EPA is conducting this project pursuant to federal legislative mandate HR2764, the Consolidated Appropriations Act of 2008, and the authority granted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Formal consultation under Section 7 of the Endangered Species Act has been conducted with the U.S. Fish and Wildlife Service (USFWS), and a Biological Opinion was issued on May 25, 2010. The USFWS Biological Opinion identified Avoidance and Minimization Measures (AMMs) keyed to each of the proposed activities and Federally listed species with potential to occur within the Action Area. EPA has agreed to implement the various components of the Radiological Survey in compliance with the Biological Opinion and its requirements. Although not under discretionary approval, it is also EPA's goal to comply with the substantive technical requirements of State of California natural resource protection laws, such as the California Endangered Species Act and California Fish and Game Code Section 1602 for impacts to riparian resources. Additional applicable biological resource laws or regulations to which the project is adhering include the Federal Migratory Bird Treaty Act and California Fish and Game Code 3503 and 3503.5 (for protection of nesting birds).

The purpose of this report is to provide the seventh quarterly monitoring update, which summarizes 1) Project Activities and Operations, 2) Biological Surveys, Monitoring, and Impacts to Federally Listed Species and their Critical Habitat, if applicable, 3) Biological Surveys, Monitoring, and Impacts to State-listed species and Species of Special Concern, 4) Riparian Area impacts, and 5) Issues Encountered and Adaptive Management. The report covers the period from January 1, 2012, through March 31, 2012.

PROJECT ACTIVITIES AND OPERATIONS

The Area IV Study Area is subdivided into Subareas 3, 5A, 5B, 5C, 5D North, 5D South, 6, 7, 8 North, 8 South, NBZ-W, and NBZ-E (**Figure 2**). The subareas have been divided into 76 Survey Sections (SS) and 23 NBZ Priority Areas. The SSs include roads. To date, EPA has conducted or is currently performing all six of the primary project tasks affecting natural resources: vegetation cutting, gamma scanning, geophysical surveying, surface and subsurface soil sampling, groundwater monitoring well

sampling, and surface water and sediment sampling. The following is a discussion of the project tasks and the locations in which they have been conducted as observed and monitored for this seventh quarterly report. Various equipment and work activities that were monitored during this quarter are shown in representative photographs in **Plates 1, 2, and 3**.

Vegetation within the study area was cut or trimmed to allow access to vehicles and equipment, and to provide clearance for gamma scanning equipment at optimum levels of sensitivity. Vegetation cutting protocols are found in Appendix E of the Site Management Plan. Vegetation cutting was monitored during this quarterly monitoring period in Subareas 5B, 5C, and NBZ-W (Figure 2). Vegetation cutting equipment used during this quarter was limited to handheld tools such as weed whackers and machetes.

Gamma scanning was performed using various scanning devices, depending on site conditions. Scanning equipment includes a JCB off-road forklift vehicle (an ERGS machine was formerly used, and the JCB is still referred to as the 'ERGS' in this report), a modified Canycom compact walk-behind rubber track-mounted gamma scanner (TMGS), mule-mounted gamma scanning devices (MMGS), a handcart scanner, and handheld scanners. Gamma scanning was monitored during this monitoring period in Subareas 5A, 5B, 5C, 5D South, 6, 7, NBZ-E, and NBZ-W (Figure 2). Gamma scanning activities concluded in mid January.

Geophysical surveys have been completed in all Subareas of the project area and were not observed to occur during this monitoring quarter.

Surface and subsurface soil sampling activities were monitored during this seventh quarterly period in Subareas 5A, 5B, 5C, 6, 7, 8-North, NBZ-E, and NBZ-W. Biological clearance surveys were performed for each of the affected soil sampling sites and sensitive resources were clearly identified and flagged. Sampling equipment used for this task includes a mobile drilling/coring rig and hand tools. Support equipment for the soil sampling effort includes a pressure steam cleaner, decontamination rack, radiation and chemical detection meters, tables, chairs, glass and plastic sample containers, and equipment boxes. The number of sampling points within each SS varies depending on the findings of the Historical Site Assessment (HSA) and the results of the gamma scanning surveys already conducted. The sampling procedure at each sample point involves retrieving a surface sample of approximately one gallon of soil from 0 to 6 inches below ground surface (bgs). A subsurface soil sample consisting of a core sample obtained from a depth of 10 feet bgs is collected at a subset of the surface sampling sites.

Monitoring well sampling was completed during the fourth quarterly monitoring period and therefore was not conducted during the seventh quarterly monitoring period.

BIOLOGICAL CLEARANCE SURVEYS, MONITORING, AND IMPACTS

Clearance Survey Methodology

Before project activities commenced, a USFWS-approved biologist from Envicom conducted clearance surveys to document the presence/absence and location of Federal and State special-status biological resources and riparian habitat within each of the subareas. The locations of the resources were marked in the field with conspicuous flagging and mapped using Global Positioning System (GPS) technology, and Geographic Information System (GIS) software. Mapped resources are shown on **Figures 3**, **4**, **and 5**. Clearance survey monitoring forms (Appendix 2) were prepared for each clearance survey completed during this monitoring period to document the resources observed and to identify which AMMs included in the Biological Opinion are applicable to future activities occurring within the survey area.

Biological Monitoring Methodology

One or more of the approved biological monitors from Envicom were present on a daily basis when work activities occurred. The monitors attend the safety meeting with crews and monitor project activities. During the reporting period (January 1 through March 31, 2012) the primary project tasks that were monitored included soil sampling and gamma scanning, with some vegetation cutting associated with those tasks. The biological monitor(s) worked alongside the field crews to point out the locations of special-status biological resources and assist the crews in avoiding impacts. Daily biological monitoring forms (Appendix 3) were prepared to document the activities monitored, any special-status biological resources also were reported on this form. In compliance with the Biological Opinion, all project-related crews participated in an environmental education program administered by the USFWS-approved biologist to inform participants as to the sensitive biological resources within the project area and the AMMs to be employed.

Clearance Survey and Monitoring Results for Federally Listed Species

Of the federally listed species in the Biological Opinion, only one (Braunton's milkvetch) has been positively identified in the study area, although suitable habitat for unidentified individuals that could, in fact, be listed were observed as well. **Table 1** summarizes the locations where these species have been detected during either clearance surveys or monitoring.

Braunton's milkvetch (Astragalus brauntonii); Federally Endangered

During the monitoring period, project activities were conducted throughout a portion of the Designated Critical Habitat for Braunton's milkvetch in Subarea 5D South (SS-59). Activities within the milkvetch habitat consisted of gamma scanning involving the use of the TMGS. This activity was monitored closely to avoid impacts to milkvetch plants, as documented in the Biological Monitoring Forms included in this report as Appendix 3. Monitoring activities included surveying the subareas where activities were to occur, and flagging individual plants identified within the vicinity of scanning operations.

SS-59 is located within the designated Critical Habitat Unit 1d for Braunton's milkvetch. Biolgical monitors ensured that work activities in this subsection did not negatively impact the primary constituent elements (PCEs) of this habitat. The PCEs for Unit 1d include calcium carbonate soils derived from marine sediment; a low proportion (<10%) of shrub cover directly around the plant; and chaparral and coastal sage scrub communities characterized by periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover.

Dudleya species: Conejo dudleya (Dudleya abramsii subsp. parva [=D. parva]), Santa Monica Mountains live-forever (D. cymosa subsp. ovatifolia [inclusive of D. cymosa subsp. agourensis]), and marcescent dudleya (D. cymosa subsp. marcescens); all Federally Threatened

None of the Federally or State listed dudleya species have been encountered. Many flowering dudleya individuals were identified as *D. lanceolata* (no protection status), while some dudleya were unidentifiable because they were not flowering at the time of observation. All unidentifiable dudleya were flagged and protected during project activities. During this monitoring period, unidentifiable species were noted during soil sampling, or gamma scanning activities in Subareas 5A (SS-17), 5C (SS-8), 6 (SS-29), 7 (SS-14, SS-40), NBZ-E (P1C, P1D, P1F,) and NBZ-W (P1B, P1I, P3Y). No identified dudleya have been harmed during project activities.

RADIOLOGICAL STUDY OF THE SANTA SUSANA FIELD LABORATORY AREA IV AND NORTHERN BUFFER ZONE

Vernal Pool Branchiopods: Riverside fairy shrimp (Streptocephalus woottoni), Federally Endangered, and vernal pool fairy shrimp (Branchinecta lynchi), Federally Threatened

Known occupied vernal pool habitat located in SS-17 and atop sandstone outcrops in P1C were within the vicinity of soil sampling and gamma scanning activities conducted during the seventh quarterly monitoring period. These activities were closely monitored to avoid impacts to vernal pool habitat as documented in the Biological Monitoring Forms included in this report as Appendix 3.

California red-legged frog (Rana draytonii); Federally Threatened

Project activities occurred within or in close proximity to areas identified in the Biological Assessment as potentially suitable habitat for the California red-legged frog in Subarea 5B (SS-12) and NBZ-E (P1D, P2R). A 300-foot buffer was mapped around each of these features using a GIS, and the biological monitor supervised all project activities within the buffer area. During this monitoring period, gamma scanning was conducted within Subarea 5B and soil sampling occurred in NBZ-E. No vegetation cutting was performed in these potentially suitable habitat areas. No red-legged frogs were observed.

Least Bell's vireo (Vireo bellii pusillus); Federally Endangered

Gamma scanning, soil sampling, and vegetation cutting was performed within or near least Bell's vireo (LBV) habitat area identified in Subarea 5B (SS-12) on March 8 and 9. No monitored work activities were conducted within the LBV habitat area Subarea 6 (SS-26) during the monitoring period. A focused survey to determine presence or absence of LBV was not conducted in SS-12 as the work activities in that area occurred prior to March 15, and thus was not required as detailed in the Biological Opinion General Avoidance and Minimization Measure GEN-9. No LBV have been observed in the project area during clearance surveys or monitoring.

California gnatcatcher (Polioptila californica californica); Federally Threatened

Monitored activities during the seventh quarter of the study included gamma scanning in Subarea 5D South (SS-59), and soil sampling in NBZ-W (P1B and P1I), which are identified as providing potential California gnatcatcher habitat. No California gnatcatchers have been detected on site during the implementation of the EPA study.

Seventh Quarterly Clearance Surveys and Monitoring Results for Non Federally-listed Protected Biological Resources (excludes non-special status nesting birds)

The Santa Susana tarplant is the only State-listed species observed during the clearance surveys and biological monitoring. However, other State-protected biological resources have been observed. The locations of Santa Susana tarplant and other State-protected biological resources within the Action Area are illustrated on Figures 3, 4, and 5. The following is a more detailed description of the observations and impacts associated with State-protected biological resources. A summary of the State-sensitive resource observations listed by Survey Section is shown in Table 3.

Santa Susana tarplant (Deinandra minthornii); State Rare, CNPS List 1B.2

This species is locally common in sections of Area IV with sandstone outcrops (**Plate 4A**). These plants were flagged for identification during activities occurring within their vicinity. Two plants were impacted by project activities during the seventh quarterly monitoring period in Subarea 5A (SS-15) and Subarea 6 (SS-37), but damages appeared to be minimal and not permanent (**Table 4**).

Malibu baccharis (Baccharis malibuensis); CNPS List 1B.1

Malibu baccharis was recorded in Subarea 5D South (SS-59) on the hilly terrain at the extreme southern end of the study area. Malibu baccharis exhibits a flexible growth form whereby it is not easily damaged by project equipment when properly marked. None of these plants were damaged or destroyed during gamma scanning activities conducted this quarter.

Plummer's mariposa lily (Calochortus plummerae); CNPS List 1B.2

This species is found in suitable habitat throughout the project area. It was observed during project activities in Subareas 5D South, 7, NBZ-E, and NBZ-W (**Plate 4B**). None of these plants were damaged or destroyed during gamma scanning or soil sampling activities conducted this quarter.

Slender mariposa lily (Calochortus clavatus var. gracilis); CNPS List 1B.2

Slender mariposa lily has not been identified to date within the project area. All *Calochortus clavatus* identified have been keyed to be the unprotected *Calochortus clavatus* var. *pallidus*. Nonetheless, all observed plants of this species were protected during vegetation cutting and gamma scanning during the seventh quarterly monitoring period.

Non-flowering mariposa lilies (Calochortus sp.)

Non-flowering lilies in the genus *Calochortus* that could not be positively identified to the species were observed in NBZ-E (P1J). These individuals were protected from project activities to ensure that special-status lilies were not impacted by the project. No potential special-status lilies were damaged or destroyed during the seventh quarterly monitoring period.

Protected Native Trees (various species); Protected by Ventura County Ordinance

Native tree species that are protected by Ventura County Ordinance were observed in most areas where monitoring activities occurred. No protected trees were pruned or otherwise impacted by project activities during this quarter.

Coast horned lizard (Phrynosoma blainvillii); State Species of Special Concern

Suitable habitat for this species was identified in most of the undeveloped survey sections of the study area. Monitored work activities occurred during the seventh quarterly monitoring period in Subareas 5D South (SS-59), 7 (SS-107), NBZ-E (P1D, P1R), and NBZ-W (P1B, P1C, P1I), which are depicted as "Occupied Coast Horned Lizard Habitat" in **Figures 3**, **4**, **and 5**. One coast horned lizard was handled by the monitoring biologist and relocated nearby out of harm's way (**Table 4**) (**Plate 4C**).

Silvery legless lizard (Anniella pulchra pulchra); State Species of Special Concern

Suitable habitat was identified in many of the undeveloped survey sections of the study area. A biological monitor was present during work activities in all suitable silvery legless lizard habitats. No silvery legless lizards were observed during the seventh quarterly monitoring period,

Coast patch-nosed snake (Salvadora hexalepis virgultea); State Species of Special Concern

Suitable habitat was identified in many of the undeveloped survey sections of the study area. A biological monitor was present during work activities in all suitable coast patch-nosed snake habitats. No coast patch-nosed snakes were observed during this quarterly monitoring period.

Cooper's Hawk (Accipiter cooperii); State Watch List

There were no recorded observations of Cooper's hawks or their nests during this monitoring period.

Golden eagle (Aquila chrysaetos); Fully Protected (Federal and State), State Watch List

A resident pair of golden eagles was observed incubating eggs (Plate 4D) and later with two nestlings at a nest site located outside the project area but close to the southern boundary of the NBZ-E during the seventh quarterly monitoring period. An 800-foot exclusionary buffer was established around the active golden eagle nest within which project activities were not permitted. Project activities in line-of-sight of the nest were restricted to soil sampling activities using only hand tools. Prior to detection of the active nest, the direct-push technology (DPT) rig was operated for approximately half a day within line-of-sight at a distance of approximately 1,200 feet from the nest. Following detection of the active nest, the use of the DPT rig was prohibited within the 800-foot exclusionary buffer, as well as at any distance within lineof-sight of the nest, to avoid potential excessive noise disturbance on the nesting eagles. Soil sampling crews worked with hand tools (hand auger or hand trowel) in line-of-sight of the nest during activities in NBZ-E and NBZ-W (P1C, P1D, P1F, and P1J), while remaining outside of the 800-foot exclusionary buffer. Project activities within line-of-sight of the active nest were carefully monitored for adverse effects on nesting. Encroachment within the 800-foot buffer was allowed at the discretion of a USFWSapproved biologist on one occasion to collect two soil samples using a hand trowel outside line-of-sight at distances between 750 and 800 feet from the nest. Project activities did not appear to have any adverse affects on eagle nesting behavior or nesting success. For example, soil sampling was conducted within line-of-sight of the nest over several days during the incubation period and, at the close of the seventh quarterly monitoring period, the eagles had successfully hatched and were bringing food to two eaglets, which were observed to be active within the nest.

Rufous hummingbird (Selasphorus rufus); Federal Bird Species of Conservation Concern

Rufous hummingbirds are primarily found in Ventura County during spring migration en route to nesting grounds in the northwestern U.S. and western Canada. This species was not observed during this monitoring period and none have been impacted by project activities.

Allen's hummingbird (Selasphorus sasin); Federal Bird Species of Conservation Concern

Allen's hummingbirds nest in Ventura County and are common in the project area. No nests were found during the monitoring period and no Allen's hummingbirds were impacted by project activities.

Loggerhead Shrike (Lanius ludovicianus); State Species of Special Concern

Loggerhead shrikes inhabit open country with short vegetation and breed in isolated trees or large shrubs. No observations of loggerhead shrikes or their nests were made during this seventh quarterly monitoring period.

Nuttall's woodpecker (Picoides nuttallii); Federal Bird Species of Conservation Concern

Nuttall's woodpeckers nest in cavities and are commonly seen in woodland areas of the project area. No nests were observed or impacted by project activities during the seventh quarterly monitoring period.

Oak titmouse (Baeolophus inornatus); Federal Bird Species of Conservation Concern

Oak titmice are common in oak woodland habitats in the study area. They nest in tree cavities and inhabit nearly every SS that contains mature coast live oaks. No nests were found or impacted by project

activities during the monitoring period.

White-tailed kite (Elanus leucurus); Fully Protected Species (State)

White-tailed kites are uncommon residents in open grasslands, valley oak savannas, marshes, and agricultural areas. These raptors hunt by hovering while searching for prey, which generally consists of voles. No known nests of this species were documented during these observations or impacted by project activities during the seventh quarterly monitoring period.

Yellow warbler (Dendroica petechia brewsteri); Federal Bird Species of Conservation Concern

In southern California, yellow warblers nest mainly in riparian woodlands after spending the winter in Mexico and other southern latitudes. No nests of this species were observed or impacted by project activities during the seventh quarterly monitoring period.

Southern California rufous-crowned sparrow (Aimophila ruficeps canescens); State Watch List

Southern California rufous-crowned sparrows are year-round residents in the Simi Hills and Santa Susana Mountains, typically nesting at or near ground level near rocky outcrops and associated low-growing shrubby and herbaceous cover. No observations of this species were noted during the monitoring period and no nests of this species were found.

San Diego desert woodrat (Neotoma lepida intermedia); State Species of Special Concern

Suitable woodrat habitat was identified in much of the study area, especially areas that contain shrubby vegetation and rocky outcrops. During this monitoring period, some woodrat nest structures were observed that could potentially be occupied by this species. No individuals of this species were directly observed, and no nest structures could be positively attributed to this species. To avoid potential impacts to this special status species by project activities, all woodrat nests observed during this quarter were monitored and avoided. No individuals or nest structures of this species, or any other woodrat species, were harmed by project activities.

Seventh Quarterly Monitoring Results for Protected Nesting Birds

Native bird species nesting in the study area are protected under several different laws at the State and Federal level, depending on the species. These laws include the Federal Endangered Species Act, Federal Migratory Bird Treaty Act, Federal Bald and Golden Eagle Protection Act, California Endangered Species Act, and California Department of Fish and Game Code Sections 3503, 3503.5, 3511, and 3513. At least 104 native bird species have been recorded in the study area since biological studies in support of the EPA Radiological Study began in 2010. Although biological monitors did survey the areas of work activity for bird nests and nesting behaviors, the majority of this seventh quarterly monitoring period is outside of the regulatory period for nesting birds, with the exception of raptors. As shown in Table 5, an active barn owl nest, golden eagle nest, and red-tailed hawk nest were observed during the seventh quarterly monitoring period. A 500-foot buffer was established around the barn owl and red-tailed hawk nests. The nesting golden eagles are discussed in detail on page 6. At the discretion of a USFWS-approved biologist, project activities were permitted at some locations within the 500-foot buffers around the barn owl and red-tailed hawk nests, provided that a monitoring biologist was continuously present to monitor activities for adverse effects on nesting. Access to other soil sampling locations within the buffers was restricted until nesting is completed.

Two soil samples were collected using the DPT rig in line-of-sight and between 480 feet and 500 feet from the active red-tailed hawk nest. These activities did not appear to influence the nesting behavior of

the incubating red-tailed hawk. Due to a communication error, soil sampling with a hand auger was conducted within approximately 25 feet of the barn owl nest, which is located in a cavity within a sandstone rock outcrop approximately 15 feet from the ground. The owl, which was presumably incubating, was flushed from the nest at the onset of the activities and, despite repeated attempts to return to the cavity, would not enter the cavity while the crew was present. Project activities were discontinued due to concerns about the nesting owl; after completing the required decontamination protocol the crew left the area. The monitoring biologist observed that the owl returned to the nest cavity after the crew departed. The barn owl was off the nest for at least 50 minutes. It is not expected that the nesting success of the barn owl was adversely affected, as the presence of at least one nestling within the cavity was verified in April 2012. Although some nesting behaviors were observed of other species, no other nests were observed during clearance surveys or monitored activities, and no other impacts to nesting birds occurred during this quarter.

Seventh Quarterly Clearance Surveys and Monitoring Results for Riparian Habitat

Riparian habitat areas were noted in monitoring areas of Subareas NBZ-W (P1B, P1C, P3V), NBZ-E (P1D, P1J, P2R), 5A and 5B (SS-12), and 5C (SS-1). These areas are ephemeral drainages. Gamma scanning and soil sampling activities were conducted in these areas during this quarter. Some vegetation clearance did occur in Subarea 5B but was limited to the use of handheld equipment (e.g. weed whackers) in this area. **Table 6** summarizes activities within the riparian habitat areas that occurred during the seventh quarterly reporting period.

ISSUES ENCOUNTERED AND ADAPTIVE MANAGEMENT

To date there have been no issues with implementing the terms, conditions, avoidance and minimization measures and/or other protective measures required by USFWS in the Biological Opinion. However, beginning with the fourth quarterly monitoring period, as an adaptive management strategy, EPA implemented more robust measures to protect nesting birds than those referenced in AMM VC-1. Due to the significant potential impacts to nesting birds created by the vegetation clearing component of the project, EPA has determined that nesting bird surveys should be conducted no more than 3 to 5 days before vegetation cutting activities begin because birds can build nests and lay eggs in a few days if undisturbed by human activity (such as during a weekend break in project activity). Additionally, throughout the nesting season, biological monitors are now provided at least 24 to 48 hours notice to allow sufficient time to complete a thorough survey for nests before vegetation cutting or other activities are conducted. These additional conditions are considered to provide adequate protections for nesting birds.

EPA considers all other terms and conditions in the Biological Opinion to enhance the protection of Federally listed and State-Listed/Sensitive species to be adequate based on the project implementation to date.

TABLES

RADIOLOGICAL STUDY OF THE SANTA SUSANA FIELD LABORATORY AREA IV AND NORTHERN BUFFER ZONE

<u>Table 1</u> List of Federally Listed Resources and Critical/Suitable Habitat Observed in Survey Sections during the Seventh Quarterly Monitoring Period

Species/Resource	Survey Sections	Subareas
Braunton's milkvetch	SS-59	5D South
Coastal California Gnatcatcher Habitat	SS-59, P1B, P1I	5D South, NBZ-W
Confirmed occupied vernal pool branchiopods (Fairy shrimp) habitat	SS-17, P1C	5A, NBZ-W
<i>Dudleya</i> sp.	SS-8, SS-14, SS-17, SS-29, SS-107, SS-40, P1B, P1C, P1D, P1F, P1I, P3Y	5A, 5C, 6, 7, NBZ-E, NBZ- W
Least Bell's vireo potentially suitable habitat	SS-12	5B
Red-legged frog potentially suitable habitat	SS-12, P1D, P2R	5B, NBZ-E

	Table 2				
List of Federal	lly Listed Res	ources	s Imp	act	ted
During Seventh	Quarterly N	Ionito	ring I	Per	iod
				-	

Species/ Resource	Survey Section	Date Recorded	Associated project activity ¹	Impact	Description	
No federally listed resources were impacted during this reporting period.						
1 VC = Vegetatio	on Clearing, GS = Gamma Scanning, S	SS = Soil Samplin	g			

Table 3
List of Non-federally Listed Resources Observed
During the Seventh Quarterly Monitoring Period
(grouped by area/subarea)

Species/Resource	Survey Section	Subarea
Coast horned lizard occupied habitat	SS-59, SS-107, P1B, P1D, P1C, P1I, P2R	5D South, 7, NBZ-E, NBZ-W
Malibu baccharis	SS-59	5D South
Nesting Birds	SS-43, P1F	8 North, NBZ-E
Plummer's mariposa lily	SS-14, SS-59, P1D, P1F, P1I, P1J	5D South, 7, NBZ-E, NBZ-W
Potential special-status mariposa lilies	P1J	NBZ-E
Protected trees	SS-1, SS-8, SS-9, SS-12, SS-14, SS-15, SS- 17, SS-29, SS-34, SS-37, SS-39, SS-40, SS- 59, SS-107, P1B, P1C, P1D, P1F, P1I, P1J, P2R, P3V	5A, 5B, 5C, 5D South, 6, 7, NBZ-E, NBZ-W
Santa Susana tarplant	SS-8, SS-9, SS-12, SS-14, SS-15, SS-17, SS-18, SS-29, SS-34, SS-37, SS-39, SS-40, P1B, P1C, P1D, P1F, P1I, P1J, P2R	5A, 5B, 5C, 6, 7, NBZ-E, NBZ-W

<u>Table 4</u> List of Non-federally Listed Resources Impacted during the Seventh Quarterly Monitoring Period (excludes non-special status nesting birds)

Species/Resource	Survey Section	Date Recorded	Associated Project Activity	Impact	Description
Coast horned lizard (1 lizard)	P1C	3/15/12	SS	Relocated	Moved about 75 meters upslope to the east.
Santa Susana tarplant	SS-15	1/11/12	GS	1 plant damaged	Large Santa Susana tarplant in area had stems bent but not broken or otherwise permanently damaged
Santa Susana tarplant	SS-37	1/12/12	GS	1 plant damaged	One plant was 25% crushed inadvertently. Root structure appears to be intact and impact appears minimal.

Common Name	Survey Section	Subarea	Date recorded	Impacts
Golden eagle	P1C, P1D, P1F, P1J	NBZ-E, NBZ-W	3/15/12	None
Red-tailed hawk	SS-36	6	3/21/12	None
Barn owl	SS-43	8 North	3/23/12	An adult owl was flushed from the nest and did not re-enter the nest cavity until the work crew left the area. The presence of at least one nestling within the cavity was verified in April 2012. Impacts are not expected to be significant.

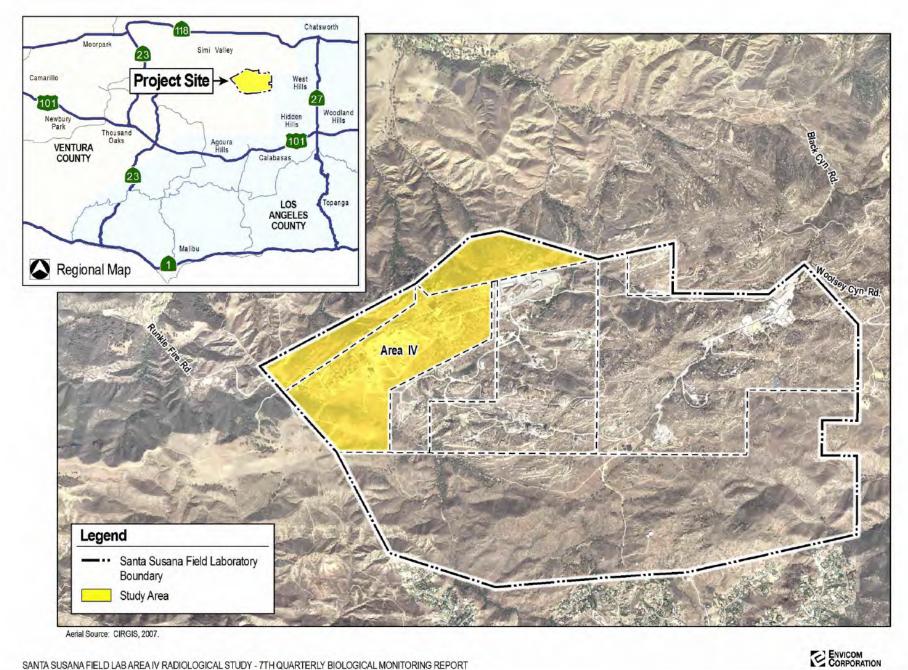
<u>Table 5</u> List of Active Bird Nests Monitored in the Study Area During the Seventh Quarterly Monitoring Period

Location	Description	Description of Activities Performed*	Significant Impacts
SS-1	Ephemeral drainage	GS	None
SS-12	Ephemeral drainage	GS, VC	Surface disturbance from mules and excessive spray paint use.
SS-39	Ephemeral drainage	GS	Surface disturbance from spray paint and prior mowing. Drainage feature was outside of scanning limits.
NBZ-E	Active creek bed	SS	None
P1B, P1C	Ephemeral riparian habitat	GS, SS	None
P1D	Ephemeral riparian habitat	SS	None
P1J	Ephemeral riparian habitat	SS	None
P2R	Ephemeral riparian habitat	SS	None
P3V	Ephemeral riparian habitat with pools of standing water	GS	None

<u>Table 6</u> List of Activities Conducted within Riparian Habitat during the Seventh Quarterly Monitoring Period

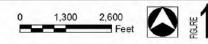
APPENDIX 1

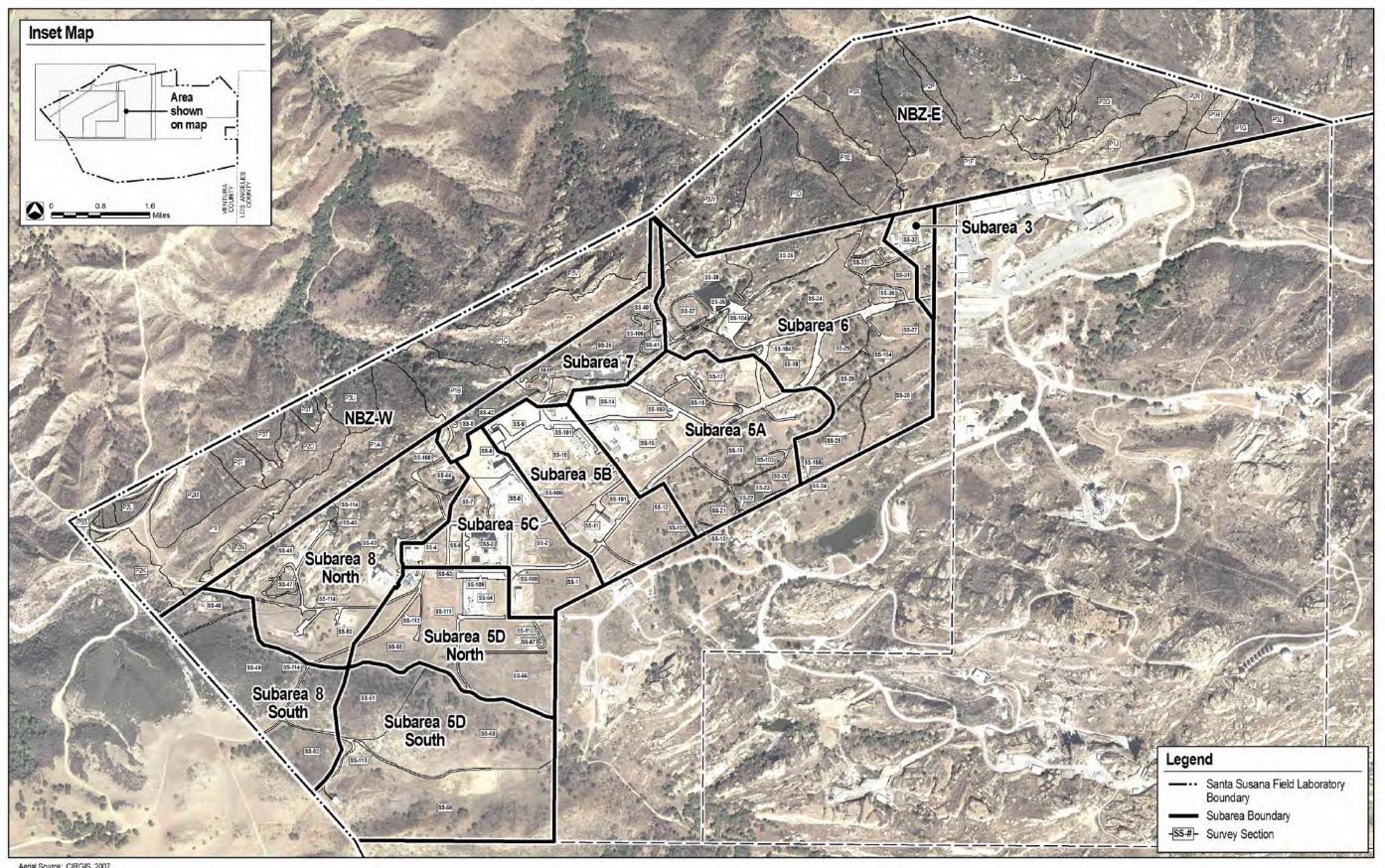
FIGURES AND PHOTO PLATES



SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT

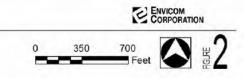
Project Location Map

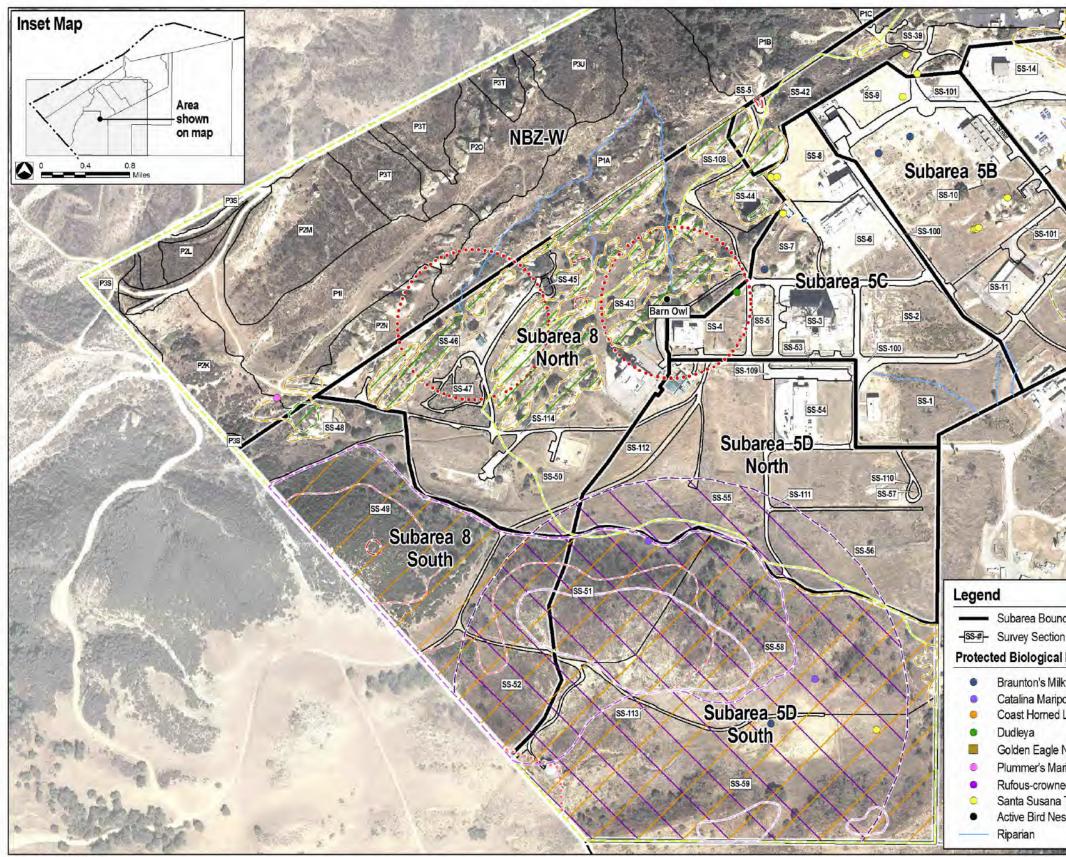




Aerial Source: CIRGIS, 2007.

SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT



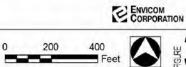


Aerial Source: CIRGIS, 2007.

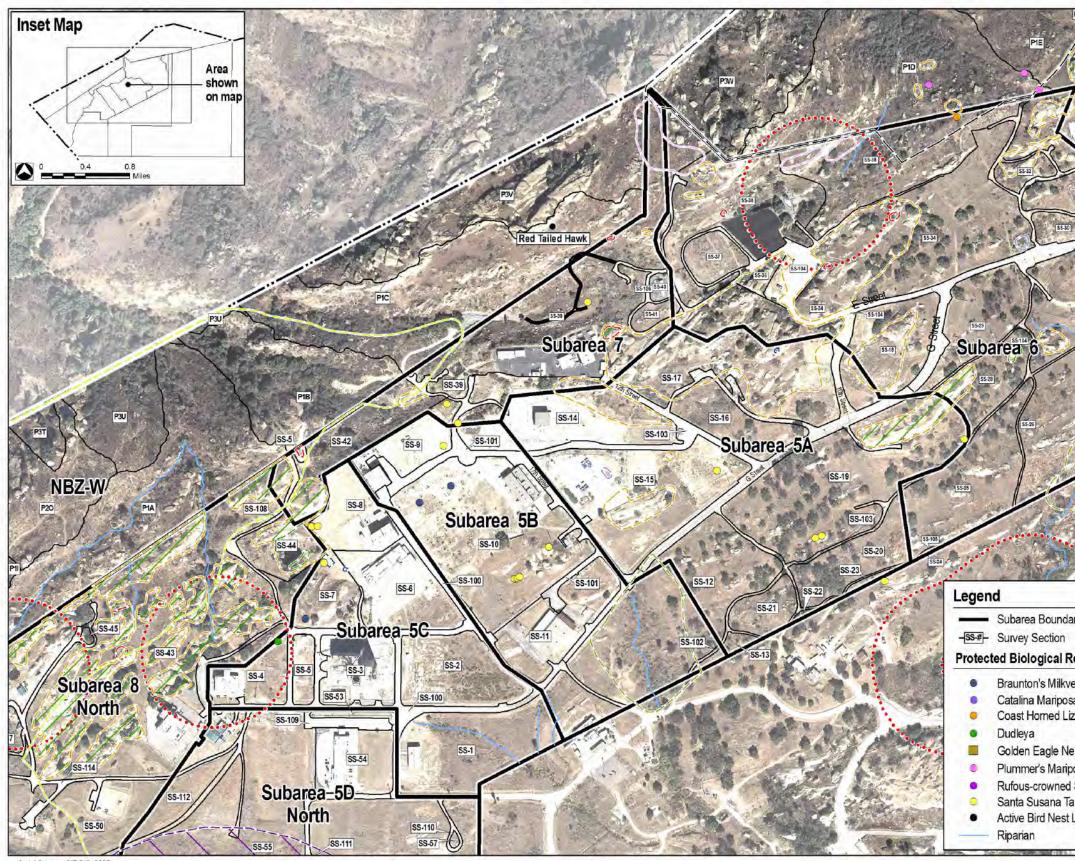
SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT

Special-Status Biological Resources Observed During Clearance Surveys / Monitoring - Map 1 of 3

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Aerial Source: CIRGIS, 2007.

SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT

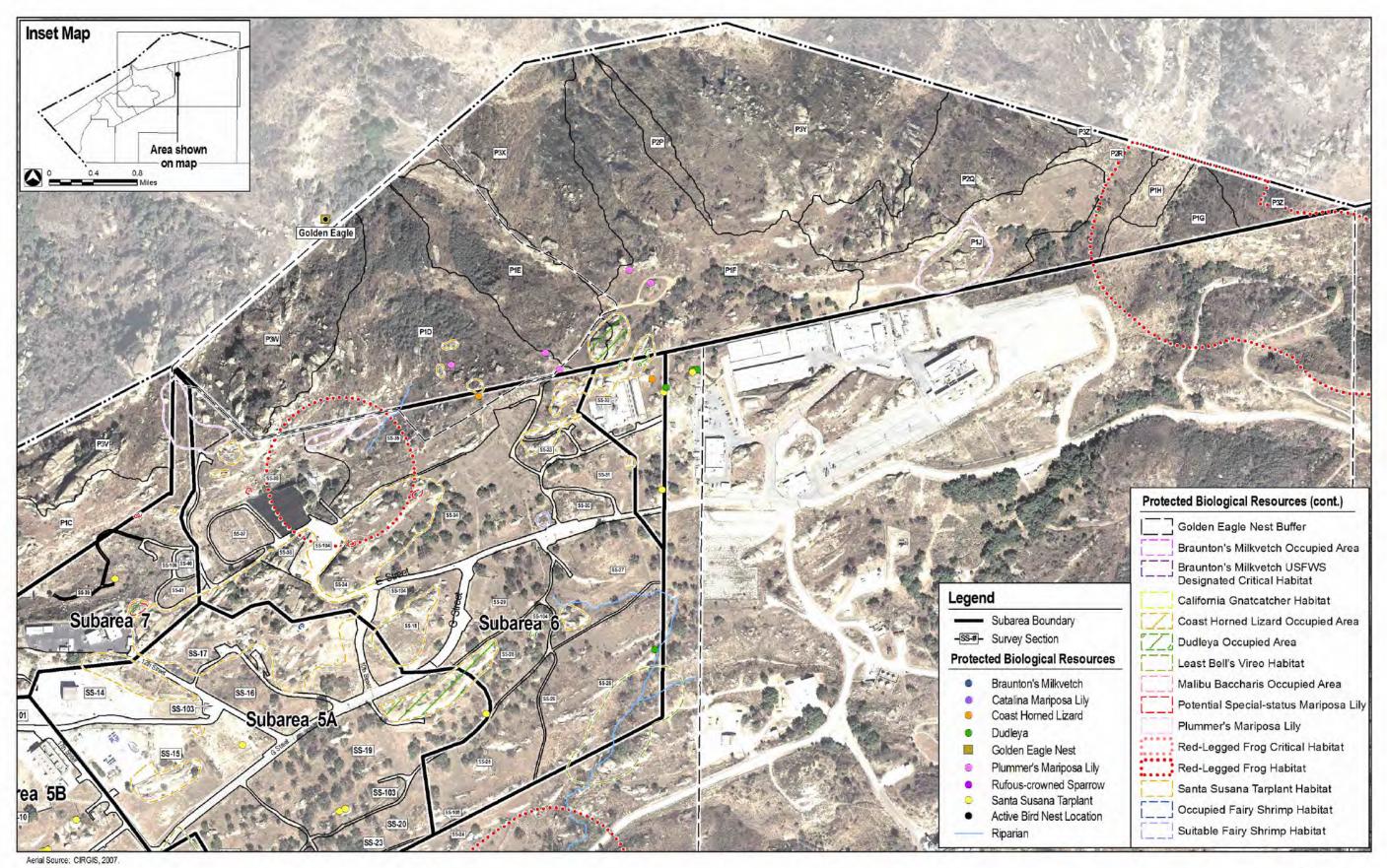
Special-Status Biological Resources Observed During Clearance Surveys / Monitoring - Map 2 of 3

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SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT

Special-Status Biological Resources Observed During Clearance Surveys / Monitoring - Map 3 of 3

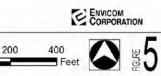




Plate 1A - Gamma scanning with the ERGS vehicle. January 10, 2012.



Plate 1B - Mule-mounted gamma scanning in Subarea 5C. January 5, 2012.



Plate 1C - Subsurface soil sampling activity in Subarea 6 using a drill rig. February 16, 2012.

SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT

Representative Photographs of the Project Site



Plate 1D – Moving the subsurface soil sampling drill rig in Subarea 6 while avoiding a Santa Susana Tarplant that is identified by stakes to alert workers of its protected status. February 20, 2012.



Plate 2A – Soil sampling activity using a Geoprobe Direct Push Technology (DPT) rig in Subarea 5C while avoiding impacts to protected trees. March 5, 2012.



Plate 2B - Soil sampling activity using a Geoprobe DPT rig. March 6, 2012.



Plate 2C - Soil sampling activity using a Geoprobe DPT rig, in the NBZ. March 15, 2012.



Plate 2D - Soil sampling activity using a Geoprobe DPT rig in Subarea 6. March 27, 2012.

SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 7TH QUARTERLY BIOLOGICAL MONITORING REPORT

ENVICOM CORPORATION

Representative Photographs of the Project Site



Plate 3A – Vegetation clearing in Subarea 5C (SS-1) using a handheld weed-whacker. March 5, 2012.



Plate 3B – Soil sampling activity using a hand auger in NBZ-E. March 20, 2012.



Plate 3C – Hand auger bit used for soil sampling activities during this quarter. March 20, 2012.



Plate 3D – Soil sampling activity using a hand auger in NBZ-E. March 23, 2012.

SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY – 7TH QUARTERLY BIOLOGICAL MONITORING REPORT



Representative Photographs of the Project Site



Plate 4A - Santa Susana tarplant in NBZ-W. February 13, 2012.



Plate 4B - Plummer's mariposa lily in NBZ-E. January 23, 2012.



Plate 4C – Coast horned lizard in NBZ-W after relocation by the monitoring biologist. March 15, 2012.



 $\mbox{Plate 4D}$ – Golden eagle nest with incubating female. Photo taken from NBZ-E (P1F) March 21, 2012.

SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY – 7TH QUARTERLY BIOLOGICAL MONITORING REPORT



Representative Photographs of the Project Site

<u>4</u>

APPENDIX 2

SEVENTH QUARTERLY BIOLOGICAL CLEARANCE SURVEY FORMS

ENVICOM CORPORATION

Survey Section (SS): BZ-NE (clearance surveys for several soil sampling locations, listed below)	Subarea: BZ-NE
Biologist: J. Anderson	Date: March 8, 2012
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 16, 2012

SURVEY FINDINGS

Soil Sample Location	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
All locations listed below	Potential special-status mariposa lilies (<i>Calochortus</i> sp.)	Y/N (some individuals may not be flagged)	Y	SS-2. Monitor present to ensure potential lilies are not impacted by soil sampling activities.
All locations listed below	Potentially occurring State wildlife Species of Special Concern (coast horned lizard, coast patch nosed snake)	N/A	Y	SS-2. Monitor present to survey for and relocate, if necessary, potentially occurring special-status wildlife species
All locations listed below	Potentially occurring nesting birds	N/A	Y	SS-2. Monitor present to conduct ongoing surveys for nesting birds at and in vicinity (generally 300 ft for songbirds and 500 ft for raptors) of work area

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations requiring use of vehicle-mounted geo-probe in the BZ-NE: Z-52, Z-53, Z-56, Z-57, Z-59, Z-60, and Z-62.

Access routes, work areas, and vicinity of work areas surveyed for protected biological resources, suitable habitat for protected species, and nesting birds. Soil sampling locations are generally open and/or have been cleared of vegetation recently such that opportunities for nesting within or adjacent to the work area are limited. No nesting birds were found.

Biologist Signature:	Date:3-8-12
HGL Field Supervisor Signature:	Date: 5. 10.12

Survey Section (SS): BZ-NW (clearance surveys for several soil sampling locations, listed below)	Subarea: BZ-NW	
Biologist: J. Anderson	Date: March 8, 2012	
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 16, 2012	

ENVICOM CORPORATION

SURVEY FINDINGS

Soil Sample Location	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
Z-2 through Z-24	Coastal California Gnatcatcher Habitat	N/A	N	GEN-8. Protocol survey required to confirm absence of this species for 2012 season.
All locations listed below	Potentially occurring State wildlife Species of Special Concern (coast horned lizard, coast patch nosed snake)	N/A	Y	SS-2. Monitor present to survey for and relocate, if necessary, potentially occurring special-status wildlife species
All locations listed below	Potentially occurring nesting birds	N/A	Ŷ	SS-2. Monitor present to conduct ongoing surveys for nesting birds at and in vicinity (generally 300 ft for songbirds and 500 ft for raptors) of work area

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations requiring use of vehicle-mounted geo-probe in the BZ-NW: Z-2, Z-3, Z-5, Z-6, Z-10, Z-15, Z-19, Z-21, Z-22, Z-23, Z-24, Z-28, Z-29, Z-30. Clearance surveys were also performed for the following surface/subsurface soil sampling locations requiring use of a hand auger or potentially the vehicle-mounted geo-probe: Z-27 and Z-28.

Access routes, work area, and vicinity of work area surveyed for protected biological resources, suitable habitat for protected species, and nesting birds. Soil sampling locations surveyed are generally open and/or have been cleared of vegetation recently such that opportunities for nesting within or adjacent to the work area are limited. No special-status species or nesting birds were found that could be harmed by the project.

Biologist Signature: Anderson	Date: 3-8-1
HGL Field Supervisor Signature:	Date: 5. 10.

ENVICOM CORPORATION

Survey Section (SS): NBZ-E (clearance surveys for several soil sampling locations, listed below)	Subarea: NBZ-E	
Biologist: J. Anderson	Date: March 15, 2012	
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 23, 2012	

SURVEY FINDINGS

Soil Sample Location	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
All locations listed below	Potentially occurring State wildlife Species of Special Concern (coast horned lizard, coast patch nosed snake)	N/A	Y	SS-2. Monitor present to survey for and relocate, if necessary, potentially occurring special-status wildlife species
All locations listed below	Potentially occurring nesting birds	N/A	Y	SS-2. Monitor present to conduct ongoing surveys for nesting birds at and in vicinity (generally 300 ft for songbirds and 500 ft for raptors) of work area

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations requiring use of vehicle-mounted geo-probe in the NBZ-E: Z-66, Z-67, Z-68, Z-71, Z-72, Z-73, and Z-74. Clearance surveys were also performed for the following surface/subsurface soil sampling locations requiring use of a hand auger: Z-45, Z-46, Z-47, Z-48, Z-49, Z-50, Z-51, Z-69, Z-70, Z-75, Z-76, and Z-77. Clearance surveys were also performed for Z-138, a random sample point to be sampled by hand trowel.

Access routes, work area, and vicinity of work area surveyed for protected biological resources, suitable habitat for protected species, and nesting birds. No special-status species or nesting birds were found that could be harmed by the project.

Biologist Signature:	
HGL Field Supervisor Signature: t. T. T	

Date: 3-15-12 Date: 5. 10.12

Survey Section (SS): Subarea 6 (clearance surveys for several soil sampling locations, listed below)	Subarea: 6	
Biologist: J. Anderson	Date: March 16, 2012	
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 23, 2012	

SURVEY FINDINGS

ENVICOM CORPORATION

Protected Resources Applicable Avoidance and Soil Flagged? Monitor **Minimization Measures** Sample needed? Location Ŷ **SS-2** Z-346.Z-Santa Susana tarplant Y/N347.Z-(N for Z-339.Z-138) 138 Z-138 Potential special-status Dudleya Ν Ν **SS-2** Y SS-2. Monitor present to survey N/A All Potentially occurring State for and relocate, if necessary, locations wildlife Species of Special Concern (coast horned lizard, potentially occurring special-status listed wildlife species coast patch nosed snake) below Y SS-2. Monitor present to conduct All Potentially occurring nesting N/A ongoing surveys for nesting birds at locations birds and in vicinity (generally 300 ft for listed songbirds and 500 ft for raptors) of below work area

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations requiring use of vehicle-mounted geo-probe or hand auger in Subarea 6: Z-327, Z-328, Z-329, Z-330, Z-331, Z-332, Z-333, Z-335, Z-336, Z-337, Z-338, Z-339, Z-434, Z-436, Z-437, Z-442, Z-446, Z-447, and Z-442. Also, clearance surveys were performed for random sample point Z-138 in NBZ-E.

Access routes, work area, and vicinity of work area surveyed for protected biological resources, suitable habitat for protected species, and nesting birds. The Santa Susana tarplant could be harmed by the geoprobe during access to/from sample points or by trampling at some sampling locations. No nesting birds were found that could be harmed by the project. Santa Susana tarplants and potential special-status Dudleya occur on rock outcrops on the route to point Z-138 and could be trampled while accessing point.

Biologist Signature: HGL Field Supervisor Signature: .

Date:_	3-16-12		
Date:_	5.10.12		

ENVICOM CORPORATION

Survey Section (SS): Subarea 5C and 5B (clearance surveys for several soil sampling locations, listed below)	Subarea: 5B and 5C	
Biologist: J. Anderson	Date: March 19, 2012	
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 26, 2012	

SURVEY FINDINGS

Soil Sample Location	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
Z-150, Z- 151, Z- 153	Nesting barn owl	N	Y	SS-2. The sample point nearest the nest should be moved to the north approx. 100 feet. Hand auger only for these three points, and minimize crew size and noise disturbance. Access area on foot and not by vehicle.
All locations listed below	Potentially occurring State wildlife Species of Special Concern (coast horned lizard, coast patch nosed snake)	N/A	Y	SS-2. Monitor present to survey for and relocate, if necessary, potentially occurring special-status wildlife species
All locations listed below	Potentially occurring nesting birds	N/A	Y	SS-2. Monitor present to conduct ongoing surveys for nesting birds at and in vicinity (generally 300 ft for songbirds and 500 ft for raptors) of work area

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations requiring use of vehicle-mounted geo-probe or hand auger in Subarea 5B: Z-358, Z-359, Z-360, Z-361, and Subarea 5C: Z-150, Z-151, Z-153.

Access routes, work area, and vicinity of work area surveyed for protected biological resources, suitable habitat for protected species, and nesting birds. No special-status species were found during clearance surveys that could be harmed by the geoprobe or hand auger activities. With the exception of the barn owl, no nesting birds were found that could be harmed by the project.

Biologist Signature:	Date: 3-19-12
HGL Field Supervisor Signature:	Date: 5.10.12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

Survey Section (SS): NBZ-E (clearance surveys for several soil sampling locations, listed below)	Subarea: NBZ-E
Biologist: J. Anderson	Date: March 22, 2012
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 30, 2012

ENVICOM CORPORATION

SURVEY FINDINGS

Soil Sample Location	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
All locations listed below	Active golden eagle nest	N	N	800-foot exclusionary buffer
All locations listed below	Potentially occurring State wildlife Species of Special Concern (coast horned lizard, coast patch nosed snake)	N/A	Y	SS-2. Monitor present to survey for and relocate, if necessary, potentially occurring special-status wildlife species
All locations listed below	Potentially occurring nesting birds	N/A	Y	SS-2. Monitor present to conduct ongoing surveys for nesting birds at and in vicinity (generally 300 ft for songbirds and 500 ft for raptors) of work area

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations requiring use of the hand auger in the NBZ-E: Z-36, Z-37, Z-38, Z-65, Z-91, and Z-92. Clearance surveys were also performed for Z-104, a random sample point to be sampled by hand trowel.

Access routes, work area, and vicinity of work area surveyed for protected biological resources, suitable habitat for protected species, and nesting birds. Active golden eagle nest is the only protected resource identified during the clearance survey. There has been substantial monitoring of hand auger activities in the general area of these sample points with no noticeable adverse affects on the nesting eagles. Accordingly, a monitor is not required for the above-listed sampling points that are in the line-of-site (but outside of 800-foot exclusionary buffer) of the golden eagle nest.

State wildlife Species of Special Concern with potential to occur include coast horned lizard and coast patch-nosed snake, which could be harmed by project activities.

Biologist Signature:	Date:
HGL Field Supervisor Signature;	Date: 5.10.12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Survey Section (SS): NBZ-E (clearance surveys for several soil sampling locations, listed below)	Subarea: NBZ-E
Biologist: J. Anderson	Date: March 23, 2012
Survey Type: Special-status species / suitable habitat / nesting birds	Expiration: March 30, 2012

Soil Sample Location	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
Z-25 Z-26 Z-27 Z-28 Z-153 Z-155 Z-181 Z-187 Z-191	Active red-tailed hawk nest	N	Y (if within buffer)	500-foot buffer (no sampling of points in line-of-sight of nest within buffer, points not in-line-of sight require a monitor; no geoprobe use within buffer)
All points listed below	Potentially occurring State wildlife Species of Special Concern (coast horned lizard, coast patch nosed snake)	N/A	See notes for list of points requiring bio monitor	SS-2. Monitor present to survey for and relocate, if necessary, potentially occurring special-status wildlife species
All points listed below	Potentially occurring nesting birds	N/A	See notes for list of points requiring bio monitor	SS-2. Monitor present to conduct ongoing surveys for nesting birds at and in vicinity (generally 300 ft for songbirds and 500 ft for raptors) of work area
Z-131 Z-119 Z-103 Z-168 Z-31 Z-32 Z-34	Potential special-status lilies (<i>Calochortus</i>), Santa Susana tarplant, and potential special- status Dudleya	Y	N	SS-2. These species were observed on outcrops close to routes in to sample points or in vicinity of sample points, but are unlikely to be harmed by project. Crews were instructed to avoid rock outcrops when sampling these points.

SURVEY FINDINGS

NOTES AND RECOMMENDATIONS

Clearance surveys were performed for the following subsurface or surface/subsurface soil sampling locations in NBZ-W: Z-25, Z-26, Z-31, Z-32, Z-33, and in the NBZ-E: Z-34 and Z-35. Clearance surveys were also performed for the following random sample points to be sampled by hand trowel in NBZ-W: Z-153, Z-155, Z-169, Z-181, Z-187, Z-191, and in NBZ-E: Z-120, Z-132, Z-110, and Z-114.

Access routes, work area, and vicinity of work area surveyed for protected biological resources, suitable habitat for protected species, and nesting birds.

State wildlife Species of Special Concern with potential to occur include coast horned lizard and coast patch-nosed snake, which could be harmed by project activities.

Z-191 and Z-153 cannot be sampled until red-tailed hawk nesting is complete. Access to Z-25 and Z-26 should be by road to outfall from west not road from east to avoid line-of-sight within 500-foot buffer of red-tailed hawk nest.

Monitor required for Z-181, Z-187, Z-155, Z-25, Z-26, Z-27, and Z-28, as these points are within 500 feet of red-tailed hawk nest but are out of line-of-sight.

*Monitor not required for remainder of points listed above if activities conducted before clearance survey expiration date.

Biologist Signature: HGL Field Supervisor Signature:

3-23-12 Date: Date:_ 5.10.12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM Environ Corporation

Survey Section (SS): 27(partial), 29(partial), 34(partial)	Subarea: 6
Biologist: Jack Stone	Date: 30 March 2012
Survey Type: clearance survey for direct push technology (DPT) rig aka the Geoprobe	Expiration: 06 April 2012

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-27, 29, 34	Nesting bird habitat	No	Yes	SS-1
	Protected trees	Coast live oaks-no Blue elderberry- yes	Yes	SS-1
	Santa Susana tarplant	Yes	Yes	SS-1
	Dudleya	No	Yes	SS-1

NOTES AND RECOMMENDATIONS

No active bird nests were found today.

Subarea 6 contains suitable habitat for California Special Concern Species: Coast horned lizard, Silvery legless lizard, San Diego desert woodrat, and Coast patch-nosed snake. This subarea also contains a portion of habitat designated as potential Least Bell's vireo habitat but the soil sampling activities projected to occur during the next week are not within or near this area.

The following soil sampling points are cleared for next weeks sampling activities:

East of current area-	North of current area-
6-400	6-414
6-401	6-415
6-402	6-416
6-403	6-417
6-404	6-418
6-405	
6-406	
6-407	
6-408	
6-409	
6-410	
6-411 (already cleared, re-check)	
6-412 (already cleared, re-check)	
\$ 00-	
A the	Data: 3-30-12
Biologist Signature:	\rightarrow Date: $3-30-12$
HGL Field Supervisor Stonature:	Date: 5. D. 12
HGL Field Supervisor Signature:	Date: 0 (0 (0)

APPENDIX 3

SEVENTH QUARTERLY BIOLOGICAL MONITORING FORMS

ENVICOM CORPORATION

04 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

- Exclusion and a second	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ- E	P1D	0745-0925	GS	STGS
5D South	SS-59	0950-1045	GS	TMGS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1D	Nesting bird habitat	GS-1	None
"	Protected trees	GS-1	None
**	Coast horned lizard confirmed occupied habitat	Biological monitor present	None
"	Plummer's mariposa lily	GS-1	None
"	Dudleya	GS-1	None
"	Santa Susana tarplant	GS-1	None
SS-59	Nesting bird habitat	GS-1	None
	Protected trees	GS-1	None
	Coast horned lizard confirmed occupied habitat	Biological monitor present	None
	Malibu baccharis	GS-1	None
	Braunton's milk vetch	GS-1	None
	Plummer's mariposa lily	GS-1	None

NOTES AND RECOMMENDATIONS

Both areas support suitable habitat for California special concern species (coast horned lizard, coast patchnosed snake and San Diego desert woodrat).

Biologist Signature: HGL Field Supervisor Signature

1-4-12 Date: Date:_5. (D.12

ENVICOM CORPORATION

05 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-	Survey Section		Activities				
			Monitored*		Equipmen	it Used	
5C	SS-6	1005-1100	GS	MMGS			
**	SS-1	1110-1150	GS	MMGS			
			<u></u>				

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encou	ntered AMM's Implem	nented Residual Impacts
SS-6	Nesting bird habitat	GS-1	None
SS-1	Nesting bird habitat	GS-1	None
56	Protected trees	GS-1	None
£4	Riparian habitat	App. N-5	None

NOTES AND RECOMMENDATIONS

Area SS-01 supports suitable habitat for California special concern species (coast horned lizard, California legless lizard, coast patch-nosed snake and San Diego desert woodrat). It also contains ephemeral riparian habitat that could support **California general riparian**, a species that is listed by the U.S. Fish & Wildlife Service as threatened.

Biologist Signature: HGL Field Supervisor Signature:

1-5-12 Date: Date: <u>5.10.12</u>

ENVICOM CORPORATION

06 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	1020-1055	GS	MMGS
5B	SS-12	1115-1150	GS	MMGS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting bird habitat	GS-1	None
			· · · · · · · · · · · · · · · · · · ·
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NOTES AND RECOMMENDATIONS

Biologist Signature: HGL Field Supervisor Signature

Date: 1-6-12

Date: 5. 10, 12

ENVICOM CORPORATION

Date: Jan 9, 2012

Biologist: Brady Daniels

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5a	12	900	Gamma Scanning	Mules and Scanning equipment.
5b	12			

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
5a SS12	live oak trees, ephemeral drainage channel.	flagging, and walking with mules and mule handler, directing avoidance where needed.	surface disturbance from mules and excessive spray paint use.
5b SS12	Live oak,	Inspected (and the second of 	excessive spray paint use.

MONITORING RESULTS

NOTES AND RECOMMENDATIONS

Arrived onsite standby until the mule team was ready. Mobilized to Sub area 5a SS 12 vehicle parking along road shoulder and spur road. The survey area is predominately live oak and non native grassland, a riparian scrub run-off feature flanks the eastern limits of scanning area. The mule team followed a path marked with spray paint throughout upland areas. I asked if it was necessary to use the paint within the immediate areas adjacent to run-off feature, spray paint was not used within the riparian scrub portion. Completed scanning of area mobilized animals and crew back to building 204. Mule team was sent back out for over time to 5b SS12 a portion of upland habitat east of the million dollar hole

refuge habitat that may have the potential of being tromped on during scanning. The mule was acting really spooky throughout scanning area. SSTP was adjacent to but not within survey limits.

/27/2010

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Scott Werner

Biologist Signature: HGL Field Supervisor Signature: ٨

Date:	1-9-1	2
Date: 🗸	5. ID	.12

ENVICOM CORPORATION

10 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	
6	SS-34	1240-1520	GS	ERGS 2
7	SS-40	1525-1555	GS	ERGS 2
			-	

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-34	Nesting bird habitat	GS-1	None
	Protected trees	GS-1	None
	Santa Susana tarplant	GS-5	None
SS-40	Nesting bird habitat	GS-1	None
	Protected trees	GS-1	None
••••	Dudleya	GS-1	None
	Santa Susana tarplant	GS-5	None

NOTES AND RECOMMENDATIONS

Area supports suitable habitat for California special concern species (coast horned lizard, coast patch-nosed snake and San Diego desert woodrat).

Biologist Signature: HGL Field Supervisor Signature:

1-10-12 Date:_ 5.1D.10 Date:

Page 1 of 2

ENVICOM CORPORATION

Date: Jan 11, 2012

Biologist: Brady Daniels

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
7	39	900	scanning	cart scanner
	18			

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
39	live oak trees, ephemeral drainage channel.	flagging and walking with cart scanner.	temp surface from spray paint and prior mowing.
18	SSTP	flagging and walking with cart scanner.	
14	none non native grassland	walked with cart	
·-···	· · · · · · · · · · · · · · · · · · ·		

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NOTES AND RECOMMENDATIONS

Survey Sections today were fairly void of protected resources. SS 39 was flanked by a Ephemeral runoff feature but was buffered by a berm and outside of the scanning limits, SS 18 had areas of SSTP but were easy to avoid with the hand cart, I flagged where needed or improved existing flagging. SS 14 also had a couple SSTP that were avoided.

all or
Biologist Signature:
HGL Field Supervisor Signature:

Date:___1-11-12 Date: 5.10.12

ENVICOM CORPORATION

11 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
. 7	SS-39	0810-0835	GS	ERGS 2
5C	SS-2	0845-1135	GS	ERGS 2
<u>.</u>	SS-6	1300-1400	GS	ERGS 2"
55	SS-1	1405-1505	GS	ERGS 2
5A	SS-15	1510-1610	GS	ERGS 2

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	
SS-39	Nesting bird habitat	GS-1	None
	Protected trees	GS-1	None
	Santa Susana tarplant	GS-5	None
SS-2	Nesting bird habitat	GS-1	None
SS-6	Nesting bird habitat	GS-1	None
SS-1	Nesting bird habitat	GS-1	None
	Protected trees	GS-1	None
	Riparian habitat	App. N-5	None
SS-15	Nesting bird habitat	GS -1	None
44	Protected trees	GS-1	None
46	Santa Susana tarplant	GS-5	Minimal*

NOTES AND RECOMMENDATIONS

*Large Santa Susana tarplant in area SS-15 had stems bent but NOT broken or otherwise permanently damaged during gamma scanning with the ERGS 2.

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Biologist Signature:	for flow
HGL Field Supervisor Sig	ature: T. T. F. Y.

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Date:_	1-11-12		
Date:_	5.10.12		

Scott Werner

ENVICOM CORPORATION

Date: Jan 12, 2012

Biologist: Brady Daniels

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
6	104	700	scanning	forklift scanner
	37			
•			1	

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
104	None scanning was within the road bed		
	SSTP	flagging	one plant was 25% crushed by rubber tires

NOTES AND RECOMMENDATIONS

Survey Section 37 has randomily distributed Santa Susanna tar plants of various sizes, flagging of individuals has been completed. One plant was 25% crushed inadvertently while scanning, the entire root structure appears to be intact the impact appears minimal.

Biologist Signature:

HGL Field Supervisor Signature:

Date:___1-12-12

Date: 5. 10. R

ENVICOM CORPORATION

12 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS14	0810-1055	GS	WMGS
NBZ- ₽∕₩	P3V	1340-1500	GS	H2GS
££	P1C	1530-1700	GS	H2GS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-14	Nesting bird habitat	GS-1	None
	Protected trees	GS-1	None
	Plummer's mariposa lily	GS-1	None
	Dudleya	GS-1	None
	Santa Susana tarplant	GS-5	None
P3V	Nesting bird habitat	GS-1	None
"	Protected trees	GS-1	None
"	Riparian habitat	App. N-5	None
P1C	Nesting bird habitat	GS-1	None
"	Protected trees	GS-1	None
66	Coast horned lizard confirmed occupied habitat	Monitoring biologist present	None
44	Riparian habitat	App. N-5	None
46	Dudleya	GS-1	None
"	Santa Susana tarplant	GS-5	None

NOTES AND RECOMMENDATIONS

Area P3V has a deeply incised canyon with ephemeral riparian habitat and somewhat large pools of standing water that would support **Company begin incised** by the U.S. Fish & Wildlife Service as threatened.

All 3 areas support suitable habitat for California special concern species (coast horned lizard, California legless lizard, coast patch-nosed snake and San Diego desert woodrat).

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Biologist Signature:	for flow
HGL Field Supervisor Sig	ghature: (.T. F.)

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Scott Werner

Date:_	1-12-12			
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ENVICOM CORPORATION

13 Date: January 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	· 大方法 当初 - 建筑的大地 (9) 北部	Time	Activities Monitored*	Equipment Used
NBZ- W	PIC	0845-0940	GS	H2GS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting bird habitat	GS-1	None
44	Protected trees	GS-1	None
44	Coast horned lizard confirmed occupied habitat	Monitoring biologist present	None
66	Riparian habitat	App. N-5	None
66	Dudleya	GS-1	None
**	Santa Susana tarplant	GS-5	None

NOTES AND RECOMMENDATIONS

Area supports suitable habitat for California special concern species (coast horned lizard, coast patch-nosed snake and San Diego desert woodrat).

Biologist Signature: HGL Field Supervisor fignature:

1-13-12 Date: Date: 5.10. 17

ENVICOM CORPORATION

Date: $\frac{13 \text{ Feb}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5C	SS-8	1010-1530	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-8	Nesting bird habitat	SS-1	None
!	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-8 contains potential anitable built the ream hy set busching and (feiry abring) and falifications de la containe de la

Biologist Signature: HGL Field Supervisor Signature:

Date:_	2-13-12			
Date:_	5.10.12			

ENVICOM CORPORATION

14 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5C	SS-8	1010-1615	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-8	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature:_

HGL Field Supervisor Signature:

2-14-12 Date: . 10.12 Date:

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

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ENVICOM CORPORATION

15 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5C	SS-8	0810-1235	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, radiation and chemical detection meters Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
5A	SS-17	1235-1630	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-8	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None
SS-17	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None
	Woodrat nests	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-8 contains potential suitable habitat for vernal pool brachiopods (fairy shrimp) and Continue -

Area SS-17 supports suitable habitat for California Species of Special Concern (San Diego desert woodrat) and also contains vernal pool brachiopods (fairy shrimp).

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Biologist Signature:	for flow
HGL Field Supervisor Si	grature: t. tut.

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Scott Werner

Date:	2-15-12		
Date:	5.10.12		

ENVICOM CORPORATION

16 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-17	0820-1010	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
6	SS-37	1025-1250 1415-1620	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, radiation and chemical detection meters Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-17	Nesting bird habitat	SS-1	None
·	Protected trees	SS-1	None
	Confirmed occupied vernal pool brachiopods (Fairy shrimp) habitat	SS-1	None
	Woodrat nests	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
SS-37	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

Both areas SS-17 and SS-37 contain suitable habitat for California Special Concern Species: Coast horned lizard, Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat.

Biologist Signature: HGL Field Supervisor Signature:

2-16-12 Date: Date: 5.10.12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

Page 1 of 1

ENVICOM CORPORATION

17 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-37	0750-1230 1325-1610	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-37	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	·		

NOTES AND RECOMMENDATIONS

at.

This survey section also supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

Biologist Signature: HGL Field Supervisor Segnature:

2-17-12 Date: Date: 5.10.12

ENVICOM CORPORATION

20 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-37	0750-1250	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
7	SS-107	1330-1610	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-37	Nesting bird habitat	SS-1	None
	Santa Susana tarplant	SS-1	None
	Protected trees	SS-1	None
SS-107	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Coast horned lizard occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Both survey sections also support suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

Biologist Signature:

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9 Date: 2-20-12

ENVICOM CORPORATION

21 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-107	0740-1120 1250-1715	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Imple	mented Residual Impacts
SS-107	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Coast horned lizard occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-107 supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

Biologist Signature: HGL Field Supervisor Signature

2-21-12 Date: 10.12 Date: S

ENVICOM CORPORATION

22 Date: February 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-107	0750-1220	SS	Sonic Drill, forklift, pressure steam cleaner, decontamination rack, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey. Section	Protected Resources Encountered	AMM's Implemented	ResidualImpacts
SS-107	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

None

Biologist Signature: HGL Field Supervisor Signature;

2-22-12 Date: Date: 5.10.12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

Page 1 of 1

ENVICOM CORPORATION

Date: $\begin{array}{c} 05 \text{ March} \\ 2012 \end{array}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5C	SS-8	0815-1140	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, 10'X10' pop up shelter, garbage cans, plastic pails, glass jars and plastic bags for samples
5C	SS-1	1150-1220	VC	Weed whacker
5C	SS-1	1305-1600	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, 10'X10' pop up shelter

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

urvey ection	Protected Resources Encountered	AMM's Implementer	I Residual Impact
SS-8	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
SS-1	Nesting bird habitat	SS-1	None

NOTES AND RECOMMENDATIONS

None

logist Signature: HGL Field Supervisor Signature

Date: 3-5-12 Date: 5. 10. 12

ENVICOM CORPORATION

Date: $\begin{array}{c} 06 \text{ March} \\ 2012 \end{array}$

Biologist: Jack Stone

ACTIVITIES MONITORED

	Survey Section	Time	Activities Monitored*	Equipment Used
5C	SS-1	0755-1150 1250-1415	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
5B	SS-9	1420-1605	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-1	Nesting bird habitat	SS-1	None
SS-9	Nesting bird habitat	SS-1	None
	Santa Susana tarplant	SS-1	None*

NOTES AND RECOMMENDATIONS

*Wood stake marking location of previously flagged Santa Susana tarplant was knocked over as soil sampling support vehicle (1/2-ton PU truck) was moved into position adjacent to soil sampling zone but the plant was NOT harmed.

Biologist Signature: `````L Field Supervisor Signature:

3-6-12 Date:_ Date: 5.10.12

ENVICOM CORPORATION

Date: $\begin{array}{c} 07 \text{ March} \\ 2012 \end{array}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Statistic reader (SR)	Survey Section	Statistication and and the second states	Activities Monitored*	
5B	SS-9	0800-1250 1355-1615	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	
SS-9	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant		None

NOTES AND RECOMMENDATIONS

None

Biologist Signature: HGL Field Supervisor Signature:

3-7-12 Date:__ Date: 5.10,12

ENVICOM CORPORATION

Date: $\frac{08 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5B	SS-12	0815-0835	VC	Weed whacker
5B	SS-12	0835-1145	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
5B	SS-12	1250-1325	VC	Weed whacker
5B	SS-12	1325-	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-12	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Ephemeral riparian habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Soil sampling activities were performed adjacent to an ephemeral riparian drainage without any adverse impacts.

SS-12 contains suitable habitat for California Species of Special concern (Coast horned lizard, Coast patchnosed snake, Silvery legless lizard and San Diego desert woodrat) and is designated as potential habitat for the federally listed as endangered Least Bell's vireo.

10/27/2010	A na
Biologist Signature:	the flow
HGL Field Supervisor Signa	ture: Un D.

k

Date:	3-8-12
Date:	5.10.12

Scott Werner

ENVICOM CORPORATION

Date: $\begin{array}{c} 09 \text{ March} \\ 2012 \end{array}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
5B	SS-12	0815-0950	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
		0950-1005	VC	Weed whacker
-		1015-1200	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
		1340-1345	VC	Weed whacker
		1345-1450	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-12	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Ephemeral riparian habitat	SS-1	None .

NOTES AND RECOMMENDATIONS

There is an ephemeral riparian drainage adjacent to the soil sampling area.

SS-12 contains suitable habitat for California Species of Special concern (Coast horned lizard, Coast patchnosed snake, Silvery legless lizard and San Diego desert woodrat) and is designated as potential habitat for the federally listed as endangered Least Bell's vireo.

Biologist Signature: HGL Field Supervisor Signature

3-9-12 Date: 5.10.12 Date:

ENVICOM CORPORATION

Date: $\frac{12 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	A REAL PROPERTY AND A REAL PROPERTY.	Time	Activities Monitored*	EquipmentUsed
NBZ- W	P1I	0820-	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

irvey. ction	Protected Resources Encountered	AMM's Implemented	d Residual Impact
P1I	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Confirmed San Diego desert woodrat occupied habitat	SS-1	None
	Plummer's mariposa lily	SS-1	None
••	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

False indigo bush flagged as protected, it is a host plant for the official California state butterfly (the California dogface butterfly).

P16 supports suitable habitat for California special concern species (coast horned lizard, coast patch-nosed snake and San Diego desert woodrat, Leggless lizard and versal post-brack products of the special statement of the second statement of th

Biologist Signature: HGL Field Supervisor Signature

3-12-12 Date: Date: 5. 10.12

ENVICOM CORPORATION

Date: 13 March 2012

1

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ- W	P1I	0815-1050	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ- W	P1B	1100-1210	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ- W	P1B	1315-1455	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ- W	P1C	1500-1625	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1I	Nesting birds	SS-1	None
	Protected trees	· SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Confirmed Coast horned lizard occupied habitat	SS-1	None
	Confirmed San Diego desert woodrat occupied habitat	SS-1	None
P1B	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Confirmed Coast horned lizard occupied habitat	SS-1	None
	Ephemeral riparian habitat	SS-1	None
PIC	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Confirmed Coast horned lizard occupied habitat	SS-1	None
	Ephemeral riparian habitat	SS-1	None

P1C cont.	Confirmed vernal pool brachiopod (fairy shrimp) occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

P1I, B and C all support suitable habitat for California special concern species (coast horned lizard, coast patch-nosed snake and San Diego desert woodrat). P1B and C also supports suitable habitat for California special concern species(Leggless lizard). P1C supports suitable habitat for California special concern species (vernal pool brachiopods esp. fairy shrimp).

Biologist Signature: HGL Field Supervisor Signature:

Date:	3-13-12
Date:	5.10.12

Date: $\frac{14 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ- W	P1C	0815-1100	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
		1100-1115	VC	Machete
		1115-1305 1420-1615	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS -1	None
	Ephemeral riparian habitat	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS -1	None
	Vernal pool brachiopod (fairy shrimp) habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Vegetation clearing of primarily Yerba santa (Eriodictyon sp.) and non-native grasses was performed to allow safe access of DPT rig (Geoprobe) and support vehicles. Prevented destruction of un-flagged Blue elderberry near soil sample point Z-23.

P1C supports suitable habitat for California special concern species (coast horned lizard, coast patch-nosed snake and San Diego desert woodrat, Leggless lizard and vernal pool brachiopods esp. fairy shrimp).

10/27/2010	1 A Da
Biologist Signature:	for plan
HGL Field Supervisor Si	ignature: t. tu Fold.

Date:_	3-14-12
Date:_	5.10.12

Scott Werner

ENVICOM CORPORATION

Date: $\frac{15 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

winsto the officers	Survey Section	PEARPOINTER 集碎局域也是成功就式。	Activities Monitored*	EquipmentUsed
NBW- W	P1C	0820-1000	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ- E	PID	1005-1255 1350-1635	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Confirmed occupied Coast horned lizard habitat*	SS-1	None
	Occupied vernal pool brachiopod (fairy shrimp) habitat	SS-1	None
	Area contains ephemeral riparian habitat	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None
P1D	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
1 ,170,177	Area contains ephemeral riparian habitat	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None
	Proposed Red-legged frog habitat	SS-1	None

NOTES AND RECOMMENDATIONS

- One fully mature adult Coast horned lizard was located near the soil sampling zone today and relocated about 75 meters upslope to the east.
- Observed Golden eagles (1) in one of the historical nests and two others flying in the area and perching atop the sandstone outcrops nearby. Golden eagle nest is now active and mandated 500-foot nest buffer will be in effect.

Biologist Signature: HGL Field Supervisor Signature:

3-15-12 Date: Date: 5.10.12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

Date: $\frac{16 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	EquipmentUsed
NBZ- E	P1F	0830-1205	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ- E	P1J	1325-1520	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1F	Nesting birds*	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
P1J	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Area contains ephemeral riparian habitat	SS-1	None

NOTES AND RECOMMENDATIONS

*Late morning observations, once some of the clouds cleared, confirmed that the historical Golden eagle nest site is occupied/active.

Both P1F and P1J support suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake and San Diego desert woodrat). P1J also supports suitable habitat for California Special Concern Species Silvery legless lizard.

Biologist Signature: HGL Field Supervisor Signature:

Date: <u>3-16-12</u> Date: <u>5</u>. 10. 12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

Page 1 of 1

ENVICOM CORPORATION

Date: $\begin{array}{c} 19 \text{ March} \\ 2012 \end{array}$

Biologist: Jack Stone

ACTIVITIES MONITORED

	Survey Section	A STATE OF A	Activities Monitored*	EquipmentUsed
NBZ- E	PIJ	0820-0950 1000-1150 1310-1505	SS	Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

urvey ection	Protected Resources Encountered	AMM's Implemented	
P1J	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Area contains ephemeral riparian habitat	SS-1	None

NOTES AND RECOMMENDATIONS

P1J supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat).

Biologist Signature: HGL Field Supervisor Signature

3-19-12 Date: 5.10.12 Date:

ENVICOM CORPORATION

Date: $\frac{20 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

ISONG HOLE HOLE HOLE TO S	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ- E	P2R	0815-1130	SS	Hand auger, slide hammer, shovels, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ- E	P1F	1330-1610	SS	Hand auger, slide hammer, shovels, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P2R	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Coast horned lizard occupied habitat	SS-1	None
	Ephemeral riparian habitat	SS-1	None
-	Santa Susana tarplant	SS-1	None
	Woodrat nests	SS-1	None
P1F	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
i i	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

P2R is within designated potential Red-legged frog habitat. This area also supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

P1F supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

Biologist Signature: HGL Field Supervisor Signature:

3-20-12 Date: 5.10.12 Date:

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

Page 1 of 1

Date: <u>3-21-2012</u>

ACTIVITIES MONITORED

Biologist: Brady Daniels

urvey ection Time		Equipment Used
odium eactor 0700-1630 ea	SS	Geo Probe, hand tools
>	actor 0700-1630	actor 0700-1630 SS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encount	ered AMM's Implemented	Residual Impacts
	Plants and Nesting Birds	Buffers, Flagging, Monitoring	Noise

NOTES AND RECOMMENDATIONS:

Monitoring activities included inspecting area immediately around geo probe locations for nesting birds or other protected species of plants and wildlife, observed a red tail hawk nest as far as 520' and as close as 480' from the proposed working locations. It was determined that the geo probe would be within line of sight and within the buffer for two of the proposed sample locations, where the other two were not in line of sight and outside of the buffer. Sampling occurred at locations 333 and 334 before mobilizing to sample sites 342 and 343 that were outside of buffer and outside of line of sight

of the of sight.	
Biologist Signature: B	Date: 3-21-12
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The second secon	
HGL Field Supervisor Signature: 1, 1 ut	$\Delta = Date: \underline{3.10.12}$

ENVICOM CORPORATION

Date: $\frac{21 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ- E	P1F	0840-1200 1315-	SS	Hand auger, slide hammer, shovels, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encount	ered AMM's Imple	mented Residual Impacts
P1F	Nesting birds	SS-1	None
	Protected trees	SS-1	None
_	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Observed a Golden eagle (a state and federal fully protected species) in one of the historical nests and two others flying in the area and perching atop the sandstone outcrops nearby. Golden eagle nest is active.

P1F supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

A 800-foot nest buffer has been established around the active golden eagle nest, within which project activities will not be permitted. Additionally, all project activities within line-of-sight of the active golden eagle nest will be monitored by a biologist to determine if activities have an adverse affect on nesting. Project activities permitted outside of the 800-foot buffer but within line-of-sight of the nest are limited to hand tools; the geoprobe will not be used within line-of-sight of the nest due to the potential for excessive noise disturbance.

10/27/2010	
Biologist Signature:	
HGL Field Supervisor Signature:	

Date:_	3-21-12		
Date:	5.10.12		

Scott Werner

Date: 3-22-2012

ACTIVITIES MONITORED

Biologist: Brady Daniels

Sub- area	Survey Section	Time	Activities Monitored*	EquipmentUsed
6	Sodium Reactor area	0700-1630	SS	Geo Probe, hand tools
				· · · · ·

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	Plants and Nesting Birds	Buffers, Flagging, Monitoring	Noise
· · · · · · · · · · · · · · · · · · ·			

NOTES AND RECOMMENDATIONS:

Monitoring activities included inspecting the areas immediately around the geo probe locations for nesting birds or other protected species of plants and wildlife. The work activities stayed within the same area as the day before moving only feet from previous sample site. Monitoring focused on observing the active raptor nest and noting any signs of distress that could lead to nest abandonment, or harassment. Behaviors remained consistent throughout the day, observed nesting and breeding behaviors by morning doves, California towhee, and Greater roadrunner. Sample locations, 341,344,345,346,347. All protected species of plants had been flagger prior and were avoided.

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Biologist Signature: B	Date:	3-22-12
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HGL Field Supervisor Signature:	Date:	<u>5. 10. 1</u>

ENVICOM CORPORATION

Date: $\frac{22 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ- E	P1F	0825-1210 1320-1545	SS	Hand auger, slide hammer, shovels, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encount	ered AMM's Imple	mented Residual Impacts
P1F	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Once again today, observed a Golden eagle (a state and federal fully protected species) in one of the historical nests and two others flying in the area and perching atop the sandstone outcrops nearby. Golden eagle nest is active.

P1F supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

Envicom established a 800-foot nest buffer around the active golden eagle nest, within which project activities will not be permitted. Additionally, all project activities within line-of-sight of the active golden eagle nest will be monitored by a biologist to determine if activities have an adverse affect on nesting. Project activities permitted outside of the 800-foot buffer but within line-of-sight of the nest are limited to hand tools; the geoprobe will not be used within line-of-sight of the nest due to the potential for excessive noise disturbance.

Biologist Signature:
HGL Field Supervisor Signature;

Date:	3-22-12		
Date:_	5.10.12		

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

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ENVICOM CORPORATION

Date: <u>3-23-2012</u>

ACTIVITIES MONITORED

Biologist: Brady Daniels

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
6	Sodium reactor area	0700-1630	SS	Geo Probe, hand tools
8 North		0700–1630	SS	Hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemente	d Residual Impacts
Subarea 6	Protected plants and nesting birds	Buffers, Flagging, Monitoring	Noise
Subarea 8 N	Nesting raptor	Monitoring	Noise, flushing of adult owl.

NOTES AND RECOMMENDATIONS:

Monitoring activities included inspecting the areas immediately around the geo probe locations for nesting birds or other protected species of plants and wildlife. Sample location 349 was immediately adjacent to yesterdays sample areas. Sample location 379 was in a portion of the paved access road. There were no biological issues or constraints with either of the two locations.

Mobilized to hand auger sample points 149,152 and 153. Sample points 149 and 152 were within 170' and point 153 was within 30' of an assumed active barn owl nest. Points 149 and 152 were out of line of site and did not disturb the owl, where site 153 was only accessible by passing underneath the rock alcove/nest. One adult owl was flushed from the nest and remained away from nest until the crew demobilized from the site. Work continued including de-mob for apprx. 50 minutes where the owl was observed attempting to return to the nest where at one point she flew into the nest and then quickly flushed again. The adult was finally observed returning to the nest once the crew left the site.

3-23-12 Date: **Biologist Signature** Date: 5. 17. 12 HGL Field Supervisor Signature:

Date: 23 March 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

200.77 HOGERA	Survey Section	A second se	Activities Monitored*	Equipment Used
NBZ- E	P1F	0830-1315 1420-1655	SS	Hand auger, slide hammer, shovels, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS	
,	

Survey Section	Protected Resources Encount	ered AMM's Impl	emented. Residual Impacts
P1F	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Golden eagles (a state and federal fully protected species) were observed today in and near one of the historical nests. Two adults and one of last year's fledglings have been observed in the area. The hen has been sitting down in the nest and appears to be incubating a new clutch of eggs. The other two have been seen flying in the area and perching atop the sandstone outcrops nearby. Golden eagle nest is active. The soil sampling work being performed today is approximately 1000 feet from the nest.

During the past five days when I have observed the Golden eagle nest during soil sampling activities there has been no indication that the soil sampling with un-powered, hand-operated equipment has caused any disturbance to the eagles nesting. The CDM/Smith technician performed the most intrusive work when she collected both surface and sub-surface soil samples with a 'slide hammer' type device that has the greatest potential for sonic disturbance to the nesting eagles. No such disturbance was observed. The eagle did not flush from the nest when this collection tool was used. I strongly recommend that no work of any kind be conducted closer to the nest while there appears to be eggs in the nest and if chicks appear that no work crews be permitted to conduct any activities that could harm, harass or otherwise disturb these eagles before their young have fledged.

P1F supports suitable habitat for California Special Concern Species (Coast horned lizard, Coast patch-nosed snake, San Diego desert woodrat and Silvery legless lizard).

Envicom established an 800-foot nest buffer around the active golden eagle nest, within which project activities will not be permitted. Additionally, all project activities within line-of-sight of the active golden eagle nest will be monitored by a biologist to determine if activities have an adverse affect on nesting. Project activities permitted outside of the 800-foot buffer but within line-of-sight of the nest are limited to hand tools;

the geoprobe will not be used within line-of-sight of the nest due to the potential for excessive noise disturbance.

Biologist Signature: HGL Field Supervisor Signature

Date:_	3-23-12		
Date:_	5.10.12		

ENVICOM CORPORATION

Date: 03/26/12

Biologist: J. Anderson

ACTIVITIES MONITORED

Sub- Surv area Sect		Activities Monitored [*]	Equipment Used
NBZ- E	800 - 1600	SS	Hand trowel
			· · · · · · · · · · · · · · · · · · ·

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
NBZ-E	Active golden eagle nest	800-foot exclusionary buffer & monitoring in line-of-sight of nest	None
NBZ-E	Potential special-status Dudleya	GEN-7; SS-2	None
NBZ-E	Santa Susana tarplant	SS-2	None
NBZ-E	Potential special-status lilies (Calochortus)	SS-2	None

NOTES AND RECOMMENDATIONS

Accompanied soil surface sampling team to surface random sample points in the NBZ, and cleared sampling locations in advance of activities.

Soil random sample points 123, 124, 126, 133, 195, 197 cleared and/or sampled today.

Soil sample points 124 and 126 are in line-of-sight of active golden eagle nest, but are well outside of the 800-foot exclusionary buffer established around the nest (approx. 2000 ft + from nest). Project activities did not appear to be influencing eagle behavior. Adults observed both at and off nest throughout the day.

3-26-12 Date: Biologist Signature:_ 5.10.12 Date: 🖄 HGL Field Supervisor Signature;

Date: $\frac{26 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-			Activities	
area)	Section	Time	Monitored*	
6 5	SS-29	0855-1220	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pop-up shelter, Pelican equipment
Ň	0 33-29	1330-1620	55	boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encour	ntered AMM's Imple	emented Residual Impacts
SS-29	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

Subarea 6 contains suitable habitat for California Special Concern Species: Coast horned lizard, Silvery legless lizard, San Diego desert woodrat, and Coast patch-nosed snake. This subarea also contains a portion of habitat designated as potential Least Bell's vireo habitat but the soil sampling activities today are not within or near this area.

Soil Sample Points Completed Today:

6-382 6-383 6-384 6-376

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

10/27/2010

A Biologist Signature:_ HGL Field Supervisor Signature: t

Date:_	3-26-12		
Date:	5.10.12		

ENVICOM CORPORATION

Date: <u>3-27-2012</u>

ACTIVITIES MONITORED

Biologist: Brady Daniels

Sub- area	Survey Section	Time	Activities Monitored*	EquipmentUsed
NBZ east	:	0700-1600	SS	Hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
NBZ east	Golden eagle nest	Nest Buffer, Monitoring	Work in line of sight of nest and limited noise

NOTES AND RECOMMENDATIONS:

Work activities were terrestrial heading from NBZ east towards the Brandeis ranch accessing random hand augering sample points, work locations were within line of site of an active golden eagle nest. An adult eagle was observed within the nest before leaving and exposing a freshly hatched eaglet. The eaglet was white in coloration and adorned with downy feathers. With the adult not observed returning to the nest after 2 hours the crew demobilized to other sample points. Points sampled were 78, 130, 119: 109, and 109.

points. Tomas sampled were 70, 190, 190, 100, 100, 100, 100.	
Biologist Signature: B	Date: 3-27-12
\rightarrow	
HGL Field Supervisor Signature:	Date: 5.10.12

ENVICOM CORPORATION

Date: 27 March 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

1010440000	b- S sa S	urvey ection	Time	Activities Monitored*	Equipment Used
6		SS-29	0805-1220 1320-1550	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encom	itered AMM's Imple	mented Residual Impacts
SS-29	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

Subarea 6 contains suitable habitat for California Special Concern Species: Coast horned lizard, Silvery legless lizard, San Diego desert woodrat, and Coast patch-nosed snake. This subarea also contains a portion of habitat designated as potential Least Bell's vireo habitat but the soil sampling activities today are not within or near this area.

Soil Sample Points Completed Today:

6-377 6-378 6-392 6-391 6-390

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

10/27/2010

Biologist Signature:_ HGL Field Supervisor Signature:_

Date:_	3-27-12		
Date:	5.10.12		

ENVICOM CORPORATION

Date: <u>3-28-2012</u>

ACTIVITIES MONITORED

Biologist: Brady Daniels

Sub- area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ East		0700-1600	SS	Hand Tools

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encounter	red AMM's Impleme	nted Residual Impacts
NBZ East	Active creek bed, oak trees	monitoring	None
. <u></u>			

NOTES AND RECOMMENDATIONS:

The daily field activity was a random point soil sampling by hand. The crew mobilized down 13th street and staged at the dead end portion of the road. An active creek channel meanders through the steep canyon. The points selected at random were on both the east and west sides of the active channel. The crew walked down the bottom of the canyon and accessed one point on the west side and three points on the east side of the channel the points were a considerable ways up the steep chaparral scrub habitat. Numerous slip and falls and climbing assist were needed for some of the crew. No protected plants or wildlife was observed through the field activities.

protected plants of whithe was observed during the new activities.	
Biologist Signature:	Date:
HGL Field Supervisor Signature:	Date: <u>3</u> (D. ()

ENVICOM CORPORATION

Date: $\frac{28 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

	Survey Section	Time	Activities Monitored*	EquipmentUsed
6	SS-29	0800-1205 1320-1540	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encou		emented Residual Impacts
SS-29	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

Subarea 6 contains suitable habitat for California Special Concern Species: Coast horned lizard, Silvery legless lizard, San Diego desert woodrat, and Coast patch-nosed snake. This subarea also contains a portion of habitat designated as potential Least Bell's vireo habitat but the soil sampling activities today are not within or near this area.

Soil Sample Points Completed Today:

6-389 6-388 6-387 6-386 6-399 6-398

Scott Werner

10/27/2010

Biologist Signature:_ HGL Field Supervisor Signature:

3-28-12 Date:_ Date: 5.10.12

Date: 03/29/12

Biologist: J. Anderson

ACTIVITIES MONITORED

Sub- area	Survey Section	Time	Activities Monitored*	
NBZ- E		800 - 1600	SS	Hand trowel
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* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
NBZ-E	Active golden eagle nest	800-foot exclusionary buffer & monitoring in line-of-sight of nest	None
NBZ-E	Potential special-status Dudleya	GEN-7; SS-2	None
NBZ-E	Santa Susana tarplant	SS-2	None
		- ·	
		-	

NOTES AND RECOMMENDATIONS

Biologist Signature:

HGL Field Supervisor Signature

Accompanied soil surface sampling team to surface random sample points in the NBZ, and cleared sampling locations in advance of activities.

Soil random sample points 101, 103, 131, 118, 197 cleared and/or sampled today.

Crew was in direct line-of-sight of active golden eagle nest during hike to and from points #101, #103, and #131, but was well outside of the 800-foot exclusionary buffer established around the nest (approx. at least 1500 feet from nest). Project activities did not appear to be influencing eagle behavior. Adults observed both at and off nest throughout the day. Possible second nestling in eagle nest but could not be confirmed. Is off-white but shape is not distinct and no movement.

Potential special-status	Dud	leya and	Santa Santa	a tarplant (observed on	i rocks on ro	outes to sam	ple points –
avoided.	\frown	6	۸					
	$\left[\right]$	A		-				

3-29-12 Date: Date: 5.10.12

ENVICOM CORPORATION

Date: 29 March 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

	Survey Section		Activities Monitored*	Equipment Used
6	SS-29	0805-1200 1305-1600	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encour	itered AMM's Impl	emented Residual Impacts
SS-29	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Subarea 6 contains suitable habitat for California Special Concern Species: Coast horned lizard, Silvery legless lizard, San Diego desert woodrat, and Coast patch-nosed snake. This subarea also contains a portion of habitat designated as potential Least Bell's vireo habitat but the soil sampling activities today are not within or near this area.

Soil Sampling Points Completed Today:

6-397 6-396 6-395

6-394

10/27/2010

Scott Werner

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Biologist Signature:	-
HGL Field Supervisor Signature:	_

1

Date:_	3-29-12				
Date:	5.10,12				

ENVICOM CORPORATION

Date: 03/30/12

ACTIVITIES MONITORED

Biologist: J. Anderson

Sub- Sur area Sect	vey tion Time	Activities Monitored*	
NBZ- E	830 - 1230	SS	Hand trowel, hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
NBZ-E	Active golden eagle nest	800-foot exclusionary buffer & monitoring in line-of-sight of nest	None
NBZ-E	Potential special-status Dudleya	GEN-7; SS-2	None

NOTES AND RECOMMENDATIONS

Accompanied soil surface sampling team to surface random sample points in the NBZ, and cleared sampling locations in advance of activities.

Soil random sample points 50, 79, 121, 134 sampled today.

Crew was in direct line-of-sight of active golden eagle nest during all sampling activities today, but was outside of the 800-foot exclusionary buffer established around the nest (#79, #121, #134 at least 1200 feet from nest, and #50 at least 1050 ft from nest). Project activities did not appear to be influencing eagle behavior. Eagles unresponsive to use of vehicles along unpaved road to staging area (road is at least 1200 ft from nest), including several vehicle trips. Female at nest with nestlings throughout a.m. Male observed both at and off nest throughout the day.

3-30-12 Date: **Biologist Signature:** Date: 5.10.12 HGL Field Supervisor Signature

Santa Susana Field Laboratory Area IV And NBZ Radiological Study US EPA Region 9

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ENVICOM CORPORATION

Date: $\frac{30 \text{ March}}{2012}$

Biologist: Jack Stone

ACTIVITIES MONITORED

	Survey Section	Time		ities ored* Equipment Used
6	SS-29	0805-1220 1320-1550	S	S Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encour	tered AMM's Impl	emented Residual Impacts
SS-29	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Subarea 6 contains suitable habitat for California Special Concern Species: Coast horned lizard, Silvery legless lizard, San Diego desert woodrat, and Coast patch-nosed snake. This subarea also contains a portion of habitat designated as potential Least Bell's vireo habitat but the soil sampling activities today are not within or near this area.

Soil Sampling Points Completed Today:

6-393 6-411 6-412 6-413 5B-388

for flow

Date: 3-30-12

Date:_____

Biologist Signature:

HGL Field Supervisor Signature:

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