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STAFF REPORT
COASTAL DEVELOPMENT PERMIT APPLICATION

CDP Application No.:	**E-05-010**
Applicant:	**Plains Exploration Company/Arguello, Inc.**
Project Location:	Mouth of Alcatraz Creek, at the Gaviota Terminal, 16899 Highway 101, Goleta, in Santa Barbara County.
Project Description:	Install a riprap spill apron, using approximately 1,200 tons of rock riprap, to prevent scour and serve as an energy dissipation device as part of a flood-control project at the mouth of Alcatraz Creek.
Substantive File Documents:	See Appendix A

SUMMARY

Severe flooding during the 2004-2005 storm season damaged existing pump facilities ("forebay facilities") essential to the operation of the Gaviota Oil Heating and Transfer Facility and three offshore oil platforms (Hermosa, Harvest, and Hidalgo). Arguello, Inc., a wholly owned subsidiary of Plains Exploration Company, proposes to install a riprap spill apron, using approximately 1,200 tons of rock riprap, to prevent scour and serve as an energy dissipation device as part of a larger flood-control project.

Most of the flood control project is located within the County of Santa Barbara's retained CDP jurisdiction. Within the County's jurisdiction, the applicant proposes to fill the stream channel with soil, covering recently discovered cultural resource deposits. The applicant will pour a concrete apron between the riprap spill apron and the current upstream creek bed level. The concrete apron will contain future overflow in a channel directed away from the forebay facilities, and water channeled by this concrete apron will spill onto the new riprap.

The applicant worked with agency personnel to develop several alternatives to the proposed project, including retaining the open, natural stream channel. Because of the location of the forebay facilities and the cultural deposits, however, maintaining an open, natural stream channel is not feasible while protecting both the existing forebay facilities and the cultural deposits. Agency staff determined that restoring the stream would be feasible once the forebay facilities have been decommissioned and removed. **Special Condition No. 1** requires the applicant to completely remove the development authorized by this permit, and restore the project site to pre-permit conditions as part of the decommissioning of the forebay facilities. The applicant expects the forebay facilities to be decommissioned in approximately 15 years; however, the decommissioning date will depend on the status of future oil and gas development in the area.

The project site is adjacent to environmentally sensitive habitat area, because of the potential presence of the Southwestern pond turtle in Alcatraz and Cementario Creeks. **Special Condition No. 2** requires regular monitoring for Southwestern pond turtle. If a Southwestern pond turtle is encountered within the project site, construction shall cease immediately, and the applicant shall notify California Department of Fish and Game staff and Coastal Commission staff. Construction shall not recommence until agency recommendations have been implemented.

The deep erosional channel scoured by heavy creek flows exposed portions of two previously undetected archaeological deposits. For management purposes, the deposits are being considered significant under federal, State, and local regulations, and the applicant has prepared a *Cultural Resources Monitoring Plan for the Alcatraz Creek Repair and Stabilization Project* ("Monitoring Plan"). **Special Condition No. 3** requires the applicant to comply with all monitoring recommendations contained in the Monitoring Plan, and adds Coastal Commission staff to the list of agency staff that shall be notified in the event of an unanticipated discovery of cultural resource deposits.

Commission staff is recommending **approval with conditions** of the proposed project.

TABLE OF CONTENTS

1 STAFF RECOMMENDATION 4
2 STANDARD CONDITIONS 4
3 SPECIAL CONDITIONS 5
4 FINDINGS AND DECLARATIONS 6
4.1 Project Location 6
4.2 Project Background 6
4.2.1 History and Setting 6
4.2.2 Current (Pre-Permit) Conditions 7
4.2.3 Flood Control Project 8
4.3 Project Description 8
4.4 Other Agency Approvals 9
5 COASTAL ACT POLICIES 9
5.1 Marine Resources, Water Quality, and Environmentally Sensitive Habitat Area 9
5.1.1 Existing Conditions 10
5.1.2 Potential Impacts 12
5.1.3 Stream Restoration 14
5.1.4 Conclusion 14
5.2 Flood Control and Fill 14
5.2.1 Coastal Act Section 30236 16
5.2.2 Coastal Act Section 30233(a) 18
5.2.3 Coastal Act Section 30233(d) 19
5.2.4 Flood Control and Fill Conclusion 19
5.3 Cultural Resources 20
5.3.1 Background 20
5.3.2 Potential Impacts 20
5.3.3 Conclusion 22
5.4 Public Access and Recreation 22
6 CALIFORNIA ENVIRONMENTAL QUALITY ACT 23

APPENDICES

Appendix A: Substantive File Documents

EXHIBITS

Exhibit 1: Project Location
Exhibit 2: Associated Facilities
Exhibit 3: Project Site, Pre-Flood Conditions
Exhibit 4: Photographs of Flooding
Exhibit 5: Project Plans
Exhibit 6: Channel/Creek Cross-Section
Exhibit 7: Cultural Resources Monitoring Plan

1 STAFF RECOMMENDATION

Approval with Conditions
The staff recommends conditional approval of the permit application.

Motion:

> *I move that the Commission approve Coastal Development Permit E-05-010 subject to conditions set forth in the staff recommendation specified below.*

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

> *The Commission hereby approves the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

2 STANDARD CONDITIONS

This permit is subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

3 SPECIAL CONDITIONS

This permit is subject to the following special conditions:

1. **Project Removal.** As part of the decommissioning of the forebay facilities, the applicant shall remove the development authorized by this permit, and restore the project site to pre-permit conditions (i.e., a natural, open stream channel capable of supporting riparian habitat). The applicant shall submit a permit application to remove the development and restore the project site no later than twelve months after the forebay facilities permanently cease operation. The removal and restoration project shall be implemented within such timeframe as shall be specified by the Commission in the course of its review of the removal and restoration project.

2. **Biological Resources Monitoring.** Within one week before construction activities begin, an environmental monitor, qualified to identify Southwestern pond turtle (*Clemmys marmorata pallida*), shall conduct a thorough inspection of the project site for the presence of the Southwestern pond turtle. Follow-up inspections shall occur the first workday of each week, and additional surveys shall be conducted as deemed necessary by the monitor. At the start of the project, the environmental monitor shall educate construction personnel as to the possible occurrence and identification of Southwestern pond turtle. If the environmental monitor or construction workers within the project site encounter a Southwestern pond turtle, construction shall cease immediately, and the applicant shall notify California Department of Fish and Game ("DFG") staff and Coastal Commission staff (Audrey McCombs at 415-904-5200). Construction shall not recommence until the recommendations of DFG staff have been implemented.

3. **Cultural Resources Monitoring.** The applicant shall comply with all monitoring recommendations contained in Section 3 of the document *Cultural Resources Monitoring Plan for the Alcatraz Creek Repair and Stabilization Project* ("Cultural Resources Monitoring Plan"), dated June 2005 (Exhibit 7). If unanticipated cultural resources are discovered in the course of construction activities, the environmental monitor shall immediately notify Coastal Commission staff (Audrey McCombs at 415-904-5200) as well as the agency and tribal offices listed in the Cultural Resources Monitoring Plan. Within 60 days of completion of the project, the environmental monitor shall submit to the Executive Director a final report describing the results of the monitoring activities for the project.

4 FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

4.1 Project Location

As depicted in Exhibit 1 and Exhibit 3, the project site is located at the mouth of Alcatraz Creek, at the Gaviota Terminal, 16899 Highway 101, Goleta, in Santa Barbara County.

4.2 Project Background

4.2.1 History and Setting

The proposed project involves flood control to protect support facilities for the Gaviota Oil Heating and Transfer Facility. As shown in Exhibit 2, the project area is occupied by three separate facilities that support oil and gas development off the coast of Point Arguello. The Gaviota Oil Heating and Transfer Facility is located to the north of Highway 101. The Gaviota Terminal is located south of Highway 101, north of the railroad trestle, and the much smaller forebay facilities are located on the coastal bluff south of the railroad trestle. In the past, the Gaviota Terminal provided oil storage capacity, however these facilities are no longer being used, and the site is currently being decommissioned.

The Gaviota Oil Heating and Transfer Facility supports three offshore platforms: Hidalgo, Hermosa, and Harvest. Crude oil that is processed on those platforms is sent by pipeline to the Gaviota Oil Heating and Transfer Facility, where the oil is transferred to the All American Pipeline and transported to final refinery destinations. The forebay facilities located on the coastal bluff provide seawater intake for desalination operations at the Gaviota Oil Heating and Transfer Facility. Produced water from the desalination operations is essential to the Gaviota Oil Heating and Transfer Facility – failure of the equipment housed at the forebay facilities would shutdown the Gaviota Oil Heating and Transfer Facility and the three offshore platforms within a maximum of two days.

A fire in June 2004 burned most of the hillside above the Gaviota Oil Heating and Transfer Facility, leaving very little vegetation in the watershed above the Facility. Two creeks (Cementario to the west and Alcatraz to the east) cross the Gaviota Terminal and empty into the ocean less than 500 feet apart where the Terminal abuts the beach. Heavy rains on October 26, 2004 caused substantial sedimentation of the creeks. Cementario Creek is outside the area of Terminal activities, however Alcatraz Creek passes through the active portion of the Terminal and near the forebay facilities.

Alcatraz Creek was channelized in the early 1900s with a brickwork channel. Prior to the 2004-2005 storm season, the brickwork included an approximately 100-foot-long culvert under fill at the downstream end that discharged just above the beach. The fill over the culvert was approximately five to ten feet deep and vehicle access to lower portions of the facility was via a graded dirt road over the fill. There was a ravine landward of the upstream entrance to the culvert above the fill. Prior to last winter's rain, the ravine was approximately 100 to 150 feet long (north to south), 50 feet wide, and ten to fifteen feet deep.

During the second substantial rain of the season on October 26, 2004, soil eroded from the hillsides above the Gaviota Oil Heating and Transfer Facility and completely filled the creekbed

and ravine, plugging the brick culvert with sediment and debris. When the ravine filled with sediment, the creek overflowed the filled area adjacent to the beach. Significant erosion of the bluff occurred at the beach end of the fill where the overflow spilled down the slope to the beach, cutting back into the slope and undermining the perimeter fence. The access road on the fill over the culvert was damaged. Water and mud also spread to the applicant's forebay facilities adjacent to the culvert mouth. Photographs of the flooding are included as Exhibit 4.

Sediment entrained in the floodwaters was deposited into the Arguello forebay and entered the forebay sump, stopping the seawater intake pumps and shutting down the desalination system at the Gaviota Oil Heating and Transfer Facility. Two pumps (a working pump and standby) are normally available to pump from the forebay. Both failed when they became clogged and seriously damaged by sediment. Also, critical electrical equipment is housed in one of the areas threatened by sediment build-up and creekflow.

On December 28, 2004, the Coastal Commission's Executive Director issued Emergency Permit E-04-018-G, authorizing the emergency installation of flood control facilities intended to protect the forebay. Following issuance of emergency permits by Santa Barbara County and other agencies, gabions were placed on December 22, 2004 to divert the creek away from the forebay area. However, the ravine created by the initial October erosion was enlarged by heavy rains in late December and substantially enlarged again in early January. On January 6, after the first of two heavy rainstorms and with a limited time window predicted between storms, an attempt was made to fill the ravine with approximately 100 or more tons of rock that had previously been stockpiled. That rock was all that could be obtained from local sources at the time and was stockpiled on site in anticipation of making the original emergency repairs.

Because the available rock was not of optimal size and had not been sorted, it was inadequate to withstand the forces generated by the creek flow during the second storm. High flows on January 9 and 10, 2005, moved virtually all of the rock from the channel onto the beach, and extended the erosion channel farther upstream and deeper into the underlying soils. As a consequence, the historic brick culvert on the eastern side of the channel partially collapsed, and previously unrecorded cultural deposits were exposed within the channel at the bottom and along the western channel wall.

With the continued rains, efforts under the original emergency permits (from the Coastal Commission and other agencies) to control flooding at this site were unsuccessful. The applicant has spent this spring and summer developing a semi-permanent repair strategy intended to protect the forebay facilities for their remaining projected life of approximately 15 years.

4.2.2 Current (Pre-Permit) Conditions

The lower reach of Alcatraz Creek, from the railroad trestle to the mouth of the creek, currently flows through an open channel that was cut by erosional forces during the winter storm season of 2004-2005. Very little vegetation currently grows within the stream corridor; however, the stream in its current, natural condition is capable of supporting riparian habitat that could establish over time.

4.2.3 Flood Control Project

The proposed installation of flood control facilities in the Commission's jurisdiction is part of a larger flood control program proposed by the applicant. Within the County of Santa Barbara's jurisdiction (landward of the bluff face), the applicant proposes to re-fill the stream channel with soil that is locally derived or otherwise acceptable to the County, covering the cultural deposit. The applicant will compact the fill to 90%, and pour a concrete apron between a riprap spill apron and the current upstream creek bed level. The concrete apron will contain future overflow in a channel directed away from the forebay, and water channeled by this concrete apron will spill onto the new riprap. The cultural deposits will be draped with geo fabric prior to being covered with fill.

4.3 Project Description

Within the Commission's retained jurisdiction, the applicant proposes to install a riprap spill apron, using approximately 1,200 tons of rock riprap, to prevent scour and serve as an energy dissipation device as part of a larger flood-control project. Project activities involve:

- Approximately 65 cubic yards of cobble/sand (not bedrock) will be excavated from the beach area. Excavation will enable the toe of the riprap to be placed sufficiently deep to resist undermining and wave erosion.
- Sand and cobble excavated from the beach will be stockpiled on the level area above the slope to the beach, away from possible wave erosion.
- The sand/cobble will be returned to the beach following installation of the spill apron, and placed over the spill apron to return the beach to a natural appearance.
- Rock that was washed onto the beach from the creek channel will be recovered from the beach and used in construction of the spill apron.
- An excavator and front-end loader will be operated on the beach to excavate material and install approximately 1,200 tons of rock riprap.
- Depending on the timing of low tides, it may be necessary to use night lighting work on the beach during suitable low tide cycles. Night lighting will only be used if low tides of sufficient duration do not occur during daylight hours.

Drawings depicting the proposed repairs are included as Exhibit 5. The following operational steps are involved:

- If necessary, temporarily divert stream flows around work area.
- Grade, fill, and compact area above the beach to 2:1 slope, approximating existing riprap contours.
- Excavate keyway at toe of slope approximately 10 to 12 feet wide and 50 feet long. Should the keyway intersect cultural deposits, an agency-approved recovery plan will be executed to collect representative samples from the affected deposit.
- Lay nonwoven heavy (1 lb./yd^2) geotextile over fill to prevent fines from filtering into rock face.

- Apply on top of geotextile a ¾-foot thick bedding layer of #3 class rock (1 lb. to 50 lb. weight) using Method B placement (dump from truck and grade to depth). Use rock recovered from the beach as appropriate.
- Apply over bedding layer a second 2 ½-foot thick layer of facing class rock (200 lb. avg. weight, 1 to 1 ½ ft diameter) using Method B. Use rock recovered from the beach as appropriate.
- Apply a final top armor layer 5 feet thick of ½-ton to 1-ton (50% each size) angular quarry stone rock using Method A (laying each rock individually so it contacts at least three adjacent rocks). Use rock recovered from the beach as appropriate.
- Recover any remaining rock that washed onto the beach.
- Restore the beach to its approximate original contours.

The proposed flood control project is intended to remain in place for the duration of PXP/Arguello Inc. project operations (approximately 15 years). When the facility is decommissioned, the project will be removed as part of a comprehensive creek restoration effort.

4.4 Other Agency Approvals

The project is also subject to the following permits and approvals:

Santa Barbara County: Coastal Development Permit for development within the County's jurisdiction. Initial Study and Mitigated Negative Declaration as the lead agency under CEQA. Expected date of issuance: September 26, 2005.

California Department of Fish and Game: Section 1602 Streambed Alteration Agreement. Expected date of issuance: October 7, 2005.

Regional Water Quality Control Board: Section 401 Water Quality Certification. Expected date of issuance: October 7, 2005.

Army Corps of Engineers: Permit approval pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. To be issued.

5 COASTAL ACT POLICIES

5.1 Marine Resources, Water Quality, and Environmentally Sensitive Habitat Area

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas, that protect riparian habitats, and minimizing alteration of natural streams.*

Coastal Act Section 30240 states:

> *…(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

5.1.1 Existing Conditions

Alcatraz Creek originates on the south slope of the Santa Ynez Mountains at Gaviota, Santa Barbara County, California. The stream is intermittent in nature, though the lower reach typically conveys some surface flow year-round. Surface flow in the lower segment of the stream is sustained by groundwater seepage and the occasional release of regulated discharge of freshwater from the Gaviota Oil Heating Facility north of Highway 101 (e.g. accumulated storm water, discharge of freshwater used to test and flush the firewater system for both facilities). The releases are made under permits with the Regional Water Quality Control Board.

The lower reach (approximately 200 yards) of Alcatraz Creek courses through the Gaviota Terminal facility. The property has been used for petroleum production for over 100 years and the natural habitats have been largely altered or eliminated as a result of industrial development. Alcatraz Creek is largely confined to a concrete- and brick-lined channel within the facility boundaries. There are culverts at two road crossings. A third culvert that once conveyed flow beneath earthen fill as the creek approached its outfall to the ocean is no longer functional. Petroleum pipelines run both parallel (within) and perpendicular to the stream channel. The Union Pacific Railroad also spans the creek, approximately 200 feet north of the shoreline. The streambed has aggraded over the last several years and its mid-reach floods periodically during significant storm events.

There is a pool approximately three feet deep, measuring six feet by three feet, just below the second road crossing. There is persistent, standing water at this location. A dense tangle of vegetation (primarily willow) overhangs the stream channel.

Several bird species have been recorded in lower Alcatraz Creek. Most are typical of the riparian and/or coastal sage scrub communities. Examples include the black phoebe, common yellowthroat, and song sparrow (riparian associates) and greater roadrunner, California thrasher, and house finch (scrub associates).

One sensitive plant species has been recorded in the project vicinity. Cliff malacothrix (*Malacothrix saxitalis var. saxitalis*) occurs near the railroad trestle, east of the creek. This plant is commonly distributed along exposed rocky bluff faces in the Gaviota area. Cliff malacothrix appears on List 4 of the California Native Plant Society's Inventory of Rare Plants. List 4 is a "watch list" of species that have a limited regional distribution.

Gaviota tarplant, a state and federally-listed endangered species is known to occur within the Gaviota Terminal boundaries, but has not been observed in the vicinity of the project site, despite numerous surveys.

Table 1 describes the known and/or expected occurrence of sensitive wildlife at the project site.

Table 1: Sensitive Wildlife

Species	**Habitat Suitability**	**Expected Occurrence**
Southern Steelhead (Oncorhynchus mykiss mykiss)	Poor due to intermittent streamflow, obstructions to upstream dispersal, and lack of suitable spawning habitat in upper reaches of the watershed.	Not expected to occur. There are no records for steelhead within the Alcatraz Creek watershed.
Grunion (*Leuresthes tenuis*)	Sandy shoreline habitat is marginally developed in the project vicinity.	Not expected to occur. Grunion are not likely to use the beach fronting the facility for spawning because of its limited extent.
Southwestern Pond Turtle (*Clemmys marmorata pallida*)	Marginal, due to intermittent streamflow, limited availability of pool habitat, and developed character of surrounding upland.	The species has been observed in Alcatraz Creek (July 2000) and in nearby Cementerio Creek (July 2002).
California Red-legged Frog (*Rana aurora draytonii*)	Marginal, due to intermittent streamflow and limited availability of pool habitat.	Not expected to occur. There is no documentation for this species within the survey reach.

With one exception, no listed or sensitive wildlife species are known or expected to occur with regularity in the project area. The Southwestern pond turtle is known to inhabit both Alcatraz and Cementario Creeks. An adult Southwestern pond turtle was observed in Alcatraz Creek in the small pool below the lower road crossing at the Gaviota Terminal on July 6, 2000. The animal was observed intermittently at that location for a period of approximately one month. An adult Southwestern pond turtle was observed at the mouth of Cementario Creek, immediately west of the Gaviota Terminal property, on July 29, 2002. Cementario Creek follows the western boundary of the Gaviota Terminal site and is approximately 100 yards from Alcatraz Creek. This is well within the range of dispersal for Southwestern pond turtles.

The Commission presumes that the project site is adjacent to environmentally sensitive habitat area ("ESHA"), because of the potential presence of the Southwestern pond turtle in Alcatraz and Cementario Creeks.

5.1.2 Potential Impacts

Potential impacts to marine resources, water quality, and environmentally sensitive habitat areas may occur as a result of construction activities. Specifically, during construction the applicant will be using heavy equipment in and around the mouth of the stream, and in the intertidal area on the beach. This area is adjacent to presumptive ESHA. The applicant has agreed to the following measures to minimize or avoid impacts that might result from construction activities:

- The applicant will provide for an independent monitor to make regular inspections of the project site. Inspections will occur on an as-needed basis, an average of three times per week, with more inspections at the start of the project and fewer towards the end. The project will be monitored by the County's Integrated Environmental Quality Assurance Program for Oil and Gas Projects ("EQAP").
- No more than one week before starting work at the project site and again within one week of completing project work, the environmental monitor will photograph the project area, including the bluff face and beach, and will describe in writing the condition of existing landforms and vegetation.
- The EQAP monitor will maintain a log that includes both written and photographic descriptions of project activities and any observed or potential effects of the project on shoreline habitat. For any adverse impacts caused by project activities, the monitor will note in the log the date, time, location, size and area of impact, the activity contributing to the damage or destruction, and any corrective actions taken. The log will also include descriptions of any spills, releases, or debris that affect coastal waters and the beach area along with a description of the measures taken to address these events. Within thirty days of project completion the monitor will submit to the Executive Director a written report summarizing the above information, and including copies of the log and the pre- and post-construction photographs.
- No fill beyond that described in Section 4.3: Project Description will be placed at the project site without additional written approval of the Executive Director. The bluff face and toe of the bluff slope will not be altered in any way, except in the area where the spill apron will be placed.
- Best Management Practices ("BMPs") for construction activities contained in the California Storm Water Best Management Practices Handbook (March 1993) and any other BMPs recommended by the on-site monitor will be implemented to minimize erosion and limit sedimentation of receiving waters. At a minimum, erosion control measures will be implemented to prevent siltation from stockpiled material and to minimize fugitive dust.
- Construction activities will not occur after dark unless approved by the on-site monitor. All night lighting will be directed towards the project work areas only, in order to minimize the amount of artificial light that illuminates the beach or other habitat areas surrounding the project site.
- During the project, Arguello will have at the project site spill response equipment adequate to respond immediately to a maximum credible spill, including, at a minimum, five bags of sorbent pads (for a total of 200 feet), 20 sandbags, and shovels. If there is a spill or hazardous material release (including oil, fuel, other petroleum products, or any hazardous chemicals), Arguello will immediately contact Coastal Commission staff (Audrey McCombs

at 415-904-5200) and will provide via facsimile (415-904-5400) the daily log that fully describes the incident.

- Equipment will not be refueled on the beach.
- Equipment will be stored off the beach within the Gaviota Terminal facility when not operating on the beach. Impermeable barriers will be placed under the stored equipment to prevent fuel, fluid, or lubricant leaks from contacting the ground. The hydraulic, lubricant, and fuel tanks, hoses, and connections will be inspected daily prior to operation to ensure that no leakage occurs. Any leaks so identified will be repaired prior to operation on the beach.

Because the stream channel was formed within the last year, the stream banks are very steep, and the banks and the mouth of the creek support very little vegetation. The applicant does not anticipate that native vegetation will need to be disturbed or removed during construction, however, the California Department of Fish and Game ("DFG") has included the following requirements in the draft Streambed Alteration Agreement for this project:

> 38. MITIGATION FOR AREAS OF TEMPORARY DISTURBANCE: No more than one acre of habitat within the banks, bed, and channel of the stream and/or riparian habitat shall be temporarily disturbed/impacted due to the proposed operations. Restoration shall include the revegetation of stripped or exposed work areas within the banks, bed, and channel of the stream (including construction areas, access roads, etc.) with native vegetation local to the area at a ratio of 3:1.
>
> 39. MITIGATION FOR AREAS OF PERMANENT DISTURBANCE: No more than one acre of habitat within the banks, bed, and channel of the stream and/or riparian habitat shall be permanently lost due to the proposed operations. Restoration shall include the restoration of a degraded, stripped or exposed area(s) with native riparian and transitional vegetation, local to the drainage, at a ration of 5:1. The location and type of restoration shall be approved by the Department [of Fish and Game]…

Special Condition No. 2 requires that within one week before construction activities begin, an environmental monitor qualified to identify Southwestern pond turtle, shall conduct a thorough inspection of the project site for the presence of the Southwestern pond turtle. Follow-up inspections shall occur the first workday of each week, and additional surveys shall be conducted as deemed necessary by the monitor. At the start of the project, the environmental monitor shall educate construction personnel as to the possible occurrence and identification of Southwestern pond turtle. If the environmental monitor or construction workers within the project site encounter a Southwestern pond turtle, construction shall cease immediately, and the applicant shall notify California Department of Fish and Game ("DFG") staff and Coastal Commission staff. Construction shall not recommence until the recommendations of DFG staff have been implemented.

With these measures in place, the Commission finds that proposed construction activities satisfy the requirements of Sections 30230, 30231 and 30240(b) of the Coastal Act.

5.1.3 Stream Restoration

Section 30231 of the Coastal Act requires that the biological productivity of coastal waters be maintained, and where feasible, restored. This section also requires that adverse affects to water quality be minimized by preventing substantial interference with surface water flow. Currently, the lower reach of Alcatraz Creek flows through a natural, open channel, cut by erosional forces during the storm season of 2004-2005 and capable of supporting riparian habitat. As discussed in Section 4.2: Project Background, above, and in Section 5.2: Flood Control and Fill, below, the applicant worked with agency personnel to develop several alternatives to the project proposed in this permit application. One of the alternatives discussed in detail involved retaining the open, natural stream channel capable of supporting riparian habitat. Because of the location of the forebay facilities and the cultural deposits, however, the applicant and agency staff determined that maintaining an open, natural stream channel was not feasible while protecting both the existing forebay facilities and the cultural deposits.

Agency staff determined that restoring the stream to an open, natural channel capable of sustaining riparian habitat will be feasible once the forebay facilities have been decommissioned and removed. **Special Condition No. 1** requires the applicant to completely remove the development authorized by this permit, and restore the project site to pre-permit conditions (i.e., a natural, open stream channel capable of supporting riparian habitat) as part of the decommissioning of the forebay facilities. The applicant expects the forebay facilities to be decommissioned in approximately 15 years; however, the decommissioning date will depend on the status of future oil and gas development in the area. **Special Condition No. 1** requires the applicant to submit a permit application to remove the development and restore the project site no later than twelve months after the forebay facilities permanently cease operation. The removal and restoration project shall be implemented within such timeframe as shall be specified by the Commission in the course of its review of the removal and restoration project.

Restoration of the upper reaches of Alcatraz Creek is currently being examined as part of the decommissioning of the Gaviota Terminal, anticipated for late 2005 or early 2006. Decommissioning of the Gaviota Terminal is within the County's CDP jurisdiction, but the Commission's appeal jurisdiction pursuant to Section 30603(a) of the Coastal Act. It is the intention of the Commission that approval of this permit shall not preclude restoration of the upper reaches of the stream (on the Gaviota Terminal Facility property) to a natural, unchannelized condition, if that is what is determined to be appropriate as part of the decommissioning of that facility.

5.1.4 Conclusion

For the reasons described above, the Commission finds that the proposed project is consistent with the Coastal Act policies relating to marine resources, water quality, and environmentally sensitive habitat areas (Coastal Act Sections 30230, 30231 and 30240(b)).

5.2 Flood Control and Fill

Coastal Act Section 30236 states:

> *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water*

supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Coastal Act Section 30233 states:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(l) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities…

(d) Erosion control and flood control facilities constructed on watercourses can impede the movement of sediment and nutrients which would otherwise be carried by storm

runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

5.2.1 Coastal Act Section 30236

As described above in Section 4.2: Project Background and Section 4.3: Project Description, the proposed project involves installing a riprap spill apron to prevent scour and serve as an energy dissipation device as part of a flood control project at the mouth of Alcatraz Creek. The project is a response to flooding that occurred at the forebay facilities during the 2004-2005 winter storm season, during which Alcatraz Creek overtopped its banks, causing sheet flow and erosion in the area around the forebay facility. Floodwaters deposited water and entrained sediment in the forebay facilities, damaging equipment essential to the operation of the Gaviota Oil Heating and Transfer Facility. The project as a whole, including those aspects of the project in the County's jurisdiction, is designed to contain the creek's 100-year storm flow and divert it away from the existing forebay facilities (and archeological deposits).

To be consistent with Section 30236 of the Coastal Act, the proposed flood control project must meet three tests. First, there must be no other feasible method for protecting existing structures in the flood plain. Second, such protection must be necessary for public safety or to protect existing development. Finally, the project must incorporate the best mitigation measures feasible.

Project Alternatives

The first test of Coastal Act Section 30236 requires that there must be no other feasible method for protecting existing structures in the flood plain. Commission staff and other agency personnel have worked with the applicant since the rainy season ended to develop the currently proposed flood-control project, to be installed before the 2005-2006 storm season. Factors that were considered during the project design stage include: 1) protecting the existing forebay facilites, 2) protecting the cultural resource deposits, and 3) retaining the stream in its current open, natural condition, so that it is capable of supporting riparian habitat.

Alternatives to the proposed project considered by the applicant and agency personnel include:

- Replacing the collapsed brick culvert with a new, larger culvert;
- Widening the stream channel to handle storm flows, and installing bank erosion control devices such as gabions or sheet pile; and
- Allowing the creek to continue to establish its own channel, without interference (the "no project" alternative).

New culvert

The first alternative considered by the applicant and agency staff would reestablish the creek hydrology essentially as it was before the storm events of 2004-2005. This alternative would replace the collapsed culvert with a new, larger culvert to direct flows in the lower reach of the

stream. The flooding that occurred in 2004-2005 was a result of unusually high sediment loads carried by the stream, that were in turn a result of a fire in the stream's upper watershed. Heavy sediment loads are expected in the stream for the next several years, until the upper watershed revegetates. Controlling the lower reach of the stream with a new culvert would require regular removal of sediment from the creekbed upstream of the culvert. It is unclear whether such removal efforts would effectively prevent the new culvert from becoming clogged. If removal efforts failed and the culvert became clogged, the stream would again flood, with consequences similar to those this project is intended to prevent.

Bank erosion control devices

Several alternatives were developed that involved widening the existing open stream channel to handle storm flows, then installing erosion control devices within the channel to prevent further erosion of the banks. Erosion control devices considered included a gabion mattress and sheet pile. Widening the stream channel to handle the 100-year storm event would involve extensive excavation into the west bank (disturbing cultural resource deposits), the east bank (precluded by the forebay facilities), or both. Exhibit 6 shows how the 2:1 slopes required for an open-channel creekbed would encroach substantially into both the cultural resources deposit (by ten feet or more) and into the forebay enclosure area (by nearly 20 feet). Sheet piles were considered for the sidewalls, to reduce the slope of the channel walls and minimize encroachment into the adjacent archeological resource area. However, installing sheet piles would involve additional noise impacts from driving in the sheet piles. In addition, the sheet piles would extend deeper into the channel area than the proposed project (potentially causing further impacts to cultural resources), would require specially fabricated piles, and would be difficult to remove if/when the channel controls are no longer needed.

"No Project" alternative

Similar considerations apply to the no-project alternative. If the creek is left to cut its own channel, it will continue to scour the banks during high flows, eroding into the forebay area and the cultural resources deposits. Until the stream has eroded a channel large enough to handle winter-season flows, flooding will continue to occur, and will continue to threaten or damage the forebay facilities.

Alternatives analysis conclusion

In developing project alternatives, the applicant and agency staff determined that at this time it is not possible to protect the forebay facilities, protect the cultural resources deposits, **and** retain an open, natural channel capable of supporting riparian habitat. The applicant anticipates decommissioning the forebay facilities in approximately 15 years, and once the forebay facilities are removed agency staff believes that it will be possible to restore the creek to an open, natural channel capable of supporting riparian habitat. The proposed project therefore does not satisfy all three criteria; rather, it satisfies two (protecting the forebay facilities and the cultural resource deposits), and allows for the third (retaining the open, natural stream channel) to be satisfied at a later date. The alternatives to the proposed project would have permanently damaged or destroyed either the forebay facilities or the cultural resource deposits, or both. The Commission therefore finds that the currently proposed project is the best available alternative, and is the only feasible method for protecting the existing forebay facilities.

Project Necessity

The second test of Coastal Act Section 30236 requires that the project be necessary for public safety or to protect existing development. As discussed above, the proposed project is necessary to protect existing development, specifically, the forebay facilities. The forebay facilities are in turn necessary for the operation of the Gaviota Oil Heating and Transfer Facility and three offshore platforms (Hermosa, Hidalgo and Harvest). Without the proposed project, the stream will continue to flood, threatening or damaging the equipment housed at the forebay facilities, and will continue to erode the fill surrounding the facilities, possibly undermining the structures and causing them to collapse.

Mitigation Measures

The final test of Coastal Act Section 30236 requires that feasible mitigation measures have been incorporated into the project. In other sections of this report, the Commission has identified feasible mitigation measures that will minimize the project's adverse environmental impacts. With the imposition of the conditions of this permit, in combination with applicant-proposed measures to avoid or reduce any adverse environmental effects, the Commission finds that the third and final test of Coastal Act Section 30236 has been met.

5.2.2 Coastal Act Section 30233(a)

The applicant proposes to place approximately 1,200 tons of rock riprap at the mouth of Alcatraz Creek. "Fill" is defined in Section 30108.2 as: "… any substance or material… placed in a submerged area," while Section 30233(a)(4) specifies that "open coastal waters" include streams. The proposed project therefore involves the placement of fill in open coastal waters. Section 30233(a) of the Coastal Act requires that any proposed project involving fill in open coastal waters meet three tests. The first test requires the project to fall within one of eight use categories described in Coastal Act Section 30233(a)(1)-(8). The second test requires that there be no feasible less environmentally damaging alternative to the fill. The third test requires the project to incorporate feasible mitigation measures to minimize the project's adverse environmental effects.

Alternatives and Mitigation

The second and third tests of Coastal Act Section 30233(a) require that there be no feasible less environmentally damaging alternative to the proposed project, and that the project incorporate feasible mitigation measures to minimize adverse environmental effects. As discussed above in <u>Section 5.2.1: Coastal Act Section 30236</u> of this report, there is no feasible less environmentally damaging alternative to the project. Furthermore, the project has incorporated feasible mitigation measures that will minimize the project's adverse environmental effects. The Commission therefore finds that the propose project meets the second and third tests of Section 30233(a) of the Coastal Act.

Allowable Use Test

The first test of Coastal Act Section 30233(a) requires that the proposed fill fall within one of eight use categories described in Coastal Act Section 30233(a)(1)-(8). The Commission has in the past interpreted the allowable use categories narrowly. For example, category one allows for fill in open coastal waters as part of a new or expanded energy or coastal-dependent industrial facility. This category does not apply to the proposed project because the proposed project is a riprap spill apron that is part of a new flood-control project. While the proposed project is

intended to protect a facility that is both an energy facility and a coastal-dependent industrial facility, the proposed project itself is not an energy facility or a coastal-dependent industrial facility.

Similarly, category five allows for the placement of fill in open coastal waters for the purpose of maintaining existing intake and outfall lines. While the proposed project is designed to protect existing facilities that house intake and outfall lines, it is not itself a maintenance project involving repair or maintenance work directly on those intake and outfall lines.

The proposed project does not fall into any of the eight categories of uses described in Coastal Act Section 30233(a)(1)-(8). The project therefore fails the first test of Coastal Act Section 30233(a), and is inconsistent with this section of the Coastal Act.

5.2.3 Coastal Act Section 30233(d)

Section 30233(d) of the Coastal Act finds that: "…[F]lood control facilities constructed on watercourses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters." The proposed project will not impede the movement of sediment and nutrients, because the stream channel will remain open and the creek will continue to carry sediments in storm runoff to coastal waters. The proposed project is therefore consistent with Section 30233(d) of the Coastal Act.

5.2.4 Flood Control and Fill Conclusion

The proposed project is consistent with Sections 30233(d) and 30236 of the Coastal Act, but inconsistent with Section 30233(a). The issue thus becomes how to resolve this conflict, as all three Chapter 3 Coastal Act policies are *prima facie* applicable to the proposed project. California Civil Code establishes maxims of jurisprudence to aid in the "just application" of law (CA Civil Code §3509 *et seq*.). Section 3534 states: "Particular expressions qualify those which are general," which in this case requires that the Coastal Act policy addressing a specific type of project be given precedence over a policy that applies to the project only generally.

Section 30233(a) of the Coastal Act addresses projects that involve the diking, filling, or dredging of open coastal waters, including streams. Sections 30233(d) and 30236 address projects that involve channelizations or other substantial alterations of rivers and streams, specifically including flood control projects. The proposed project is a flood control project involving a stream channelization. Therefore, since Sections 30233(d) and 30236 specifically address stream channelizations and flood control, while Section 30233(a) addresses "fill in open coastal waters [including streams]" only generally, relative to Section 30233(a), Sections 30233(d) and 30236 are the more specific policies applicable to the proposed project.

The Commission therefore finds that the proposed project is consistent with the flood control and fill policies of the Coastal Act (Section 30233(d) and 30236). The Commission further finds that, for purposes of determining the ultimate approvability of the proposed project under the Coastal Act, it is appropriate to give precedence to the project's consistency with the more specifically applicable sections 30233(d) and 30236, over the project's inconsistency with the more generally applicable "allowable use" test of Section 30233(a) of the Coastal Act.

5.3 Cultural Resources

Coastal Act Section 30244 states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

5.3.1 Background

During the winter storms of 2004-2005, the deep erosional channel scoured by heavy creek flows exposed and destroyed portions of a previously undetected archaeological deposit (AE-PXP01). Fragments of shell, chipped stone, and (non-human) bone in a buried, dark grey soil matrix were present in both the east and the west erosional exposures. Additional cultural deposits and an apparent hearth (destroyed by subsequent storms) were visible within the channel bottom. Cultural resource monitors noted these materials when observing emergency stabilization work during December 2004 and January 2005.

In February 2005, the applicant conducted excavations at AE-PXP01 to recover data that would otherwise be lost to erosion within the channel bottom, and to evaluate site significance and determine the effects of proposed stabilization measures along the west creek bank. These excavations confirmed that intact site deposits exist along the western erosional bank. Although analysis is still in progress, the site appears to constitute a significant resource, as defined by federal, State, and local regulations.

A second site, AE-PXP02, was discovered during the February 2005 investigation of AE-PXP01. This site is also located within and adjacent to the recently formed erosion channel, and samples were excavated during the investigation. The intact deposits contain a dense assembly of marine shells, fish and land mammal bones, lithic artifacts, fire-altered rock, shell beads, and thick lenses of ash indicative of cooking fires. Two strata containing archaeological remains were observed beneath the modern fill. Like AE-PXP01, AE-PXP02 is assumed to be significant for management purposes.

After discovery of AE-PXP01, a records search was conducted to gather information regarding previous archaeological investigations and known sites in the vicinity. The records search revealed that three recorded archaeological sites are mapped in the immediate vicinity of AE-PXP01, but outside the Alcatraz Creek repair project. CA-SBA-94 lies atop a knoll immediately northwest of Alcatraz Creek; CA-SBA1870 is recorded atop the hill immediately east of the project site; and CA-SBA-2189, a buried site, is located along the northwest margin of the knoll where CA-SBA-94 is recorded. Each of these sites appears to represent substantial habitation deposits and contain a diverse array of cultural material types and zones of dense cultural material. In the case of CA-SBA-1870, these features include human interments. None of these sites will be affected by the proposed project.

5.3.2 Potential Impacts

The proposed project has the potential to cause impacts to cultural resources from excavation on the beach during construction of the riprap spill apron. The spill apron has been designed with a wide base, to minimize the depth of excavations and avoid the possible cultural resource-bearing

strata that may be present at the mouth of the creek. The applicant does not anticipate that excavations will cause adverse impacts to cultural resources. However, to further reduce the likelihood that construction activities will adversely affect cultural resources, the applicant has prepared a *Cultural Resources Monitoring Plan for the Alcatraz Creek Repair and Stabilization Project* ("Monitoring Plan" or "Cultural Resources Monitoring Plan"), attached to this report as Exhibit 7. Section 3 of that Monitoring Plan contains the following monitoring recommendations:

- Excavation activities will be monitored at all times by a qualified archeologist and a Native American observer.
- The archaeological monitor will conduct a pre-construction briefing for site personnel, explaining the monitor's role on site, the types of material of concern, and the protocol for carrying out monitoring. Construction personnel will be advised that collection of artifacts is unlawful.
- The cultural resource monitors will have the authority to, and will immediately halt or redirect work away from any unanticipated cultural resources discovered during excavations. Earth-moving activities will remain suspended in the area of the discovery until the significance of the material can be evaluated. Upon discovery of unanticipated cultural resources, the monitor will immediately notify the following agency and tribal offices: Santa Ynez Band of Chumash Indians, Santa Barbara County, and the Army Corps of Engineers. Construction will not be allowed to resume in the area of the discovery until notice to proceed is granted by the regulatory agencies.
- If materials suspected to be human remains are encountered, all project activities in the vicinity will halt, and the archaeological monitor will immediately notify the Santa Ynez Band of Chumash Indians, Santa Barbara County, the Army Corps of Engineers, and the County Coroner's office.

  California law stipulates that the County Coroner will examine all discoveries of human remains within 48 hours of receiving notice. If the Coroner agrees that the remains are those of a Native American, she is required to contact the California Native American Heritage Commission within 24 hours. Under statute, the Native American Heritage Commission is responsible for immediately notifying the person it believes is the Most Likely Descendant of the deceased Native American. The Most Likely Descendent will consult with the County and the onsite monitors to address final disposition of the remains. No ground-disturbing project activities will be resumed at the burial discovery site until treatment of the remains is concluded, and the onsite environmental coordinator provides confirmation that work may proceed.
- Any artifacts collected by the archaeological monitor during construction will be curated (along with copies of all related documentation) at one of the two qualified facilities within Santa Barbara County: the Repository for Ethnographic and Archaeological Collections at the University of California, Santa Barbara, Department of Anthropology, or the Santa Barbara Museum of Natural History.
- Following completion of construction, a cultural resources monitoring report summarizing the work and results will be prepared and submitted to the County and to the Central Coast Information System, Department of Anthropology, University of California Santa Barbara.

Special Condition No. 3 requires that the applicant comply with all monitoring recommendations contained in Section 3 of the Cultural Resources Monitoring Plan, as summarized above. If unanticipated cultural resources are discovered in the course of construction activities, the environmental monitor shall immediately notify Coastal Commission staff, as well as the agency and tribal offices listed in the Cultural Resources Monitoring Plan. Within 60 days of completion of the project, the environmental monitor shall submit to the Executive Director a final report describing the results of the monitoring activities for the project.

5.3.3 Conclusion

The Commission finds that with the imposition of the conditions of this permit, in combination with applicant-proposed measures to avoid or reduce adverse effects to cultural resources, the proposed project is consistent with the cultural resources policy of the Coastal Act (Section 30244).

5.4 Public Access and Recreation

Coastal Act Section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30211 states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Recreational resources along this stretch of coast include Gaviota State Park and various public accessways from Highway 101 to the beach located on property owned by the California Department of Parks and Recreation. Gaviota State Park is approximately one mile to the west of the project site, and vertical accessways are located approximately ½ mile east and 1 mile west of the facility. Lateral access exists, but is limited along the beach as a result of rocky formations that block access at high tide.

Construction activities will temporarily close the sandy beach at the project site, and will make the beach at that location inaccessible and impassable to the public for approximately two to three weeks. The applicant has agreed to the following mitigation measure to reduce impacts to public access and recreation:

- All construction work affecting lateral beach access will be restricted to weekdays, unless work on the weekends is required by tidal conditions or an unforeseen hazardous situation. The applicant will obtain prior approval from the Executive Director for construction work outside of weekdays.

- Signs indicating the closure of the beach to lateral access will be posted at the primary access points (Gaviota State Park and San Onofre Creek), and at the project site if feasible, at least two weeks prior to commencement of construction activities, and will remain in place until access is restored.

The toe of the spill apron will extend approximately 20 feet (on average) into the upper reaches of the beach, and will cover approximately 1,000 square feet of beach. The applicant estimates that at mid-tide the total beach area is approximately 30,000 square feet (450 x 65 feet). For most of the year, all but approximately two feet of riprap will be below the level of sand. In the winter, sand is eroded from the beach, leaving mostly cobbles. The riprap is somewhat more difficult to negotiate on foot than cobble, but not substantially so. The installation of the riprap spill apron therefore will not substantially alter the usability of the beach for the public. Neither construction activities nor the presence of the riprap spill apron on the beach will affect hiking, biking or equestrian trails, or other recreational activities.

The Commission finds that impacts from construction activities will be temporary, and the applicant has included mitigation measures to reduce impacts to access and recreation from construction activities. Furthermore, the presence of the spill apron on the beach will not substantially alter the usability of the beach for the public. The Commission therefore finds that proposed project is consistent with the public access and recreation policies of the Coastal Act (Sections 30210 and 30211).

6 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The project as conditioned herein incorporates measures necessary to avoid any significant environmental effects under the Coastal Act, and there are no less environmentally damaging feasible alternatives or mitigation measures. Therefore, the proposed project is consistent with CEQA.

APPENDIX A

Substantive File Documents

DOCUMENTS

California Coastal Commission Emergency Permit E-04-018-G.

Draft Initial Study, Alcatraz Creek Erosion Control Project. County of Santa Barbara 05CDP-00000-00076. Published August 23, 2005.

Stevens, Nathan and C. Lebow. *Fieldwork Summary Report, Archeological Studies at the Mouth of Alcatraz Creek, Gaviota Marine Terminal.* Applied Earthworks, Inc. January 17, 2005.

Project Plans. July 13, 2005. 3 Sheets.

Draft Agreement Regarding Proposed Stream or Lake Alteration. California Department of Fish and Game. July 15, 2005.

LETTER CORRESPONDENCE

August 29, 2005. From Antal Szijj, Army Corps of Engineers, to Carl Artopoeus, Arguello, Inc.

June 29, 2005. From Andrew Nelson, Mariposa Environmental Services, to Jeff Lindgren, Santa Barbara County Planning Department. Subject: Alcatraz Creek Erosion Control Project Application Addendum and Design Documentation. With attachments:

- Addendum to Project Description
- Alcatraz Creek Spillway and Shoreline Protection Plan
- Gaviota Beach Photo History
- Project Plans (3 sheets)
- Cultural Resources Monitoring Plan (See Exhibit 7)

May 13, 2005. From Jason Burnett, Shell Pipeline Company for Gaviota Terminal Company, to Jeff Lindgren, Santa Barbara County Planning Department. Subject: Landowner Approval

April 13, 2005. From Andrew Nelson, Mariposa Environmental Services, to Jeff Lindgren, Santa Barbara County Planning Department. Subject: Alcatraz Creek Erosion Control Project Application Addendum and Design Documentation. With attachments:

- Project Description
- Project Plans (2 sheets)

January 19, 2005. From Michael Imwalle, Archaeological Consultant, to John Storrer, Storrer Environmental Services. Subject: Letter Report: Assessment of Brick Drainage Feature – Arguello Alcatraz Creek Spillway Erosion Control Project (04EMP-00000-00006)

January 17, 2005. From Laurence Spanne, EQAP Archeological Specialist, to John Storrer, Storrer Environmental Services. Subject: Cultural Resources Evaluation for Unrecorded Archeological Site Exposed at the Site of the Arguello Alcatraz Creek Erosion Control Project in the Vicinity of Gaviota, Santa Barbara County

E-MAIL CORRESPONDENCE

September 8, 2005. From John Storrer, Storrer Environmental Services, to Audrey McCombs, California Coastal Commission. Subject: Review of CCC Permit Conditions of Approval - Arguello Alcatraz Creek Project

September 6, 2005. From Andrew Nelson, Mariposa Environmental Services, to Audrey McCombs, California Coastal Commission. Subject: Tonnage of Riprap

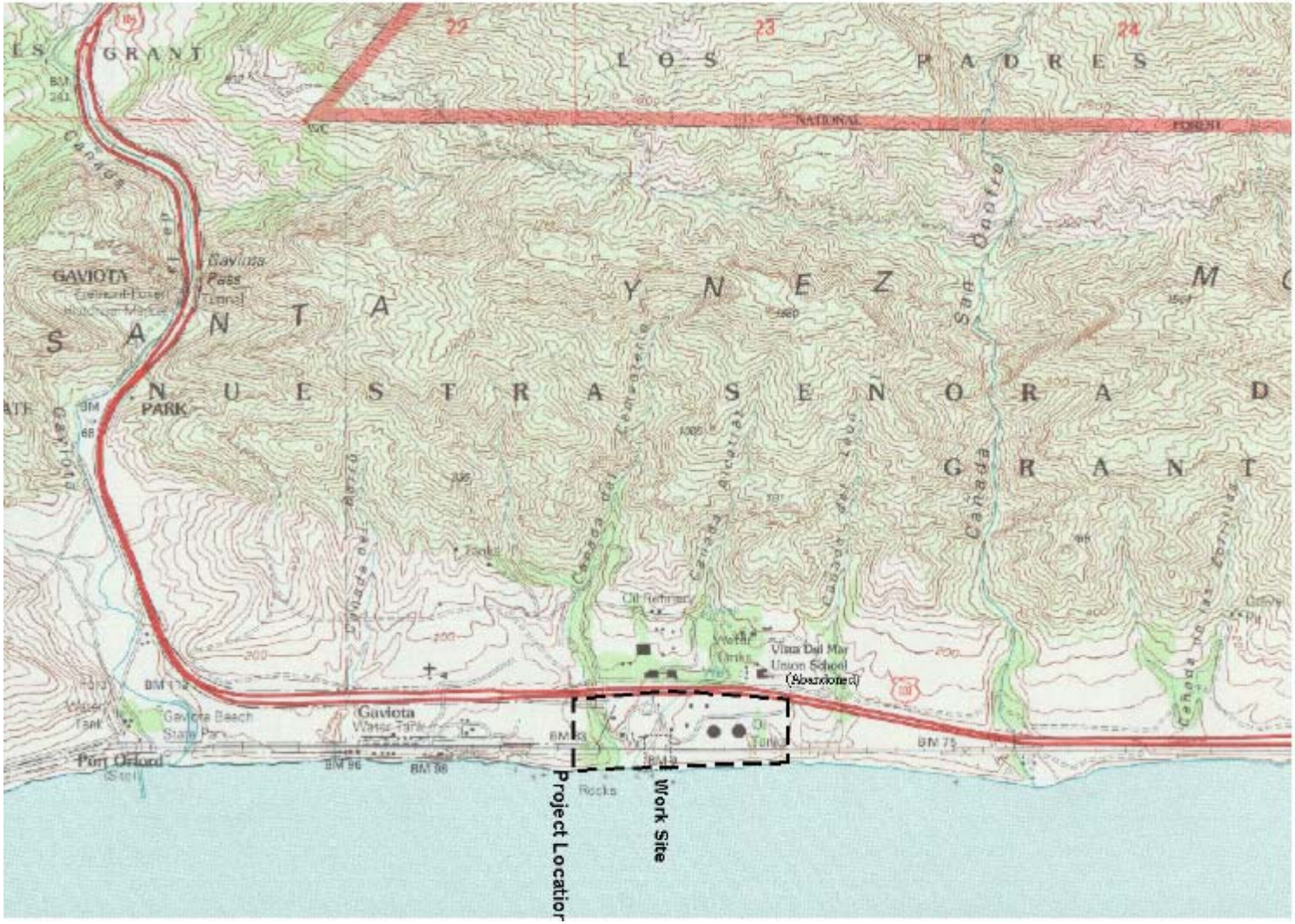

Exhibit 1
Project Location
E-05-010: PXP/Arguello

Exhibit 2

Associated Facilities

E-05-010: PXP/Arguello

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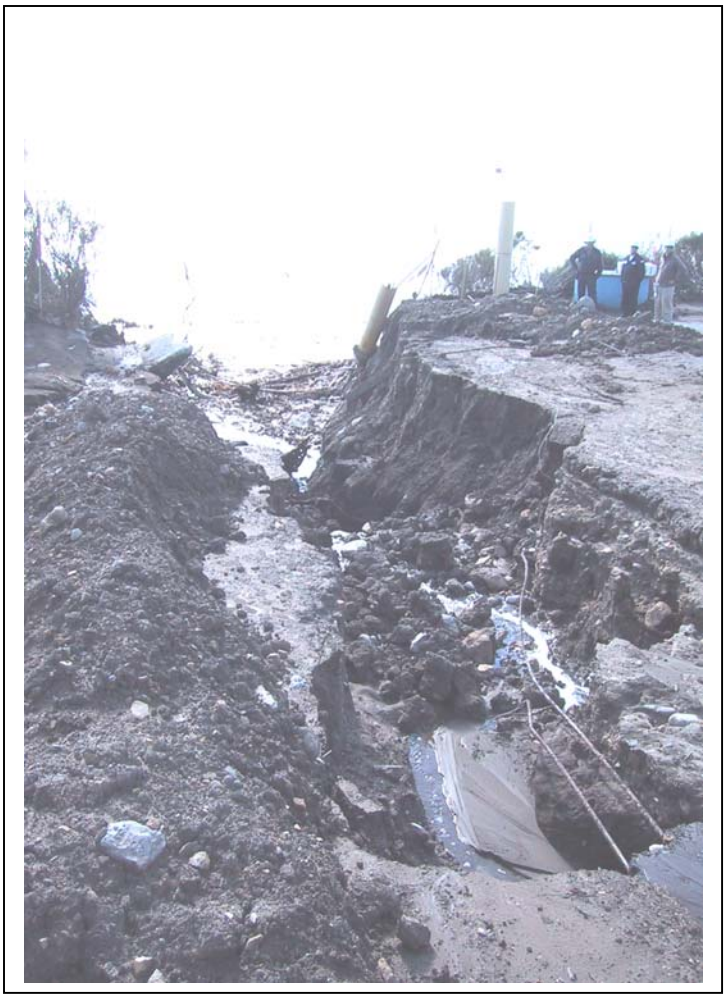
Exhibit 3
Project Site
Pre-Flood Conditions
E-05-010: PXP/Arguello

Top: Sheet flow over fill at the beginning of the flooding

Left: Erosion channel carved by flood waters

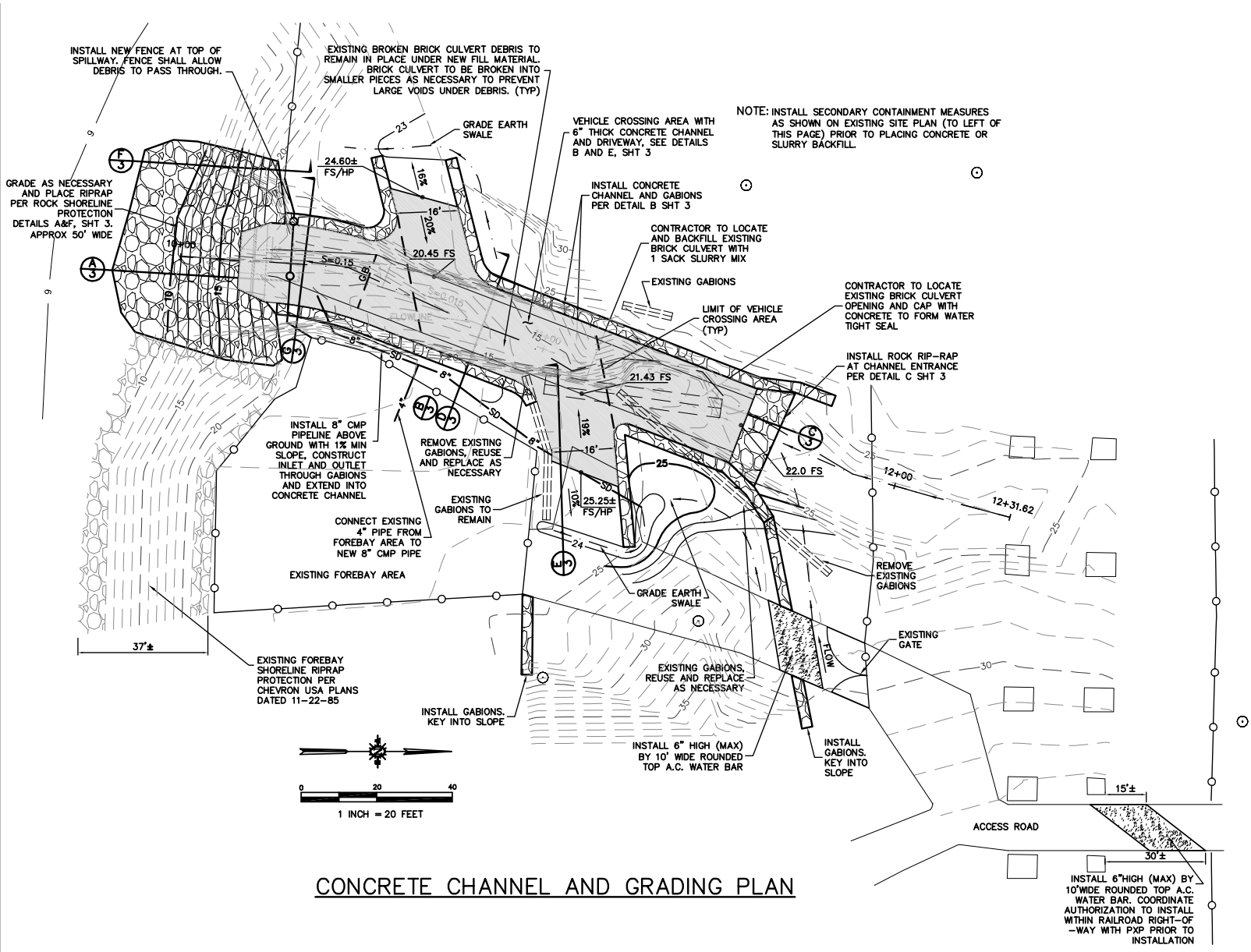
Exhibit 4 Page 1 of 2
Photographs of Flooding
E-05-010: PXP/Arguello



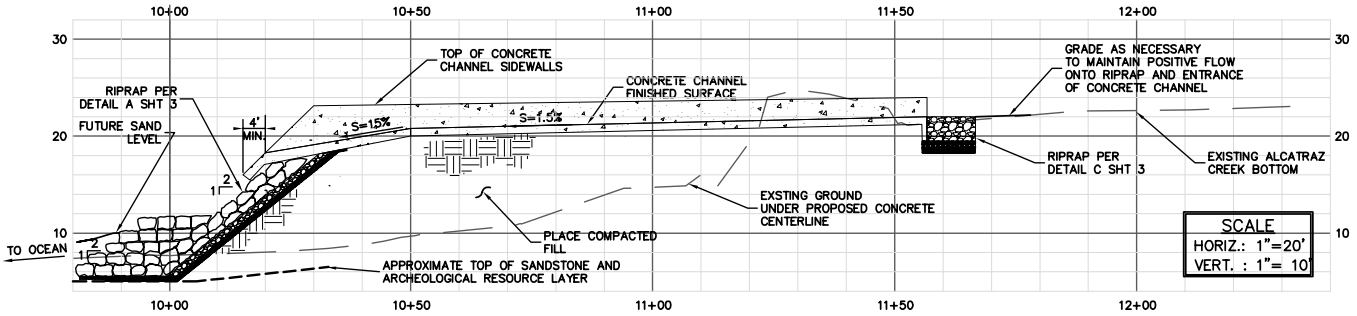
Top: Mouth of Alcatraz Creek (facing north)

Left: Creek Channel (facing south)

Exhibit 4 Page 2 of 2
Photographs of Flooding
E-05-010: PXP/Arguello



CONCRETE CHANNEL AND GRADING PLAN



EXISTING GROUND UNDER PROPOSED FLOWLINE OF CHANNEL

Exhibit 5

Project Plans

E-05-010: PXP/Arguello

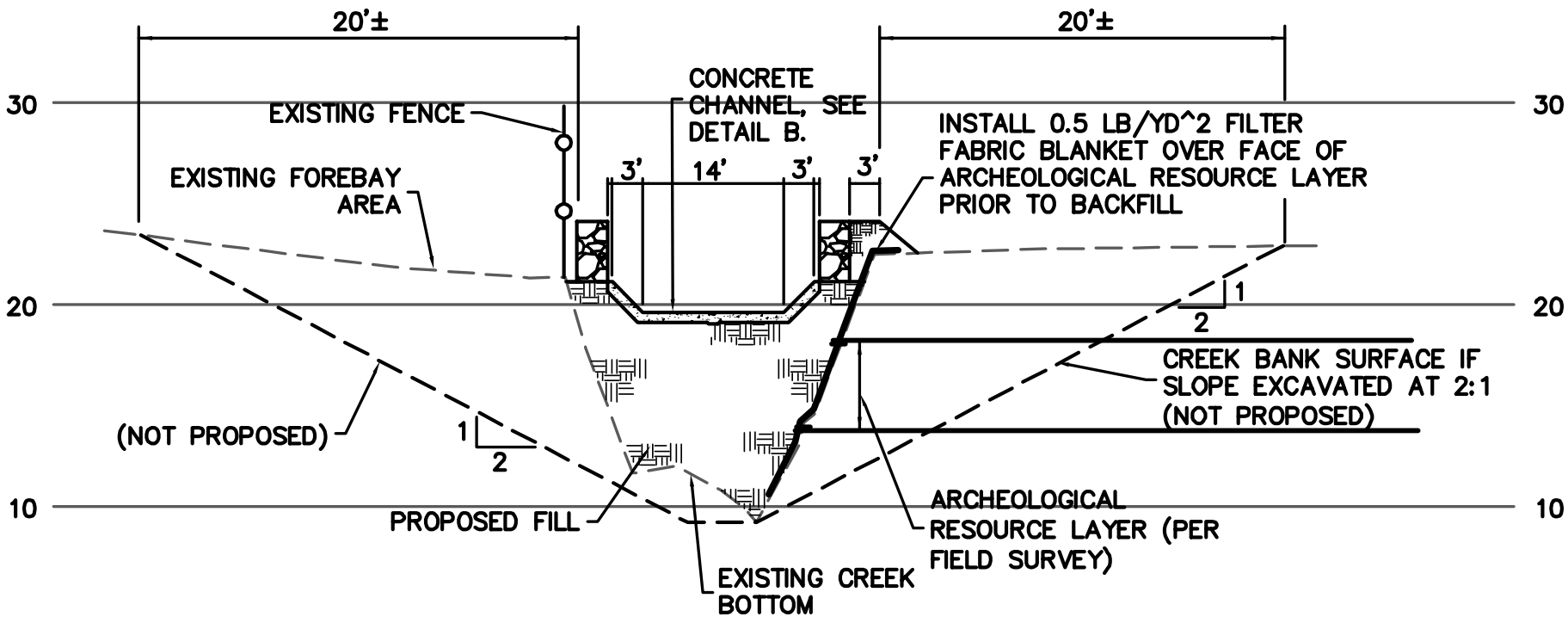


Exhibit 6
Channel/Creek Cross-Section
E-05-010: PXP/Arguello

Cultural Resources Monitoring Plan
for the
Alcatraz Creek Repair and Stabilization Project
Gaviota
Santa Barbara County, California

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June 2005

CONTENTS

1 INTRODUCTION 1
- 1.1 Project Background and Purpose 1
- 1.2 Regulatory Context 6
  - 1.2.1 Local and State 6
  - 1.2.2 Federal 7
- 1.3 Project Description 8
  - 1.3.1 Spillway Construction 8
  - 1.3.2 Rock Riprap 8

2 CULTURAL RESOURCE BACKGROUND 9
- 2.1 Inventory and Status 9
- 2.2 Management Recommendations 10

3 MONITORING REQUIREMENTS 11
- 3.1 Monitoring Organization and Monitor Qualifications 11
- 3.2 Authority to Temporarily Halt Construction 12
- 3.3 Monitoring Documentation 12

4 UNANTICIPATED DISCOVERY PLAN 13
- 4.1 Procedures, Notifications, and Coordination 13
- 4.2 Content for Evaluation and Assessment of Effects 14
  - 4.2.1 Evaluations of Significance 14
  - 4.2.2 Assessment of Effects 16
- 4.3 Standard Investigation Techniques 16
  - 4.3.1 Defining the Distribution of Surface Remains 16
  - 4.3.2 Defining the Extent of Subsurface Deposits 17
  - 4.3.3 Mapping 18
  - 4.3.4 Other Field Procedures 18
- 4.4 Treatment of Human Remains 19
  - 4.4.1 Burial Treatment Policy and Procedure 19
  - 4.4.2 Native American or Other Burial/Cemetery 19

5 REFERENCES CITED 21

FIGURES

1 Project location 2
2 Existing conditions 4
3 Proposed project 5

1
INTRODUCTION

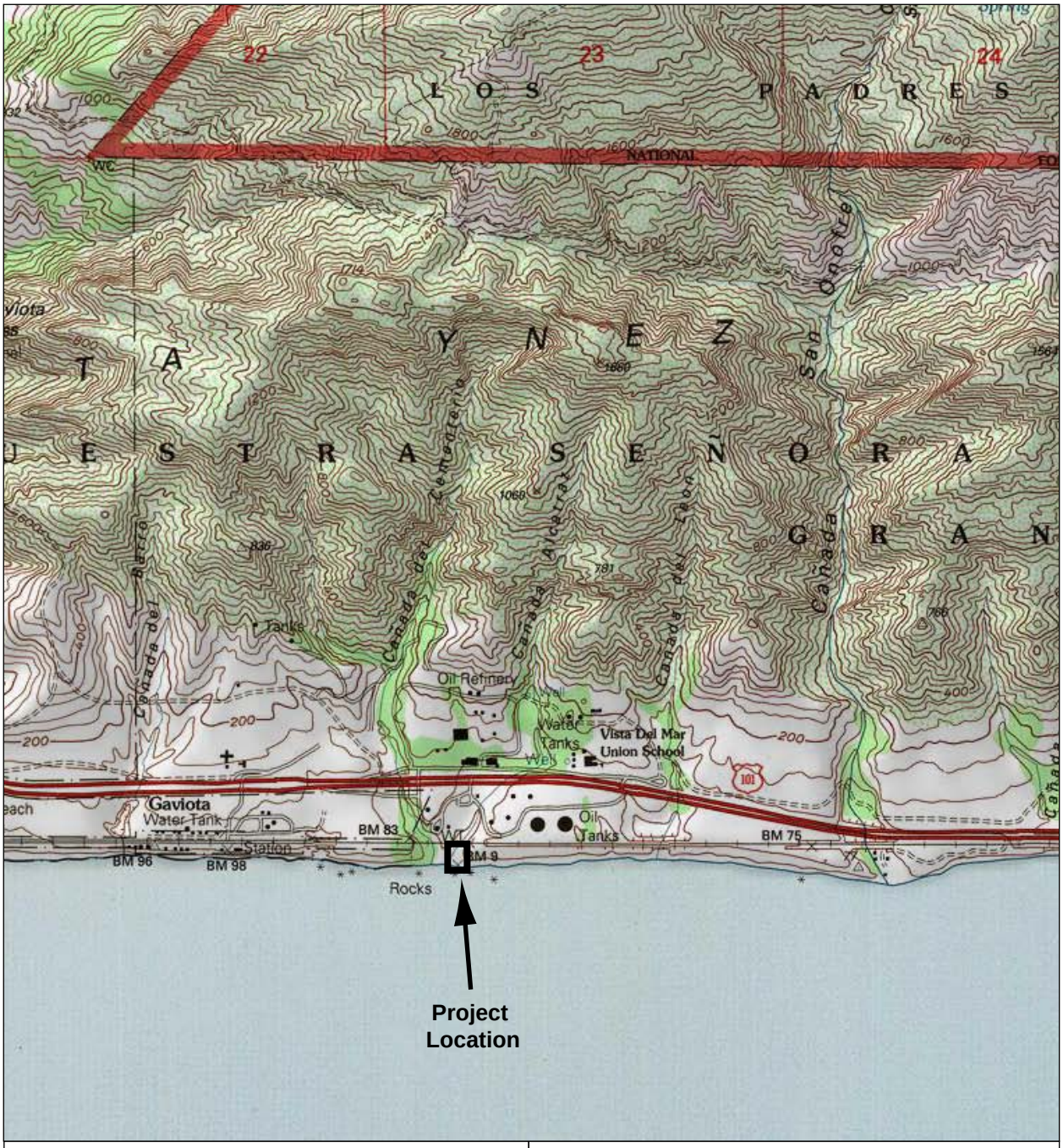
Operators of the Gaviota Oil Heating Facility (and the former Texaco Gaviota Marine Terminal) propose to repair a segment of lower Alcatraz Creek that suffered severe damage during the 2004-2005 rainy season. The project area is at Gaviota in Santa Barbara County (Figure 1), south of Highway 101 and roughly 23 miles west of the city of Goleta. Erosion and sediment deposition endangered critical functions of the Arguello Inc. forebay desalination facility, and exposed and damaged a previously unknown, buried archaeological site (temporary designation AE-PXP01). The site is assumed to be significant and thus potentially eligible for inclusion on federal, state, and local lists. Repair plans are designed to avoid impacts to site deposits, and construction will be monitored by a qualified archaeologist and Native American observer. The proposed plan is intended to be implemented and completed prior to the coming (2005-2006) rainy season, in order to protect operation of the forebay facility and the integrity of the remaining AE-PXP01 site deposits.

This Cultural Resources Monitoring Plan (CRMP) describes requirements for archaeological and Native American monitoring of repair work proposed along the lower reaches of Alcatraz Creek within the Gaviota Oil Heating Facility. In addition to providing a summary of project background and purpose (below), this CRMP (1) summarizes the regulatory context and describes the project; (2) briefly describes the project area's cultural resources and their regulatory status; (3) outlines project cultural resource monitoring requirements; and (4) explains the procedures to be followed should unanticipated cultural resources be encountered during construction.

1.1 PROJECT BACKGROUND AND PURPOSE

The project area encompasses a deep erosional channel that was scoured along lower Alcatraz Creek by heavy rain events during October 2004 through March 2005. The rain events, occurring in the wake of a recent wildfire, caused creek channel erosion, overbank flows, and sediment deposition along the lower reaches of the creek, endangering the Arguello Inc. forebay desalination facility adjacent to the east bank of the creek mouth. The forebay facility is crucial to operation of both the Gaviota Oil Heating Facility (north of Highway 101) and the Gaviota Terminal (south of the highway). Without effective stabilization and repair to the lower creek, the forebay facility remains at risk of damage or destruction during the next rainy season.

The deep erosional channel scoured by heavy creek flows exposed and destroyed portions of a previously undetected archaeological deposit (AE-PXP01). Fragments of shell, chipped stone, and bone in a buried, dark grey soil matrix were present in both east and west erosional exposures. Additional cultural deposits and an apparent hearth (destroyed by subsequent storms) were visible within the channel bottom. These materials were noted by cultural resource monitors observing emergency stabilization work during December 2004 and January 2005.



USGS 7.5 Minute Topographic Quadrangle
Gaviota

N

0.3 0 0.3 0.6

mile / 40-foot contour interval

Figure 1

Project Location

Alcatraz Creek Repair
and Stabilization

Santa Barbara County, California

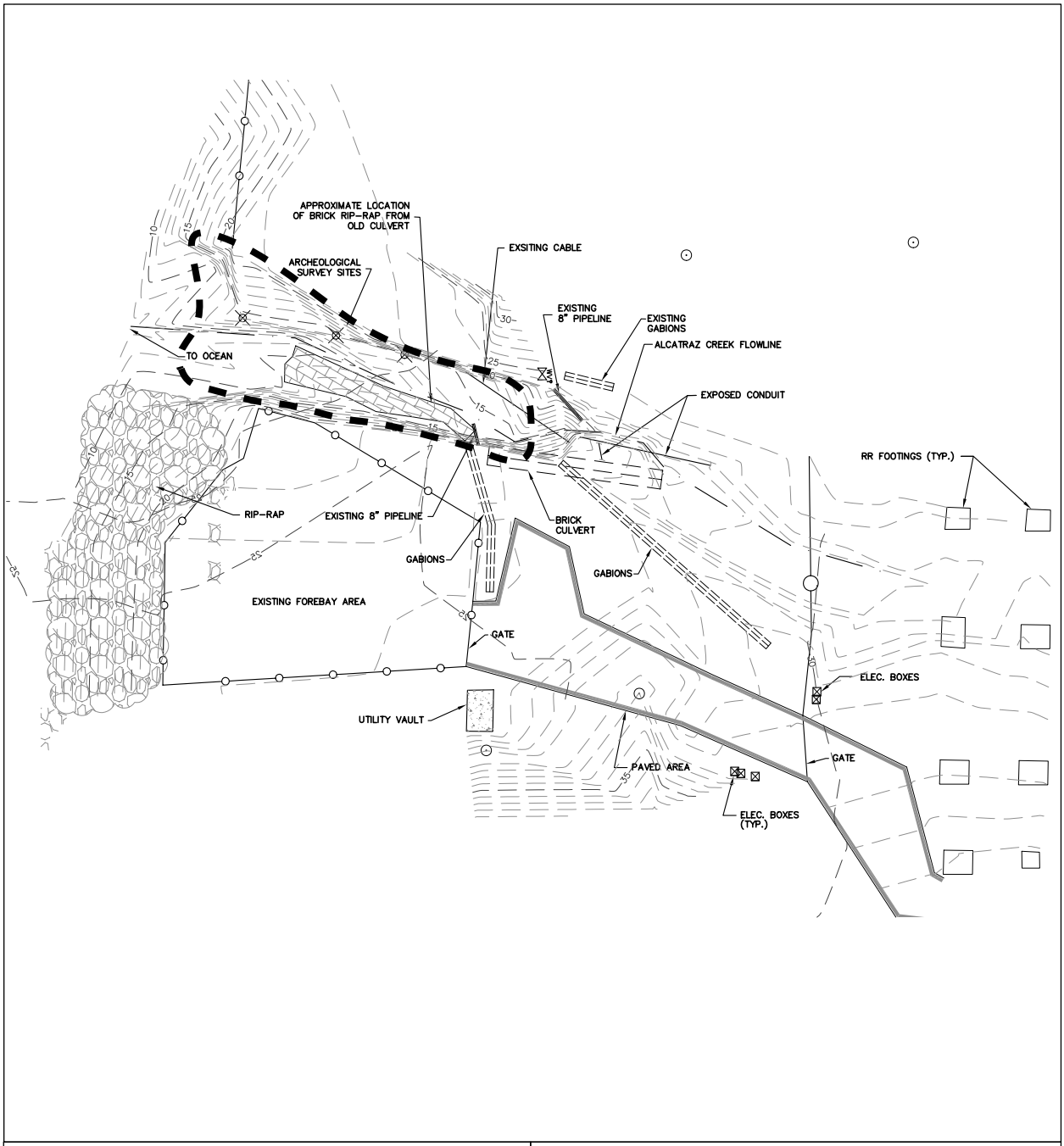
Applied EarthWorks Inc.

The work was conducted under emergency permits issued by the County of Santa Barbara (County) [Case No. 04EMP-00000-00006], California Coastal Commission (CCC) [Emergency Permit No. E-04-018-G], and US Army Corps of Engineers (ACoE) [Regional General Permit 63, File No. 200500260-JCM]. Emergency work included installation of gabions and placement of rock riprap to direct water away from the forebay facility. Observations by the cultural resource monitors (required by County and ACoE permits) indicated that emergency stabilization work did not negatively affect the newly discovered site.

The emergency stabilization measures proved inadequate to withstand later high stream flows, and operators of the Gaviota oil facilities continued to work with regulating agencies to devise effective plans for stabilizing the lower drainage and protecting the forebay facility. Early designs involved use of sheet piling and/or gabions to confine stream flows to the scoured channel. These designs would have involved some small-scale disturbance to site deposits exposed along the channel bottom and western erosional bank. Meanwhile, ongoing rains continued to destroy exposed site deposits. (See Figure 2 for topographic plan view of scoured channel.)

Applied EarthWorks, Inc. (Æ) was retained by Plains Exploration and Production (PXP) to address cultural resource concerns surrounding the development of effective repair measures. Regulatory agencies, including the ACoE, agreed that the site could be assumed to be significant, based on the presence of a diverse array of cultural materials, intact stratigraphic contexts, and at least one feature (the apparent hearth). In February 2005, under the emergency permits and with ACoE and County approval, Æ conducted excavations at AE-PXP01 to recover data that would otherwise be lost to erosion within the channel bottom and to evaluate site significance and determine effects of proposed stabilization measures along the west creek bank. These excavations confirmed that intact site deposits exist along the western erosional bank. Although analysis is still in progress, the site appears to constitute a significant resource, as defined by federal, state, and local regulations.

Proposed repairs to lower Alcatraz Creek are currently in the permitting process. Repairs are intended to be completed prior to the next rainy season, so as to prevent further damage to both the forebay facility and the exposed archaeological site. Repair plans have been modified so as to avoid impacts to AE-PXP01. Briefly, the project is designed so that site deposits exposed in the channel bottom and banks would be draped with protective geotextile fabric, covered with county-approved fill sediment, and capped with rebar-reinforced concrete channel lining. Rock riprap currently protects the seaward face of the forebay facility, east of the creek mouth. The proposed plan would install an additional 50-foot length of rock riprap westward from the existing span, in order to protect the concrete-lined spillway from wave action. (See Figure 3 for plan view of proposed repair work.) The new riprap design has been altered to avoid possible cultural-bearing strata that could be present west of the creek mouth. To ensure avoidance of cultural resources during construction, the work will be monitored by a County-qualified archaeologist and a Native American observer.



Legend

ARCHEOLOGICAL SURVEY SITE

WATER VALVE

SET CONTROL POINT

BENCHMARK

EXISTING FENCE

AE-PXP01 deposit in erosional exposure

0 20 40

1 INCH = 20 FEET

Figure 2

Existing Conditions

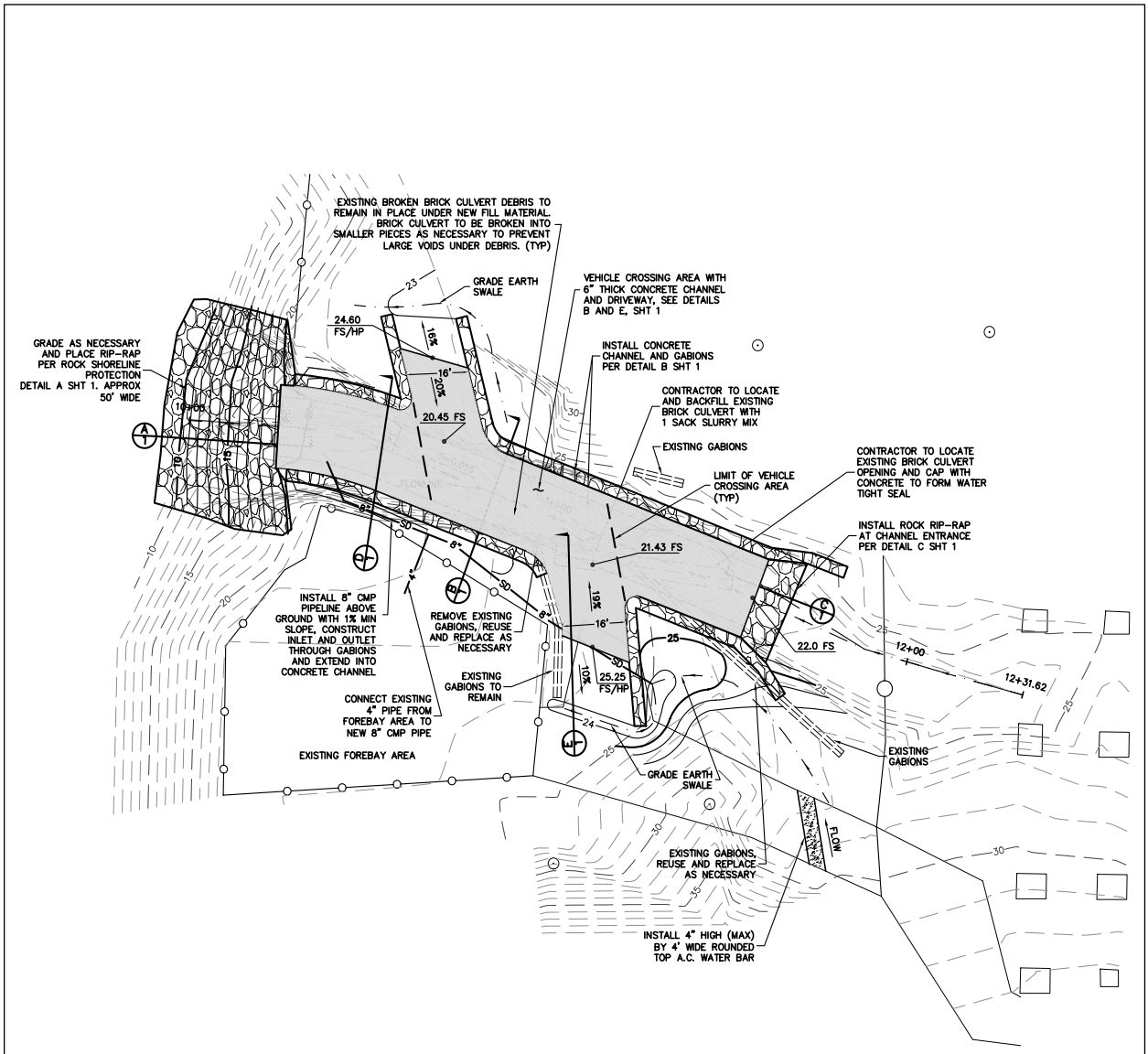
Alcatraz Creek Repair and Stabilization Project

Santa Barbara County, California

Base map source: Cannon Associates (5/10/05)
L. Haslouer, 21 June 2005

Applied EarthWorks Inc

Confidential: Not For Public Distribution



Legend

MINOR CONTOUR	
MAJOR CONTOUR	
EXISTING MINOR CONTOUR	
EXISTING MAJOR CONTOUR	
CREEK FLOWLINE	
ROCK RIPRAP	
CONCRETE	
TYPICAL	(TYP)
HIGH POINT	HP
STORM DRAIN	SD
FLOW LINE	FL
POINT OF CURVE	PC
POINT OF TANGENT	PT
FINISHED SURFACE	FS
EXISTING FENCE	
SET CONTROL POINT	

0 20 40

1 INCH = 20 FEET

Figure 3

Proposed Project

Alcatraz Creek Repair
and Stabilization Project

Santa Barbara County, California

Cannon Associates

Applied EarthWorks Inc

Confidential: Not For Public Distribution

1.2 REGULATORY CONTEXT

1.2.1 Local and State

Repairs to Alcatraz Creek involve permits and approvals at several jurisdictional levels: local (County), state (CCC), and federal (ACoE). In accordance with County implementation of the California Environmental Quality Act (CEQA), a Mitigated Negative Declaration (MND) is being prepared for the Alcatraz Creek repair project. This CRMP is to be incorporated as part of the Environmental Quality Assurance Program (EQAP) for the project, specifically addressing local and state regulatory requirements.

Brief summaries of standard County requirements for similar projects are listed below and are described in greater detail in Section 3. Additional requirements may be included in the project MND and in other County conditions of project approval. All such requirements must be met, and are incorporated here by reference. **For this reason, the project MND and County Conditions of Approval should be attached to this CRMP before it is distributed to field personnel.**

- The Archaeological Monitor will conduct a preconstruction briefing for site personnel, explaining the monitor's role on site, the types of materials of concern, and the protocol for carrying out monitoring.
- Earth disturbing activities will be monitored by a County-qualified archaeologist and a Native American observer.
- The cultural resource monitors will have the authority to and shall immediately halt / redirect work away from any unanticipated cultural resources discovered during earth-disturbing activities. Special procedures are required if human remains are encountered (see Section 4.4).
- Any artifacts collected by the Archaeological Monitor during construction must be curated (along with copies of all related documentation) at one of the two qualified facilities within Santa Barbara County: the Repository for Ethnographic and Archaeological Collections at the University of California, Santa Barbara Department of Anthropology or the Santa Barbara Museum of Natural History.
- Following completion of construction, a cultural resources monitoring report summarizing the work and results will be prepared and submitted to the County and to the Central Coast Information System, Department of Anthropology, University of California Santa Barbara.

The County provides additional guidance for local implementation of CEQA and other state laws and regulations pertaining to cultural resources. Three guidance documents are especially relevant. The County's *Environmental Thresholds and Guidelines Manual* (updated January 1995) outlines County implementation of CEQA requirements and provides guidance for County application of significance thresholds. Section 8 of that document pertains to cultural resources (archaeological, historical, and ethnic elements), outlining the phases of investigation and specific standards (criteria) for evaluating resource significance.

The *Archaeological Element of the Santa Barbara County Heritage Management Plan, Cultural Resources Guidelines* (1986, reissued January 1993) outlines regional research questions pertinent to resource significance evaluation criteria specified by CEQA. These research questions are commonly used to guide development of Phase II (evaluation) and Phase III (data recovery) archaeological investigation plans in the County.

The County's *Regulations Governing Archaeological and Historical Projects Undertaken in Conformance with the California Environmental Quality Act and Related Laws: Cultural Resource Guidelines* (1986, revised January 1993) defines the phasing of archaeological investigations, specifies the qualifications required for key project personnel, outlines methods required for executing each phase of investigation, describes reporting requirements, and specifies requirements for curation of collections and documents.

In addition to the CEQA statute (Public Resources Code [PRC] Section 21000 *et seq*.) and regulations (California Code of Regulations [CCR] Title 14, Chapter 3), several other state laws pertain to archaeological resources and Native American concerns and are incorporated into this CRMP by reference. Among these are several relating to procedures and notifications in the event that Native American human remains are encountered, including California Health and Safety Code (CHSC) Section 7050.5; PRC Section 5097.8; and PRC 5097.99).

1.2.2 Federal

Because ACoE has exercised jurisdiction over Alcatraz Creek repairs, federal laws and regulations are applicable. The primary source of federal guidance regarding cultural resources is Section 106 of the National Historic Preservation Act (NHPA) of 1966 [16 USC 470 *et seq*.] and its implementing regulations [36 CFR 800]. Briefly, Section 106 requires federal agencies to take into account the effect of any undertaking on any district, site, building, structure, or object that is on or eligible for the National Register of Historic Places (NRHP). The Section 106 process requires identification of historic properties (i.e., those on or eligible for the NRHP), assessment of potential adverse project effects on any historic properties, and resolution of adverse effects in consultation with the State Historic Preservation Office (SHPO) and/or, if necessary, the Advisory Council on Historic Preservation.

Emergency repair work conducted in December 2004 and January 2005 occurred under emergency permit issued by ACoE (Regional General Permit 63 for repair and protection activities in emergency situations). Temporary stabilization measures failed shortly after their installation, and design work began immediately to devise an alternative, more effective solution. After discovery of AE-PXP01 during emergency stabilization work, the ACoE agreed that the new site appeared to be a significant resource (potentially eligible for the NRHP). Under this assumed significance, archaeological samples were excavated in February 2005 for the purposes of evaluating site significance and to gather information useful in assessing potential site impacts under preliminary designs being considered at that time. These excavations were conducted under the original emergency permit, after consultation with and approval by the ACoE archaeologist assigned to the project.

Emergency permits have expired; permits for the currently proposed repair work will be non-emergency. The proposed plan avoids impacts to cultural deposits and requires archaeological

and Native American monitoring to ensure this avoidance. However, if resource avoidance cannot be achieved, then ACoE consultation with the SHPO, per Section 106 requirements would likely be necessary.

Other important federal regulations governing cultural resource management include the Archaeological and Historic Preservation Act (AHPA) of 1974 [16 USC 469a *et seq*.]. The AHPA is directed toward the preservation of historic and archaeological data that would otherwise be list as a result of federal construction or other federally licensed or assisted activities. The AHPA Authorizes the Department of the Interior to undertake recovery, protection, and preservation of archaeological or historic data. Under 36 CFR part 800, the AHPA may applied as an alternative to Section 106, under certain types of situations involving unanticipated discoveries.

1.3 PROJECT DESCRIPTION

Proposed repairs to lower Alcatraz Creek entail two main elements: 1) construction of a concrete-lined spillway and vehicle crossing atop a partially filled channel; and 2) installing rock riprap along the beach, extending westward from the existing forebay facility to a point approximately 15 feet west of the spillway outlet. Existing topography for the channel vicinity is shown in Figure 2. See Figure 3 for the proposed placement of project elements.

1.3.1 Spillway Construction

In preparation for channel filling, the existing, below-ground segment of mortared brick drainage culvert flanking the eastern side of the creek will be left in place, filled with slurry, and the ends capped. To accomplish this, recent sediment will be excavated to expose the upstream culvert mouth, debris within the culvert will be cleared, the upstream culvert mouth will be capped with concrete, and the culvert will be filled with slurry. Debris from the collapsed sections of brick culvert will be broken up or removed from the channel as necessary, prior to placement of fill.

Geotextile will be draped along erosional channel sections to protect archaeological site AE-PXP01. County-approved fill material will be placed in the channel and compacted to form contours for the spillway and vehicle crossing. The lower spillway (seaward from the vehicle crossing) will maintain a 15 percent grade downward to the landward edge of the riprap. Gabions will be set into a keyway excavated at the upstream end of the spillway. The contoured channel will be lined with reinforced concrete.

1.3.2 Rock Riprap

The seaward aspect of the low beach cliffs west of the creek mouth are to be cut, filled, and compacted to conform to a 2:1 slope mirroring existing riprap contours. At the base of the cliff, a trench will be excavated to form the footing of the riprap armor. Excavations will be sufficiently shallow to avoid affecting cultural deposits, if any are present below the active beach sands. After lining the trench and dressed slope with geotextile, engineered layers of rock will be laid to form the riprap armor.

2
CULTURAL RESOURCE BACKGROUND

One prehistoric site, temporary designation AE-PXP01, is identified within the Alcatraz Creek repair project area and is assumed to constitute a significant resource. Three additional prehistoric archaeological sites (CA-SBA-94, -1870, and –2189) are recorded in the immediate vicinity of the project area; although none has been formally evaluated, all are assumed to be significant for management purposes. A portion of feature recorded within historic site CA-SBA-1555H was exposed and destroyed by winter storms. An intact portion of this feature still exists and will remain within the northern portion of the project area. This section briefly describes the recorded and newly identified resources within or adjacent to the project area and outlines recommendations for resource management.

2.1 INVENTORY AND STATUS

After discovery of AE-PXP01, a records search was conducted at the Central Coast Information Center, Department of Anthropology, University of California Santa Barbara to gather information regarding previous archaeological investigations and known sites in the vicinity. This background research revealed prior work encompassing portions the project area, including work associated with construction of the Marine Terminal (Cooley et al. 1989), construction of related flow lines (Erlandson et al. 1993), and a monitoring project for Shell/AERA flow line removal (Munns 2000).

The records search revealed that three recorded archaeological sites are mapped in the immediate vicinity of AE-PXP01, but outside the Alcatraz Creek repair project area. CA-SBA-94 lies atop a knoll immediately northwest of Alcatraz Creek; CA-SBA-1870 is recorded atop the hill immediately east of the project area; and CA-SBA-2189, a buried site, is located along the northwest margin of the knoll where CA-SBA-94 is recorded (along Cementerio Creek). Each of these sites appear to represent substantial habitation deposits contain diverse array of cultural material types and zones of dense cultural material. Temporally diagnostic artifacts and a small number of radiocarbon and obsidian hydration dates indicate activities at these sites occurred during a broad time period spanning the Middle and Late periods of prehistory. Although these sites have not been formally evaluated for federal, state, or local listing, Cooley et al. (1989:vii) indicate that they appear significant and "worthy of preservation."

The records search also identified one historic archaeological site recorded within the project area. CA-SBA-1555H comprises deposits and features associated with the late 1890s development of Alcatraz Landing by the Alcatraz Asphalt Company. The facility included an asphalt processing plant and associated infrastructure, a wharf, and worker housing and support structures. Eight historic loci are identified on the site record form, including a channelized creek segment, structural footings / foundations; trash deposits, and three mortared brick features: a bridge, a drain, and a buried culvert installed to contain the flow of the lower and middle reaches of Alcatraz Creek. The seaward portion of the mortared brick culvert was exposed and destroyed by the high creek flows that prompted the need for the creek repair project (Imwalle 2005).

The recently discovered site AE-PXP02, is located within and adjacent to the recently formed erosional channel. Samples were excavated during an investigation by Applied EarthWorks in February 2005. The intact deposits contain dense marine shell, fish and land mammal bone, lithic artifacts, fire-altered rock, shell beads, and thin lenses of ash indicative of cooking fires. The site's depositional history includes a combination of alluvuim and colluvium (from adjacent hill slopes). Two strata containing archaeological remains were observed beneath the modern overburden, with a combined thickness of about 150-160 centimeters. Preliminary indications suggest the presence of Late Period site activities. AE-PXP02 is assumed to be significant and thus potentially eligible for federal, state, and local listing.

2.2 MANAGEMENT RECOMMENDATIONS

One prehistoric archaeological site, AE-PXP01, is within the Alcatraz Creek repair project area but has not undergone formal significance evaluation. This site is assumed eligible for federal, state, and local register listing. Avoidance of impacts to this resource is called for in project plans, and is required by regulating agencies.

If project constraints dictate that avoidance of intact archaeological deposits cannot be accomplished, several steps will be necessary before work would be allowed to proceed. Consultation with SHPO would likely be needed (requiring up to 90 days for review by that office). Regulatory agencies normally require additional testing in order to clarify the relationship of site deposits to project impacts and to evaluate site importance relative to federal, state, and local criteria. Resource evaluation would be conducted in compliance with applicable laws and regulations at all levels of jurisdiction. If archaeological deposits subjected to assessment of importance are evaluated as significant and cannot be avoided, additional data recovery work (normally including excavation of samples, analysis, and reporting) will be necessary in order to mitigate project impacts.

Monitoring requirements and procedures for the treatment of unanticipated discoveries are discussed in greater detail in the following sections.

3
MONITORING REQUIREMENTS

Cultural resources monitoring during construction is intended to ensure that project activities avoid known and previously undetected cultural resources that could be impacted during construction. If unanticipated discoveries are encountered, procedures outlined in Section 4 would be implemented. Archaeological and Native American monitoring is required for all project activities that involve disturbance to native soils.

3.1 MONITORING ORGANIZATION AND MONITOR QUALIFICATIONS

The project's EQAP will be directed by the Onsite Environmental Coordinator. The cultural resource monitoring program will be directed by the Lead Project Archaeologist who will also coordinate Native American project participation and will be responsible for: (1) ensuring that Native American Monitors are available as necessary, (2) acting as the project's point of contact for Native Americans interested in the project, and (3) coordinating information such as discoveries of human remains or previously unknown cultural resources.

Prior to commencement of project activities the Archaeological and Native American Monitors, in coordination with the Onsite Environmental Coordinator, will hold an educational workshop. The purpose of this meeting will be to inform project personnel of the project's cultural resource requirements, including the prohibition of unauthorized artifact collection and the requirement that work be halted if unanticipated cultural materials are encountered during project activities.

Construction tasks requiring monitoring will be observed by both Archaeological and Native American Monitors. Archaeological Monitors will have appropriate education and experience, as required by the County of Santa Barbara's *Regulations Governing Archaeological and Historical Projects Undertaken in Conformance with the California Environmental Quality Act and Related Laws: Cultural Resource Guidelines* (1993). On a regular basis, the Archaeological and Native American Monitors will provide updates to the Onsite Environmental Coordinator.

For unanticipated discoveries encountered during construction, the Archaeological and Native American Monitors will report to both the Onsite Environmental Coordinator and the Lead Project Archaeologist (see discussion of discoveries in Section 4). The Lead Project Archaeologist will ensure that the Onsite Environmental Coordinator is informed of such discoveries and will provide updates regarding the status of further investigations (if necessary) to assess such finds. The Native American Monitor will be responsible for reporting unanticipated discoveries to the Monitoring Coordinator for the Santa Ynez Band of Chumash Indians.

3.2 AUTHORITY TO TEMPORARILY HALT CONSTRUCTION

Archaeological and Native American Monitors have the authority to temporarily stop construction in the event that unanticipated archaeological deposits are suspected. If the Archaeological Monitor quickly determines that the suspected deposits are not potentially significant (for instance, if the deposit is not cultural, is less than 50 years old, or is not in an original context), the monitor can allow construction to proceed without notifying the Lead Project Archaeologist or Onsite Environmental Coordinator.

If the Archaeological Monitor cannot quickly make a decision concerning the suspected archaeological deposit or if additional assessment and treatment is necessary, the monitor will notify the Onsite Environmental Coordinator and Lead Project Archaeologist of the potential discovery. Project earthmoving activities will remain suspended in the area of the discovery until the significance of the material can be satisfactorily evaluated. If necessary, the Archaeological Monitor may install flagging tape or exclusionary fencing to ensure that project activities are excluded from the vicinity of the find.

3.3 MONITORING DOCUMENTATION

The Archaeological Monitor will complete a Daily Monitoring Log for each monitoring day. Minimally, this report will document the location and activities monitored and, if appropriate, archaeological discoveries or noncompliance activities. Noncompliance activities include actions contrary to recommendations in this CRMP (e.g., failure to halt at the request of a monitor, unauthorized artifact collecting by project personnel, work outside the defined project area, or encroachment into an exclusion zone). These forms will be maintained and available for examination on request by the Onsite Environmental Coordinator.

Upon completion of all archaeological monitoring, the Lead Project Archaeologist will coordinate completion a final report describing results of the archaeological monitoring activities for the project. This report will be submitted to the Onsite Environmental Coordinator, the county, the Santa Ynez Reservation Monitor Coordinator, and the Central Coast Archaeological Information Center at the University of California, Santa Barbara.

4
UNANTICIPATED DISCOVERY PLAN

Although design of the stabilization and repair work for Alcatraz Creek has focused on avoiding impacts to archaeological resources, it is possible that unanticipated cultural deposits associated with the recently discovered buried site AE-PXP01 may be encountered during construction. This deposit is currently assumed to be significant under federal, state, and local regulations. As a result, if impacts to the deposit cannot be avoided, additional excavations to assess project effects would likely be required before construction could proceed.

This section describes procedures designed to allow timely assessment and treatment of unanticipated discoveries. The plan covers procedures for notification and coordination with agencies and Native Americans; a context for evaluation and assessment of effects; techniques for defining and evaluating archaeological resources and for treating significant cultural resources that will be affected by project activities; and an overview of policies regarding treatment of human remains.

4.1 PROCEDURES, NOTIFICATIONS, AND COORDINATION

Although the archaeological or Native American monitors are most likely to discover cultural resources, if other construction personnel observe possible cultural remains, they must immediately notify the Archaeological Monitor (or the Onsite Environmental Coordinator, if one is designated for this project).

Upon observing potential cultural materials, archaeological and Native American monitors (or any environmental inspectors) have the authority to temporarily halt construction in the discovery area (see Section 3.1.2). The archaeologist will quickly investigate to determine whether the observed materials are cultural and potentially significant. If the materials are clearly non-cultural, the archaeologist can allow construction to proceed.

The archaeological monitor may determine that the find is cultural but holds limited data potentials and does not appear significant relative to federal, state, or local criteria. An example of a cultural item lacking significance might be an isolated flake, shell fragment, or other artifact found in disturbed fill. In such an instance, the archaeologist would allow construction to proceed and would record the incident and location in the Daily Monitoring Log.

If, however, the unanticipated discovery is confirmed as cultural and as potentially significant, construction in the immediate vicinity will be suspended and the Archaeological Monitor will mark an appropriate exclusion zone to prevent damage or further disturbance to the discovery. The monitor will notify key onsite personnel (including the Onsite Environmental Coordinator, Native American Monitor, and the construction supervisor) and the Lead Project Archaeologist. The discovery and its location will be described on the Daily Monitoring Log. Project activities in the vicinity of the discovery area (as marked by the Archaeological Monitor) will remain suspended pending evaluation of the discovery and assessment of project impacts.

As soon as possible after the discovery, the Lead Project Archaeologist will provide notification to project contacts at the following agency and tribal offices:

- Monitoring Coordinator, Tribal Elders Council, Santa Ynez Band of Chumash Indians
- Coordinator, Environmental Quality Assurance Program (EQAP)
- Project Planner, Energy Division of Planning and Development Department, County of Santa Barbara
- Project Archaeologist, Army Corps of Engineers, Los Angeles District

The Lead Project Archaeologist will evaluate the significance of the discovery and potential adverse project effects, using techniques described below (Section 4.3). The Lead Project Archaeologist will be a professional archaeologist who meets the requirements specified by and the Secretary of the Interior and the County.

After the discovery has been evaluated, the Lead Project Archaeologist will prepare a written report of the discovery. Documentation will include information on the deposit location, methods used during evaluation, data potentials, integrity, evaluation significance and adverse project effects, and management recommendations. This report will be provided to the same agency and tribal contacts who were originally notified. If the discovery is found to be non-significant, construction in the vicinity of the find will be allowed to resume after notice to proceed is granted by the regulating agencies.

If the discovery is significant and cannot be avoided during the remaining repair and stabilization activities, archaeological mitigation / data recovery excavations will likely be required before work in the area is allowed to proceed. Construction will be allowed to resume in the discovery vicinity only after notice to proceed is granted by the regulating agencies. Construction may be allowed to proceed after data recovery field work is completed but before analyses and reporting are complete.

4.2 CONTEXT FOR EVALUATION AND ASSESSMENT OF EFFECTS

4.2.1 Evaluations of Significance

Cultural resource guidelines associated with Section 106 of the NHPA, CEQA, and the County require evaluation of cultural resource significance to be conducted with respect to site integrity, research potential, and public benefits. Resource evaluations are based on criteria specified by the regulations.

Under CEQA, a cultural resource is “historically significant” if it is eligible for listing on the California Register of Historic Places (CRHP) (CCR Title 14 Section 4852; PRC Section 5024.1). A site is eligible for listing on the CRHP if it is:

(A) Associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

(B) Associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield information important in prehistory or history [CCR Section 15064.5].

The CEQA also requires consideration of importance using local criteria, if they exist. For the decommissioning project, criteria for evaluating the significance of archaeological resources are found in the *Santa Barbara County Environmental Thresholds and Guidelines Manual*, Section 8: Cultural Resources Guidelines, Archaeological, Historical, and Ethnic Elements (1995). An important archaeological resource can be defined by one of several criteria:

(A) Is associated with an event or person of

1. Recognized significance in California or American history; or

2. Recognized scientific importance in prehistory.

(B) Can provide information which is of both demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions.

(C) Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind.

(D) Is at least 100 years old and possesses substantial stratigraphic integrity; or

(E) Involves important research questions that historical research has shown can be answered only with archaeological methods.

Evaluation criteria established by the NHPA are very similar to those discussed above for CEQA. Under the NHPA, a cultural resource is significant if it is eligible for listing on the National Register of Historic Places (NRHP) (36 CFR part 63). A site is eligible for listing on the NRHP if it:

(A) Is associated with events that have made a significant contribution to the broad patterns of our nation's history;

(B) Is associated with the lives of persons significant in our past;

(C) Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

(D) Has yielded, or may be likely to yield information important in prehistory or history.

In addition, assessments of eligibility under Section 106 must establish an historic context for the research, demonstrate the importance of research questions that may be addressed, establish the presence of data adequate to address these research questions, and demonstrate that the resource retains a level of integrity sufficient to contribute to our knowledge.

Criteria for evaluating the significance of historic architectural resources are found in the Santa Barbara County *Cultural Resources Guidelines, Historic Resources Element* (1993). Inventory investigations in support of the decommissioning project would have identified important architectural resources if they existed within the project area.

Cultural resources that might not be identified during inventories are historic and prehistoric archaeological sites obscured from view because of thick vegetative cover or because they are buried beneath the surface. Archaeological sites are typically evaluated in the context of their potentials to provide information important to our understanding of history or prehistory. These data potentials are evaluated against research issues developed in the *Archaeological Element of the Santa Barbara County Heritage Management Plan, Cultural Resources Guidelines* (1993). These research issues are incorporated by reference into this CRMP as guidance for evaluations of unanticipated discoveries encountered during decommissioning project activities. Briefly, important prehistoric research topics include subsistence, technology, social organization, religion and ideology, trade or economic exchange, population size, natural environment, chronological sequences, site structure and depositional processes, artifact functions, and site functions.

4.2.2 Assessment of Effects

If a cultural resource is determined "historically significant" (i.e., eligible for the NRHP, CRHR or local listing), project effects on the cultural resource must be assessed per applicable statutes and regulation. If, after discovery, construction activities have altered or are likely to alter the data potentials that make the site significant, appropriate treatment to mitigate the effects must be designed and implemented.

4.3 STANDARD INVESTIGATION TECHNIQUES

Guidance regarding the methods and procedures used during archaeological investigations within the County of Santa Barbara is contained in the County's *Regulations Governing Archaeological and Historical Projects Undertaken in Conformance with the California Environmental Quality Act and Related Laws: Cultural Resource Guidelines* (1993). This section briefly outlines the methods and procedures to be employed during examination of archaeological deposits discovered during decommissioning project activities. Data on site structure, cultural content, areal extent of cultural material, the relationship of cultural deposits and/or features to the project area, and the integrity of each site and its setting are required to evaluate site significance and potential project effects on cultural deposits within the project area. Information on the depth of cultural deposits, the stratigraphy and depositional history of the site, the kinds and densities of subsurface cultural remains, and the integrity of subsurface deposits are crucial to site evaluation relative to the CRHR and local listing criteria.

Standard archaeological methods and procedures will be employed, including documentation of exposed surface remains, surface collection of diagnostic items, definition of the extent and nature of subsurface deposits, and site mapping. Standard techniques that may be employed are defined and discussed below.

4.3.1 Defining the Distribution of Surface Remains

Surface Inspection. The surface of each archaeological site will be intensively examined to locate visible features, artifacts, and other cultural debris. Intensive survey will employ pedestrian transects spaced at 2–5 meter intervals.

Surface Collection, Point-Provenienced (SCP). During intensive surface inspection of a site, all time-sensitive and functionally diagnostic artifacts (e.g., projectile points, milling tools) will be flagged and collected. Point-provenience with respect to the site datum will be established using a transit or compass and metric tape.

Surface Test Unit (STU). Surface test units may be used to determine the presence or absence of surface cultural materials in heavily vegetated settings, to establish the horizontal dimensions and distribution of surface deposits, and to gauge the potential for subsurface cultural remains. Surface test units are 1 by 1 meter square and are excavated to a depth of 10 centimeters below surface. Duff or vegetation covering the ground surface is removed and screened prior to excavation so that 10 centimeters of sediment can be examined. All collected material will be saved in a single bag labeled with content, unit provenience, and screen size.

4.3.2 Defining the Extent of Subsurface Deposits

Shovel Test Pit (STP). Shovel test pits are employed to establish the presence or absence of cultural material at near-surface depths and to determine the horizontal distribution of subsurface materials. Shovel test pits will be a maximum of 50 centimeters in diameter, excavated in 20-centimeter arbitrary levels. All collected material will be bagged by level and labeled with content, unit/level provenience, and screen size. A Shovel Test Pit Record documenting the location, sediment description, and artifacts recovered is completed for each shovel test pit excavated.

Auger Probe (AUG). Augering is a relatively quick means of testing subsurface deposits; it is particularly useful where the sediments are not rocky or overly compact. Augering also is useful for testing very deep deposits. The Lead Project Archaeologist will decide which of three sizes (8, 10, or 20 centimeters) will be used. All auger probes will be excavated in 20-centimeter levels. An Auger Record is used to document auger excavations.

Sondage (SON). Sondages are 50 by 50 centimeters squares excavated in horizontal 10-centimeter levels. At sites with very rocky or compact sediments, sondages are an efficient means of sampling. Observations on each excavation level are recorded on a Sondage Record. Excavating a sondage more than 90–100 centimeters deep is difficult and, if cultural materials are present at deep levels, additional excavation with an auger may be necessary.

Test Excavation Unit (TEU). Test units excavated using a Manual Rapid Recovery (MRR) technique are a cost-effective means of exposing stratification and retrieving subsurface cultural material. This technique entails removal of sediments in 10-centimeter arbitrary levels with a shovel. Test excavation units are 1 by 1 meter square; each level thus has a standard volume of 0.1 cubic meter. Collected materials are bagged by unit, level, and screen size, and labeled with provenience data. California Occupational Safety and Health Administration (OSHA) regulations restrict the depth of test excavation units to 150 centimeters, at which point shoring or other safety precautions must be employed. Augering may be employed to continue investigation of test excavation units that contain cultural material below 150 centimeters.

Auger Probe within Shovel Test Pit, Sondage, or Test Excavation Unit (SHX, SOX, or TEX). Auger probes may be placed at the bottom of selected shovel test pits, sondages, and/or test excavation units to confirm that culturally sterile sediments are present below the final excavation level or to ascertain the maximum depth of cultural materials. Sediments from auger probes within shovel test pits, sondages, or test excavation units will be removed in 20-centimeter arbitrary levels. All collected material is bagged by level and labeled with unit and level provenience.

4.3.3 Mapping

Site mapping will be done from a primary datum, or from subdatum points established for mapping purposes. All subdatum points will be located and mapped with respect to the primary datum. The mapping datum for surface test units, sondages, and test excavation units is the northwest corner of the unit. Other data to be mapped include point-provenienced cultural materials, shovel test pits, surface test units, sondages, auger probes, test excavation units, and cultural features such as hearths, pits, and bedrock mortars. Natural landscape features (e.g., topographic relief, drainages, vegetation patterns) also are mapped. For this project, all field maps will be made using a transit or compass and metric tape.

4.3.4 Other Field Procedures

Screen Size for Excavation Units. The Lead Project Archaeologist shall determine appropriate screen sizes to be employed at a particular site. Sediments may be screened through 1/4-inch, 1/8-inch, or 1/16-inch mesh depending on the nature of the site sediments and cultural materials and potential for microconstituents.

Geoarchaeology. A geoarchaeologist may examine selected sites and collect data on depositional contexts and environments, landform stability, site stratigraphy, and related issues important for evaluation of site integrity and significance. The geoarchaeologist will examine exposed profiles and will describe the major sediments and soil units at each investigated site. Stratigraphic profiles will be recorded for at least one wall of each test excavation unit. Each profile will include the site designation, unit number, and orientation of the exposure. For each stratum, soil color (Munsell code and descriptor), texture, structure, and inclusions (natural and cultural) will be described; contacts between strata also will be described and mapped.

Photodocumentation. Photographs (both 35-millimeter and digital) will be used to record site overviews, aspects of the site setting and topography, locations of excavation units, cultural features, and stratigraphic profiles. All film will be labeled with the project name and roll number. Photographic logs will be kept for each roll of film or disk of digital photos, recording the date, time, exposure number, subject, site, unit and level (if appropriate), and direction.

Cultural Resource Records. Upon completion of each site investigation, State of California Department of Parks and Recreation cultural resource record forms (DPR 523A–523L, as appropriate) will be prepared for submission to the Central Coastal Archaeological Information Center at the University of California, Santa Barbara. Site maps and descriptions will reflect the findings of all surface and subsurface investigations.

Artifact Analysis and Curation. Materials collected during site investigations will be processed at an appropriate archaeological laboratory. Any special studies or other analyses required to assess the data potentials and integrity of the site also will be undertaken. All collected artifacts, samples, and field notes will be curated at the Repository for Archaeological and Ethnographic Collections, Department of Anthropology, University of California. Interested Native Americans will be offered the opportunity to conduct a final precuration inspection.

4.4 TREATMENT OF HUMAN REMAINS

Ground-disturbing project activities in the immediate vicinity of discovered human remains must be halted immediately to comply with Section 7050.5 of the California Health and Safety Code.

4.4.1 Burial Treatment Policy and Procedures

It is common policy to treat in a respectful manner any human remains that may be encountered during construction and to respect the sensitivity and concerns of contemporary Native Americans should such remains be discovered during excavations. If human remains, with or without associated grave goods, are discovered during project activities, they will be treated pursuant to Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the PRC.

If materials suspected to be human remains are encountered, all project activities in the vicinity will halt and the Archaeological Monitor will immediately notify the Onsite Environmental Coordinator, Lead Project Archaeologist, and the Monitor Coordinator for the Santa Ynez Band of Chumash Indians. The County Coroner will be also be notified immediately. California law stipulates that the County Coroner will examine all discoveries of human remains within 48 hours of receiving notice. If the Coroner agrees that the remains are those of a Native American, he/she is required to contact the California Native American Heritage Commission within 24 hours.

Under the statute, the Native American Heritage Commission is responsible for immediately notifying the person it believes is the Most Likely Descendant of the deceased Native American. The Most Likely Descendant will consult with the county and the onsite Native American Monitor to address final disposition of the remains. The law states that the Most Likely Descendant has 24 hours to make recommendations for the treatment or disposition of the remains and associated grave goods. If an agreement for treatment of the remains cannot be resolved satisfactorily, the project proponents or the Most Likely Descendant may request mediation by the Native American Heritage Commission.

No ground-disturbing project activities will be resumed at the burial discovery locality until the treatment is concluded and the Onsite Environmental Coordinator provides confirmation that work may proceed. It is expected that interested Native Americans may desire to participate in and freely observe all treatment activities involving Native American burials.

4.4.2 Native American or Other Burial/Cemetery

Sites containing Native American human burials, including both interments and cremation features, either singly or grouped together, will be treated in a respectful manner and treatment will consider the discovery-specific recommendations of the Most Likely Descendant. All Native American burials that cannot be avoided will be removed from the project area, and any remaining associated cultural deposits will be treated following the techniques summarized in Section 4.3, as appropriate.

The preferred alternative to treatment of discovered human burials is avoidance of further impacts or disturbances during project activities. The Lead Project Archaeologist may consult with the Onsite Environmental Coordinator and the project proponent about the possibility of redirecting project activities.

Non-Native American burials will be treated similarly to prehistoric interments. If the remains cannot be identified through either oral history or documentary research, the remains will be removed from the project area following consultation with the County Coroner and their final disposition will be per agreement with the landowner.

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