Appendix C.4
Sensitive Species Descriptions and Lists

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SENSITIVE SPECIES DESCRIPTIONS

Sensitive Plants

Aphanisma (*Aphanisma blitoides*)
Aphanisma is a fleshy herbaceous annual of the goosefoot family (Chenopodiaceae). This species is typically found on sandy or clay soils and occurs in coastal scrub, coastal bluff scrub and coastal dune habitats near the Pacific Ocean. Aphanisma is approximately 10 to 55 centimeters tall, has elliptic to ovate leaves, blooms from April to May, and is found from 1 to 305 meters above sea level.

Aphanisma is categorized as CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. This species is known to occur on the mainland and on the Channel Islands. Nearest occurrence of this species is from the northwest corner of Vandenberg Air Force Base near the Point Sal beach road, approximately 10 miles south of the Project Site. On the Project Site, potential habitat for this species is located in the areas that support coastal scrub/dune communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013. This species is threatened by non-native invasive species and loss of habitat.

Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)
Davidson's saltscale is an herbaceous annual of the goosefoot family (Chenopodiaceae). This species is typically found on alkaline soil and occurs in coastal scrub and coastal bluff scrub. Davidson's saltscale is approximately 30 to 100 centimeters tall, has elliptic to lanceolate leaves, blooms from April to October, and is found from 3 to 205 meters above sea level.

Davidson's saltscale is categorized as a CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. This species is known to occur on the mainland, along the coast and on the Channel Islands. Nearest known occurrence of this species is from Guadalupe near Highway 1, approximately 4.5 miles south of the Project Site. On the Project Site, potential habitat for this species is located in the areas that support coastal scrub communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013. This species is threatened by non-native invasive species and loss of habitat.

Coastal goosefoot (*Chenopodium littoreum*)
Coastal goosefoot saltscale is a fleshy herbaceous annual of the goosefoot family (Chenopodiaceae). This species is only known to occur in San Luis Obispo and Santa Barbara Counties and is limited to sand dune habitats. Coastal goosefoot is a prostrate/mat forming species, grows 5 to 40 centimeters tall, has elliptic to lanceolate leaves, blooms from July to October, and is found from 10-30 meters above sea level.

Coastal goosefoot is categorized as a CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. Nearest known occurrence is approximately 1 mile west of the Project Site with several other occurrences located to the north, south and southwest. On the Project Site, potential habitat for this species is located in the areas that

support coastal dune scrub/dune communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013. This species is threatened by non-native invasive species and loss of habitat.

Straight-awned Spineflower (*Chroizanthe rectispina*)

Straight-awned spineflower is an herbaceous annual herb of the buckwheat family (Polygonaceae). This species is found in Monterey and San Luis Obispo Counties and occurs on dry slopes in chaparral, coastal scrub, and oak woodland habitats. Straight-awned spineflower is a spiny low growing plant species (3 to 8 centimeters), blooms from April to July, and is found from 85-1035 meters above sea level.

Straight-awned spineflower is categorized as a CNPS 1B.3, a plant of limited distribution that is fairly endangered to not very threatened in California. Nearest known occurrence of straight-awned spineflower is approximately four miles northwest of the Project Site. This occurrence is located in coastal scrub just west of Highway 227, 0.5 miles west of Printz Road in Arroyo Grande (CNDDB, 2013). On the Project Site, potential habitat for this species is located on the various slopes that currently support coastal scrub communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013.

Surf thistle (*Cirsium rothophilum*)

Surf thistle is perennial herb of the sunflower family (Asteraceae). This species is endemic to California and is found on coastal bluff scrub/sand dunes of San Luis Obispo and Santa Barbara Counties. Surf thistle is spiny and bush like/mounded, and grows from 10 to 100 centimeters tall. This species blooms from April to June and is found from 3 to 60 meters above sea level.

Surf thistle is state listed as threatened under the ESA and his categorized as CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. Nearest known occurrence of surf thistle is approximately 4-miles southwest of the Project Site near the Guadalupe Dunes oil field area. This species is threatened by non-native invasive species, off-road vehicles, and loss of habitat. On the Project Site, potential habitat for this species is located in the areas that support coastal dune scrub/dune communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013.

Gaviota tarplant (*Deinandra increscens* subsp. *villosa*)

Gaviota tarplant is an annual herb of the sunflower family (Asteraceae). This species is endemic to California, from Gaviota north to Point Conception, and occurs in coastal bluff scrub, coastal scrub, and coastal and valley grassland habitats. Gaviota tarplant blooms from May to October and is found from 20 to 430 meters above sea level.

Gaviota tarplant is federal and state listed as endangered under the ESA and is categorized as a CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. Nearest known occurrence of Gaviota tarplant is approximately 9 miles south of the Project Site. This species is seriously threatened by energy development and non-native plant species. On the Project Site, potential habitat for this species is located in the areas that support

coastal dune scrub; however, this species was not identified during botanical surveys conducted by Arcadis in 2013.

Dune larkspur (*Delphinium parryi* subsp. *blochmaniae*)
Dune larkspur is a perennial herbaceous plant in the buttercup family (Ranuculaceae) and occurs in chaparral and coastal dune communities with sandy or rocky soils. This species typically blooms from April to May and is found from 0 to 200 meters above sea level.

Dune larkspur is categorized as a CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. Nearest documented occurrence of Dune larkspur is located directly adjacent to the southern boundary of the Project Site. This occurrence was observed in 1969 in the proximity of the Los Berros Creek riparian corridor. This species is threatened by non-native invasive species, off-road vehicles, and loss of habitat. The various coastal scrub on the Project Site could support this species; however, this species was not identified during botanical surveys conducted by Arcadis in 2013.

Blochman's leafy daisy (*Erigeron blochmaniae*)
Blochman's leafy daisy is a perennial rhizomatous herb of the sunflower family (Asteraceae). This species is endemic to the sand dunes of the Central Coast, extending from Vandenberg Air Force Base in Santa Barbara County north to Morro Bay. Blochman's leafy daisy is woody at the base, is intricately-branched and covered with small curly hairs, and grows up to one meter in height. This species blooms from June to August and is found from 3 to 185 meters above sea level. This species is threatened by non-native invasive species, off-road vehicles, and loss of habitat.

Blochman's leafy daisy is categorized as CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. On the Project Site this species was found in limited numbers along the proposed secondary emergency vehicle access route at the eastern end of the site.

Suffrutescent wallflower (*Erysium suffrutescens*)
Suffretescent wallflower is a perennial herb of the mustard family (Brassicaceae). This species is endemic to California and occurs in coastal bluff scrub, chaparral (maritime), coastal dunes and coastal scrub habitats. Suffretescent wallflower blooms from January to July and is found form 0-150 meters above seas level.

Suffretescent wallflower is categorized as a CNPS 4.2 (watch list), uncommon to fairly endangered in California. On the project site, potential habitat for this species is located in the areas that support coastal scrub and coastal dune communities. This species is threatened by coastal development, vehicles, and non-native plants. The various coastal scrub on the Project Site could support this species; however, this species was not identified during botanical surveys conducted by Arcadis in 2013.

Mesa Horkelia (*Horkelia cuneata* subsp. *puberula*) and Kellogg's Horkelia (*Horkelia cuneata* subsp. *sericea*)

Mesa horkelia and Kellogg's horkelia are subspecies of the more widespread herbaceous perennial, coast horkelia (*Horkelia cuneata* var. *cuneata*), and a members of the rose family (Rosaceae). Both horkelias are characterized by basal leaves divided into leaflets, with flowering stalks bearing reduced leaves and small white flowers at the branched tips. The flowers each produce five narrow white petals and ten stamens with distinctive flattened ribbon-like filaments. Mesa horkelia and Kellogg's horkelia are distinguished by characteristics of leaf and stem hairs as well as diagnostic features found in the flowers.

Mesa horkelia is known from San Luis Obispo County to San Diego County, while the distribution of Kellogg's horkelia encompasses populations in San Mateo, Santa Cruz, San Luis Obispo, and Santa Barbara Counties; it has been extirpated in the San Francisco Bay area. Numerous populations of mesa and Kellogg's horkelia have been eliminated by development, particularly in the northern part of its range. Both species bloom from April to September, and each is listed separately on CNPS List 1B.1 for species that are seriously endangered in California. The coastal scrub habitat within the Project Site could support this species; however, this species was not identified during botanical surveys conducted by Arcadis in 2013.

Nipomo Mesa Lupine (*Lupinus nipomoensis*)

Nipomo Mesa lupine is an annual herb restricted to stabilized back dune habitat on the east side of the Guadalupe Dunes at the southwest base of the Nipomo Mesa in San Luis Obispo County. The entire known distribution of the annual Nipomo Mesa lupine is confined to an area less than 3 square miles that encompasses what is generally considered to be one extended population consisting of five to seven colonies (USFWS 2000; Center for Plant Conservation 2008), including a ruderal roadside area adjacent to Highway 1 south of the Site near the ConocoPhillips refinery. Nipomo Mesa lupine has been known from swales between or at the bases of stabilized dunes and seems to prefer pockets of open sand between widely spaced individuals of dune-heather, often mixed with other annuals and herbaceous perennials. Currently, it is also known from areas dominated by the invasive veldt grass. The Nipomo Mesa lupine blooms from December to May. Nipomo Mesa lupine is Federally listed as Endangered and is State listed as Endangered, and is categorized as CNPS 1B.1, a plant of limited distribution that is seriously endangered in California.

Nipomo Mesa lupine was not identified on the Site. Targeted searches were conducted during the blooming period for this species. The surveys were scheduled based on the observation of blooming individuals in known populations elsewhere on the SMR property. The nearest known population of Nipomo Mesa lupine is located approximately 0.25 miles north of the offloading facility east of the existing storage tanks.

San Luis Obispo monardella (*Monardella frutescens*)

San Luis Obispo monardella is a perennial rhizomatous herb of the mint family (Lamiaceae). This species is a California endemic and grows in sandy soils in coastal scrub and coastal dune habitats. This species blooms from May to August and is found from 10 to 200 meters above sea level.

San Luis Obispo Monardella is categorized as CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. On the Project Site, potential habitat for this species is located in the areas that support coastal scrub and coastal dune communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013. Nearest known occurrence is approximately 2 miles northwest of the Project Site.

Crisp monardella (*Monardella* subsp. *crispa*)

Crisp monardella is a perennial rhizomatous herb of the mint family (Lamiaceae). This species is a California endemic and grows in sandy soils in coastal scrub and coastal dune habitats. This species blooms from April to August and is found from 10 to 120 meters above sea level.

Crisp monardella is categorized as CNPS 1B.2, a plant of limited distribution that is fairly endangered to moderately threatened in California. This species is threatened by off road vehicles. On the Project Site, potential habitat for this species is located in the areas that support coastal scrub and coastal dune communities; however, this species was not identified during botanical surveys conducted by Arcadis in 2013. Nearest known occurrence of crisp monardella is approximately 1.3 miles northwest of the Project Site.

California Spineflower (*Mucronea californica*)

California spineflower is a distinctive reddish annual of the buckwheat family (Polygonaceae). This species produces wiry branches low that grow low to the ground and rarely grow taller than 25 centimeters. Gaviota tarplant grows on sandy soils and occurs in chaparral, cismontane woodland, coastal dunes, and coastal scrub communities from Atascadero to La Panza Range and south to Pozo. It is also found sporadically along the coast from Morro Bay southwards to Nipomo Mesa, and also occurs on the sand sheets of northern Santa Barbara County. This species blooms from March to August and is found from 0 to 1,400 meters above sea level.

California spineflower is categorized as CNPS 4.2, a plant of limited distribution that is fairly endangered in California. This species is threatened by aggregate mining, vehicles, flood control modification, urbanization, and water percolation projects. California spineflower occurs in sandy openings in several areas that support Central Dune Scrub. More than 3,000 individuals were observed by Arcadis during botanical surveys in 2013. Individuals and small populations were mapped during this time.

Sand almond (*Prunus fasciculate* var. *punctata*)

Sand almond is an intricately branched shrub that ranges from 2 to 3 feet in height (0.6 to 0.9 meters), although it may sometimes be taller. This winter-deciduous shrub has narrow leaves to 0.5 to 0.75 inches long, with punctuate (sunken) glands on the surface. The tiny white flowers appear in spring and are followed by small, round pubescent fruits. Unlike its desert relative, *Prunus fasciculata* var. *fasciculata*, a desert species native to washes and rocky soils of the western desert regions, sand almond is confined to sandy substrates in coastal Santa Barbara and San Luis Obispo Counties.

Sand almond occurs in Graciosa Canyon on the northern flanks of the Purisima Hills south of Orcutt, northwest of Los Alamos, on San Antonio Terrace (Smith 1998), and in the Solomon Hills in Santa Barbara County. Keil and Holland (1998) also report sand almond on San Antonio

Terrace in mixed chaparral and in disturbed areas surrounded by grasses, as well as in the Casmalia Hills north of Barka Slough. One outlying population of sand almond lies far to the east of these more coastal populations, on the easternmost extent of the Purisima Hills west of Ballard Canyon (Smith 1998). Sand almond also extends north into San Luis Obispo County on Nipomo Mesa and in maritime chaparral south of Morro Bay.

Sand almond is listed as CNPS List 4.3, which is a watch list for species with a limited distribution that are not very endangered in California.

Three individuals of sand almond were observed at the top of a sandy ridge in the Black Sage – Dune-Heather Association on the Project Site, as well as along the proposed emergency access route at the eastern end of the Site in the Dune-Heather Alliance vegetation type.

Black-flowered Figwort (*Scrophularia atrata*)

Black-flowered figwort (*Scrophularia atrata*) is a perennial herb in the Scrophulariaceae family. It is found throughout San Luis Obispo and Santa Barbara Counties in closed cone coniferous forest, coastal scrub, coastal dunes, riparian scrub, and chaparral. It blooms March through July, and is easily identified by a dark red to black flower that sits pendulant on a tall stalk (CNPS, 2007) The CNPS considers this species to be "seriously endangered in California and elsewhere" (List 1B.1).

The nearest documented occurrence of black-flowered figwort is approximately six miles northwest of the property, adjacent to James Way in Arroyo Grande (CNDDB 2013). The coastal scrub and riparian corridors on the property provide suitable habitat for this species. Black-flowered figwort was not observed during the botanical surveys conducted during the appropriate blooming period in 201.3

Rayless ragwort (*Senecio aphanactis*)

Rayless ragwort is an annual herb of the sunflower family (Asteraceae). This species is endemic to California, grows on alkaline soils, and occurs in coastal scrub, cismontane woodland, and chaparral habitats. Rayless ragwort blooms from January to April and is found from 15 to 800 meters above sea level.

Rayless ragwort is categorized as a CNPS 2B.2, plants rare, threatened, or endangered in California, but more common elsewhere. This species is threatened by non-native invasive species and loss of habitat. On the project site, potential habitat for this species is located in the areas that support coastal scrub and coastal dune communities. Nearest documented occurrence of rayless ragwort is 20 miles north/northeast of the project site.

Blochman's groundsel (*Senecio blochmaniae*)

Blochman's groundsel is a subshrub in the sunflower family that reaches 1.5 meters in height. The leaves are bright green and linear, with dried leaves remaining attached to the plant lower on stems. Like Blochman's leafy daisy, Blochman's groundsel is a member of the sunflower family, with yellow ray and disk flowers. The fruits bear tufts of soft hairs that aid in dispersal.

Blochman's groundsel is distributed on stabilized dunes from Point Conception north to Morro Bay. It is threatened by development, invasive weeds, off-road vehicles, and other human

activities. It is categorized as CNPS 4.2, a plant of limited distribution (CNPS watch list) that is fairly endangered in California.

Blochman's groundsel is scattered at the Site, especially in the western half in places where veldt grass is sparse. Approximately 50 individuals were observed within the Project Site.

San Bernardino Aster (*Symphyotrichum defoliatum*)

San Bernardino aster (*Symphyotrichum defoliatum*) is a perennial herb in the Asteraceae family that occupies cismontane woodlands near ditches and streams. This species occurs at elevations that range from 2 meters to 2,040 meters. The typical blooming season for San Bernardino aster is July through November (CNPS, 2007). The CNPS considers this plant to be "fairly endangered in California and elsewhere" (List 1B.2).

The nearest occurrence of San Bernardino aster is approximately 2.65 miles west of the property at the base of Halcyon Grade. Several of the drainages that traverse the property provide suitable habitat for this species (Arcadis 2013). San Bernardino aster was not observed during the botanical surveys conducted during the appropriate blooming period (Arcadis 2013).

Sensitive Animals

Cooper's hawk (*Accipiter cooperii*)

The Cooper's hawk (CDFW Watch List) feeds predominantly on small to medium-sized birds, but will also take reptiles and mammals such as wood rats and small rabbits. The breeding season for this species begins in mid-March to early April. Nests are built in the upper canopy of a dense stand of trees such as live oak or cottonwood. Nests are occasionally built atop a wood rat or squirrel nest (Meng and Rosenfield 1988). After completion of the nest, three to five eggs are laid, and incubation lasts about 1 month. Young Cooper's hawks fledge at about 4 weeks of age (Reynolds & Wight 1978). The Cooper's hawk is a secretive species, but is known to breed within urban settings.

Cooper's hawk was observed within the Project Site during Arcadis surveys conducted in Fall 2012. This species was not observed during any field surveys in 2013. The Project Site and surrounding area has adequate foraging habitat for the Cooper's hawk, which is likely to use the SMR property for foraging throughout the year.

Bell's Sage Sparrow (*Amphispiza belli*)

The sage sparrow (SSC) is a distinctive species found in barren sage brush deserts and dry open habitat types including the grassland/chaparral interface. The pacific population or Bell's sage sparrow typically occurs in dense coastal chaparral and sagebrush scrub. The Bell's sage sparrow can often be seen running between bushes with its tail raised high. It is a medium sized sparrow with a relatively long tail. It has a dark central spot on a mostly white breast and has a complete white eye-ring and a gray head. The Bell's sage sparrow builds a cuplike nest of twigs, grasses, bark, lined with finer materials, placed on the ground or up to 3-feet high in a shrub. Typically 3 to 4 bluish eggs are laid in the spring; incubation lasts approximately 13 days and young fledge in 9 to 11 days (Ehrlich et al. 1988, Stokes 1996).

A singing male Bell's sage sparrow was observed within the Project Site during Arcadis field surveys in 2012. The Project Site has suitable foraging and nesting habitat to support Bell's sage sparrow.

Western Burrowing Owl (*Athene cunicularia*)

The western burrowing owl (SSC) can be found in dry, open grasslands and fields. Burrowing owls are capable of creating their own burrows, but typically occupy burrows abandoned by California ground squirrels (*Otospermophilus beecheyi*) and badger. Abandoned pipes and debris piles are also commonly used by burrowing owls for shelter. Burrowing owls feed on a wide range of animals including insects, small mammals, birds, and reptiles. The breeding season can start as early as late February and is typically over by late August. Up to nine eggs are laid, and incubation is complete in 28 to 30 days. Young owls fledge in 44 days.

Western burrowing owls commonly winter and historically have nested in San Luis Obispo and Santa Barbara Counties. They utilize open fields with low vegetation cover. The availability of small mammal burrows, particularly California ground squirrel burrows, is a critical component of burrowing owl habitat.

Western burrowing owl was observed during both Arcadis field surveys in October and November 2012. Focused surveys were conducted on July 12th and July 15th, 2013 to determine if the species was breeding on-site. The results of this focused survey effort were negative. Although California ground squirrels were not observed on the Site, both small mammal and medium-sized mammal burrows are occasionally encountered that can provide shelter for the western burrowing owl. Conditions within the Project Site are considered to be moderately to well suited for the western burrowing owl, and the Project Site provides refuge for this species as indicated by the sighting of two individual burrowing owls during the Arcadis surveys in Fall/Winter 2012.

Ferruginous hawk (*Buteo regalis*)

The ferruginous hawk (SSC) is an open-country raptor that nests in Canada and the northern U.S., and winters as far south as central Mexico. Most northern populations of ferruginous hawks are completely migratory, whereas southern populations appear to migrate short distances or are sedentary. In California, the ferruginous hawk is a fairly common winter visitor to the interior of the state (Small, 1994). Habitat during both summer and winter includes grasslands, deserts, and other open areas with isolated shrubs or trees where less than 50 percent of the land is under cultivation (Small, 1994). During winter, ferruginous hawks are often found around colonies of prairie dogs, which make up much of their winter diet. Large stick nests are usually constructed in an isolated tree or within a small grove of trees, and can be found on other elevated sites such as large shrubs, rock outcrops, buttes, haystacks, transmission towers, and low cliffs. Nests are located adjacent to open areas such as grasslands or shrublands.

Ferruginous hawk was observed by Arcadis during surveys conducted in Fall/Winter 2012. This species was not observed by Arcadis or SWCA in 2013. Nesting activity within the Project Site would be considered unlikely due to the lack of suitable habitat (trees, transmission lines, etc.). However, there is a potential that his species would occur within the Project Site during the winter as an infrequent forager.

Northern Harrier (*Circus cyaneus*)
The northern harrier SSC) is a slender raptor with long wings and tail. It spends much of its time coursing back and forth low over open fields, marshlands, savannahs, and grassland prairies in search of food, which typically includes small birds, mammals, reptiles, and insects. The northern harrier typically builds a stick nest on the ground or in low shrubs (Ehrlich et al. 1988).

Northern harrier was observed during both Arcadis surveys in Fall/Winter 2012, and the species is expected to forage regularly on the SMR property in the fall and winter months. The northern harrier is unlikely to nest on the Project Site.

White-tailed Kite (*Elanus leucurus*)
The white-tailed kite (SSC; "Fully protected") requires large, open fields and relatively undisturbed oak woodland, grassland, and/or coastal sage scrub for successful breeding. Small mammals are the normal preFy item of this species. Eggs are laid as early as mid-March and as late as the end of May. White-tailed kite habitat usually requires a stretch of riparian corridor in which to nest (particularly cottonwoods, but including eucalyptus, willows, and live oaks), and adjacent fields in which to hunt. Nests are usually well hidden in the tree canopy (Dixon et al. 1957).

This species was not observed within the Project Site during focused wildlife surveys Arcadis or SWCA verification surveys. However, the Project Site and SMR property offers good to excellent foraging habitat for the white-tailed kite, and the species is assumed to occur in the area periodically as an infrequent forager.

Loggerhead Shrike (*Lanius ludovicianus*)
The loggerhead shrike (SSC) is found in dry, open habitat types including the grassland/chaparral interface. This bird is known for its habit of impaling prey items such as lizards, small mice, and large insects on the spines of thorn bushes or on barbed wire fencing. It generally hunts from low perches such as fence posts, wires, and the tops of low bushes. Shrikes lay five to six eggs in an open cup-shaped nest well hidden in the crotch of a tree branch. Egg laying commonly begins in April, and young fledge in about 34 days (Ehrlich et al. 1988).

One individual loggerhead shrike was observed on the SMR property during Arcadis surveys in Fall/Winter 2012. No individuals were observed by SWCA in Summer 2013. The Project Site and surrounding area has suitable foraging and nesting habitat to support the loggerhead shrike.

Coast horned lizard (*Phrynosoma coronatum*)
The coast horned lizard (SSC) is found in a variety of habitats including grassland, oak woodland, and maritime chaparral. The coast horned lizard requires loose, sandy soils, preferably in the presence of low shrubs that can provide cover from predators. Additional requirements are open areas used for sunning, and the presence of ants and other insect prey. Eggs are laid in sandy soils from April through June (Stebbins 1985).

Coast horned lizards are known to occur in dune scrub habitat south of Oso Flaco Lake (personal observation). The species was not observed on the Site by Arcadis; however, sandy soil conditions and an adequate prey base indicate that the Site is well suited for the coast horned lizard.

Coast horned lizard was not observed during Arcadis surveys. However, the Project Site has fair to good habitat conditions for the coast horned lizard, and it is reasonable to assume the species can be found on the Site. Arcadis biologists spoke with a cattle rancher on the Site during the field survey who commented that he has observed coast horned lizards on the SMR property on numerous occasions.

Silvery legless lizard (*Anniella pulchra* subsp. *pulchra*)

The silvery legless lizard (SSC) prefers loose sand or loamy soils with some vegetation cover, and can be found in chaparral, beach foredunes, pine-oak woodland, and streamside growth of sycamores, cottonwoods, and oaks. The right amount of soil moisture is believed to be a critical microhabitat feature for this species. The silvery legless lizard favors the loose litter under sycamore, oak, and cottonwood trees (Stebbins 1985). The understory of oak thickets is a prime habitat for this species.

The silvery legless lizard may occur on the Site. Sandy soil conditions on the Site are suitable, and the presence of an adequate prey base is assumed. In addition, silver dune lupine (*Lupinus chamissonis*) and mock heather (*Ericameria ericoides*) are two native plant species present within the Project Site that are closely associated with the presence of silvery legless lizards. Silvery legless lizards are often found where these two plants occur in undisturbed, Coastal Dune Scrub habitats.

This species was not observed during Arcadis or SWCA surveys. However, the soil composition at the Site and the remnant central dune scrub habitat on the Project Site provide good to excellent conditions for this species. It is reasonable to assume that the silvery legless lizard occurs within the Project Site.

Monarch Butterfly (*Danaus plexippus*)

The Monarch butterfly does not have federal or state listing status, but is included as a sensitive species in the CNDDB. Winter roost sites extend from Northern Mendocino to Baja California, Mexico. The listing by CDFW is based on limited wintering roost sites within the Central California coast portion of the butterfly's West Coast wintering range. The Monarch butterfly can be found in a variety of habitats, especially those supporting milkweed plants (*Asclepias* sp.), the primary food source of the caterpillars. These butterflies frequent grasslands, prairies, meadows, and wetlands, but avoid dense forests. In the winter, Monarchs cluster together in large numbers forming winter roost locations in eucalyptus, cypress, and Monterey pine trees, often on the edges of open areas.

The closest CNDDB reports of wintering Monarch butterflies come from the vicinity of Hwy 1 and Willow Street less than 1 mile north of the Site. Adult Monarch butterflies were observed on the Site by Arcadis; however, The Site is not likely to support a winter roost location for this species, as there are few potential roost trees present on the SMR property, and those that are present are typically single trees or a small number of associated trees exposed to prevailing on-shore winds and the elements.

American badger (*Taxidea taxus*)

The American badger (SSC) is found in open grassland, coastal scrub, chaparral, and oak woodland. California ground squirrels and other small rodents, such as the kangaroo rat

(*Dipodomys* spp), are common prey items of the badger. The American badger is generally nocturnal, but is sometimes observed active in the daytime. Burrow openings of this species are elliptical and approximately 8 to 12 inches wide. Young are born in March and April (Whitaker 1996).

Subdivision and development of properties on the Nipomo Mesa is occurring at an accelerated rate, making it increasingly difficult for larger carnivore species such as the American badger to survive. Mortality due to car strikes is a common end for badgers caught in development areas. Other pressures include loss of prey species (e.g., California ground squirrels, kangaroo rats, pocket gophers) due to land clearing and or poisoning, and clearing of suitable denning locations. American badgers are known from the area and have been observed dead from vehicle strikes on Hwy 1 less than 1 mile from the Site.

The Site and surrounding SMR property provides good habitat for the American badger, although no badger or badger diggings or burrows were observed during the Arcadis survey. California ground squirrels, an important prey species of the American badger, were also not observed by Arcadis; however, other small mammal badger prey species are present. Arcadis biologists spoke with a cattle rancher on the Site during the October 9 field survey who commented that he has observed badger on the Site on one or two occasions.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Taxonomic Group is (Ferns or Gymnosperms or Monocots or Dicots or Lichens or Bryophytes) and Quad is (Oceano (3512015) or Pismo Beach (3512026) or Arroyo Grande NE (3512025) or Tar Spring Ridge (3512024) or Nipomo (3512014) or Santa Maria (3412084) or Guadalupe (3412085) or Point Sal (3412086))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agrostis hooveri	PMPOA040M0	None	None	G2	S2	1B.2
Hoover's bent grass						
Aphanisma blitoides	PDCHE02010	None	None	G3G4	S3	1B.2
aphanisma						
Arctostaphylos luciana	PDERI040N0	None	None	G2	S2.2	1B.2
Santa Lucia manzanita						
Arctostaphylos morroensis	PDERI040S0	Threatened	None	G2	S2	1B.1
Morro manzanita						
Arctostaphylos pechoensis	PDERI04140	None	None	G2	S2.2	1B.2
Pecho manzanita						
Arctostaphylos pilosula	PDERI04160	None	None	G3	S3	1B.2
Santa Margarita manzanita						
Arctostaphylos rudis	PDERI041E0	None	None	G2	S2.2	1B.2
sand mesa manzanita						
Arenaria paludicola	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
marsh sandwort						
Astragalus didymocarpus var. milesianus	PDFAB0F2X3	None	None	G5T2	S2.2	1B.2
Miles' milk-vetch						
Atriplex serenana var. davidsonii	PDCHE041T1	None	None	G5T2?	S2?	1B.2
Davidson's saltscale						
Calochortus obispoensis	PMLIL0D110	None	None	G2	S2.1	1B.2
San Luis mariposa-lily						
Calochortus simulans	PMLIL0D170	None	None	G2	S2.3	1B.3
La Panza mariposa-lily						
Calystegia subacaulis ssp. episcopalis	PDCON040J1	None	None	G3T3	S3	4.2
Cambria morning-glory						
Castilleja densiflora var. obispoensis	PDSCR0D453	None	None	G5T2	S2.2	1B.2
San Luis Obispo owl's-clover						
Centromadia parryi ssp. congdonii	PDAST4R0P1	None	None	G3T2	S2	1B.1
Congdon's tarplant						
Chenopodium littoreum	PDCHE091Z0	None	None	G2	S2	1B.2
coastal goosefoot						
Chorizanthe breweri	PDPGN04050	None	None	G2	S2.2	1B.3
Brewer's spineflower						
Chorizanthe rectispina	PDPGN040N0	None	None	G1	S1	1B.3
straight-awned spineflower						
Cirsium fontinale var. obispoense	PDAST2E162	Endangered	Endangered	G2T2	S2	1B.2
Chorro Creek bog thistle						

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Cirsium rhothophilum surf thistle	PDAST2E2J0	None	Threatened	G1	S1	1B.2
Cirsium scariosum var. loncholepis La Graciosa thistle	PDAST2E1N0	Endangered	Threatened	G5T1	S1	1B.1
Cladium californicum California saw-grass	PMCYP04010	None	None	G4	S2.2	2B.2
Clarkia speciosa ssp. immaculata Pismo clarkia	PDONA05111	Endangered	Rare	G4T1	S1	1B.1
Deinandra increscens ssp. villosa Gaviota tarplant	PDAST4R0U3	Endangered	Endangered	G4G5T2	S2	1B.1
Delphinium parryi ssp. blochmaniae dune larkspur	PDRAN0B1B1	None	None	G4T2	S2	1B.2
Delphinium parryi ssp. eastwoodiae Eastwood's larkspur	PDRAN0B1B2	None	None	G4T2	S2	1B.2
Delphinium umbraculorum umbrella larkspur	PDRAN0B1W0	None	None	G2G3	S2S3.3	1B.3
Dithyrea maritima beach spectaclepod	PDBRA10020	None	Threatened	G2	S2.1	1B.1
Dudleya abramsii ssp. murina mouse-gray dudleya	PDCRA04012	None	None	G3T2	S2.3	1B.3
Dudleya blochmaniae ssp. blochmaniae Blochman's dudleya	PDCRA04051	None	None	G2T2	S2.1	1B.1
Erigeron blochmaniae Blochman's leafy daisy	PDAST3M5J0	None	None	G2	S2.2	1B.2
Eriodictyon altissimum Indian Knob mountainbalm	PDHYD04010	Endangered	Endangered	G1	S1	1B.1
Eryngium aristulatum var. hooveri Hoover's button-celery	PDAPI0Z043	None	None	G5T1	S1	1B.1
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T2	S2.1	1B.1
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T2	S2?	1B.1
Layia jonesii Jones' layia	PDAST5N090	None	None	G1	S1	1B.2
Lupinus ludovicianus San Luis Obispo County lupine	PDFAB2B2G0	None	None	G2	S2.2	1B.2
Lupinus nipomensis Nipomo Mesa lupine	PDFAB2B550	Endangered	Endangered	G1	S1	1B.1
Monardella undulata ssp. crispa crisp monardella	PDLAM18070	None	None	G3T2	S2.2	1B.2
Monardella undulata ssp. undulata San Luis Obispo monardella	PDLAM180X0	None	None	G2	S2.2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Nasturtium gambelii	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
Gambel's water cress						
Nemacaulis denudata var. denudata	PDPGN0G011	None	None	G3G4T3?	S2.2	1B.2
coast woolly-heads						
Nemacladus secundiflorus var. robbinsii	PDCAM0F0B2	None	None	G3T2T3	S2S3	1B.2
Robbins' nemacladus						
Orobanche parishii ssp. brachyloba	PDORO040A2	None	None	G4?T3	S3.2	4.2
short-lobed broomrape						
Scrophularia atrata	PDSCR1S010	None	None	G2	S2.2	1B.2
black-flowered figwort						
Symphyotrichum defoliatum	PDASTE80C0	None	None	G2	S2	1B.2
San Bernardino aster						

Record Count: 46

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Taxonomic Group is (Fish or Amphibians or Reptiles or Birds or Mammals or Mollusks or Arachnids or Crustaceans or Insects) and Quad is (Oceano (3512015) or Pismo Beach (3512026) or Arroyo Grande NE (3512025) or Tar Spring Ridge (3512024) or Nipomo (3512014) or Santa Maria (3412084) or Guadalupe (3412085) or Point Sal (3412086))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ablautus schlingeri Oso Flaco robber fly	IIDIP42010	None	None	G1	S1	
Accipiter striatus sharp-shinned hawk	ABNKC12020	None	None	G5	S3	WL
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SSC
Anniella pulchra pulchra silvery legless lizard	ARACC01012	None	None	G3G4T3T4Q	S3	SSC
Areniscythris brachypteris Oso Flaco flightless moth	IILEG49010	None	None	G1	S1	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S2	SSC
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S2S3	
Charadrius alexandrinus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chlosyne leanira elegans Oso Flaco patch butterfly	IILEPJA051	None	None	G4G5T1T2	S1S2	
Cicindela hirticollis gravida sandy beach tiger beetle	IICOL02101	None	None	G5T2	S1	
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1	S1	
Danaus plexippus monarch butterfly	IILEPP2010	None	None	G5	S3	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S2S3	SSC
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S3	WL
Gila orcuttii arroyo chub	AFCJB13120	None	None	G2	S2	SSC
Gymnogyps californianus California condor	ABNKA03010	Endangered	Endangered	G1	S1	
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G4T1	S1	FP
Lichnanthe albipilosa white sand bear scarab beetle	IICOL67010	None	None	G1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Oncorhynchus mykiss irideus steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	G5T2Q	S2	SSC
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Plebejus icarioides moroensis Morro Bay blue butterfly	IILEPG801B	None	None	G5T1T3	S1S3	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2S3	FP
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S4	SSC
Thamnophis hammondii two-striped garter snake	ARADB36160	None	None	G4	S2	SSC
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2G3	S2S3	

Record Count: 29

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN00-2014-CPA-0018

November 19, 2013

Jon Claxton
Natural Resources Team leader
SWCA Environmental Consultants
1422 Monterey Street, Suite C200
San Luis Obispo, California 93401

Subject: Species List Request for the Phillips 66 Rail Spur Project, San Luis Obispo County, California

Dear Mr. Claxton:

We are responding to your request, received in our office via email on October 21, 2013, for information on federally proposed or listed threatened and endangered species, candidate species, and designated critical habitat that may be affected by the subject project. The Phillips 66 Company proposes to modify the existing rail spur currently on the southwest side of the Santa Maria Refinery located in unincorporated San Luis Obispo County, California. The project would include an eastward extension of the existing rail spur, a railcar unloading facility, above-ground pipeline, and other associated facilities.

The Service's responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act and its implementing regulations prohibit the taking of any federally listed endangered or threatened wildlife species. Section 3(18) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species.

Exemptions to the prohibitions against take may be obtained through coordination with the Service through interagency consultation for projects with Federal involvement pursuant to section 7 or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act. If the subject project is to be funded, authorized, or carried out by a Federal agency and

may affect a listed species, the Federal agency must consult with the Service, pursuant to section 7(a)(2) of the Act. If a proposed project does not involve a Federal agency but may result in the take of a listed animal species, the project proponent should apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act. Once a project proponent determines if the proposed project will have a lead Federal agency, we can provide more detailed information regarding section 7 interagency consultation or the 10(a)(1)(B) permitting process.

We have enclosed a list of federally listed species and their designated critical habitats, which may occur in the vicinity of the Phillips 66 Rail Spur Project. Newer information based on updated surveys, changes in the abundance and distribution of listed species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential presence of federally proposed, listed, or candidate species and federally designated critical habitat. Please note that pursuant to Federal regulation (50 CFR 402.12(e) a species list is valid for 90 days.

Only federally listed species receive protection under the Act; however, species listed by the State of California or otherwise considered to be sensitive should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812, for information on other sensitive species that may occur in this area.

If you have any questions regarding this species list, please contact Colleen Draguesku of my staff at (805) 644-1766, extension 221.

Sincerely,

Jeff Phillips
Deputy Assistant Field Supervisor

Enclosure

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES WHICH MAY OCCUR NEAR THE PHILLIPS 66 RAIL SPUR PROJECT, SAN LUIS OBISPO COUNTY, CALIFORNIA

Birds		
California least tern	*Sterna antillarum browni*	E
Western snowy plover	*Charadrius nivosus nivosus*	T
Amphibians		
California red-legged frog	*Rana draytonii*	T
Plants		
Gambel's watercress	*Rorippa gambellii*	E
La Graciosa thistle	*Cirsium loncholepis*	E, CH
Marsh sandwort	*Arenaria paludicola*	E
Nipomo Mesa lupine	*Lupinus nipomensis*	E
Pismo clarkia	*Clarkia speciosa* ssp. *immaculata*	E

Key:

E – Endangered T - Threatened CH - Critical habitat