United States Department of the Interior

BUREAU OF LAND MANAGEMENT
FISH AND WILDLIFE SERVICE
BUREAU OF RECLAMATION

October 5, 2007

Ms. Yvonne Meeks
Portfolio Manager – Site Remediation
Pacific Gas and Electric Company
4325 South Higuera Street
San Luis Obispo CA 93401

Subject: PG&E Topock Compressor Station Remediation Site – Transmittal of Final Land Use Memorandum: *"Role of Future Land Use Assumptions in Conducting CERCLA Baseline Human Health Risk Assessments and Development of Remedial Alternatives for the Topock Site"*

Dear Ms. Meeks:

Attached please find the Department of the Interior's (DOI) final "Role of Future Land Use Assumptions in Conducting the CERCLA Baseline Human Health Risk Assessment and Development of Remedial Alternatives for the Topock Site" that has been developed through a collaborative process between DOI and PG&E. This memorandum outlines the framework for identifying future land use assumptions for the federal portion of the Topock Site to be utilized in the baseline human health risk assessment and in the development of remedial alternatives conducted during the CERCLA Remedial Investigation/Feasibility Study (RI/FS). It also discusses the relevant statutes, regulations, policies, land use plans and other sources from which future land use assumptions should be derived for the Havasu National Wildlife Refuge and Bureau of Reclamation/Bureau of Land Management land.

The National Oil and Hazardous Substances Pollution Contingency Plan and CERCLA guidance emphasize the importance of factoring reasonable, but conservative, future land use assumptions into both the baseline risk assessment and the development of remedial alternative; the risk levels developed in the baseline human health risk assessment are then used to evaluate whether remedial alternatives will be protective of human health.

We appreciate the ongoing dialogue and assistance provided by PG&E staff and counsel during the development of this memorandum. It is DOI's hope and expectation that this memorandum will prove to be helpful as we all move forward through the RI/FS and remedy selection process for the Topock Site.

If you have any questions concerning clarification of this memorandum, please contact me at (303)236-3350 or Joanna Citron-Day at (202)219-1657.

Sincerely,

Krista A. Doebbler

Kris Doebbler
DOI Acting Topock Remedial Project Manager

cc: CWG Distribution List

ROLE OF FUTURE LAND USE ASSUMPTIONS IN CONDUCTING THE CERCLA BASELINE HUMAN HEALTH RISK ASSESSMENTS AND DEVELOPMENT OF REMEDIAL ALTERNATIVES FOR THE TOPOCK SITE

Executive Summary

Pacific Gas and Electric Company ("PG&E") is performing a remedial investigation and feasibility study ("RI/FS") to investigate the nature and extent of contamination and evaluate remedial alternatives to clean up hexavalent chromium and other hazardous substances released from the PG&E Topock Compressor Station. These hazardous substances have migrated on or under adjacent federal land. Areas where the hazardous substances released from the Compressor Station have come to be located are referred to in this document as the "Topock Site."

PG&E is performing the RI/FS in accordance with an administrative order on consent ("AOC") entered with the Federal Government pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). The Bureau of Land Management ("BLM"), Bureau of Reclamation ("Reclamation"), U.S. Fish and Wildlife Service ("FWS"), and U.S. Department of the Interior ("DOI") (collectively "the Federal agencies") are responsible for directing and overseeing PG&E's performance of the Topock CERCLA RI/FS.

When evaluating remedial alternatives pursuant to CERCLA, the analysis must consider, among other things, whether remedial alternatives will protect human health. This analysis is based on risk levels developed during the baseline human health risk assessment that are premised on assumptions about the future land uses at the site. A site-specific ecological risk assessment must also be conducted to determine whether a threat to ecological receptors exists.

The National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") and, to a greater extent, Environmental Protection Agency ("EPA") CERCLA guidance emphasize the importance of factoring reasonable land use assumptions into both the baseline risk assessment and the development of remedial alternatives. Assumptions about reasonably foreseeable future uses at the Topock Site can be developed by examining current land uses, adjacent land uses, development patterns in the area, federal resource management plans, cultural and ecological factors, and geographic and geological information. Knowing how people currently use and will likely use the property helps to determine whether an actual or potential threat to human health exists from onsite contamination.

The risk levels developed in the baseline human health risk assessment are then used to evaluate whether remedial alternatives will be protective of human health. Remedial alternatives may protect human health by reducing concentrations of hazardous substances or interrupting complete exposure pathways that pose an unacceptable risk to human health and the environment, or reducing exposure durations through the use of

institutional controls. Determining what types of institutional controls may be necessary is a site-specific inquiry.

Management and use of federal land is governed by federal law, including statutes, regulations and Executive Orders. In addition, use of land under the jurisdiction of FWS, Reclamation, and BLM is guided by bureau-specific policies and land use plans. These policies and land use plans reflect each bureau's unique mission and approach to land management**.** Within the boundaries established by the relevant federal law, policies and land use plans, each bureau has broad discretion to determine how property under its jurisdiction should be used.

Under the National Wildlife Refuge System Improvement Act of 1997 ("FWS Organic Act"), FWS has a primary conservation mission, which is further articulated in relevant policies and the relevant land management plan for each particular refuge. This conservation mission limits human use of refuge property and makes it unlikely that refuge property will be transferred out of federal ownership. Therefore, it is reasonably foreseeable that the property will continue to be managed as a wildlife refuge and the resulting future human use assumption is limited to recreational uses.

BLM, on the other hand, is subject to a multiple use directive under the Federal Land Policy Management Act of 1976 ("FLPMA"). BLM's multiple use mission allows for a broad array of recreational and other uses as demonstrated in the relevant land management plan. In addition, BLM's land management discretion includes the discretion to transfer property and/or execute land exchanges with State, local, and private parties. Therefore, it is reasonably foreseeable that BLM-managed land may be transferred out of federal ownership and the resulting future human use assumption must include unrestricted use.

A significant portion of the lands managed by the BLM in this case are Reclamation lands, acquired or withdrawn for Reclamation projects. These lands are managed by BLM under a special provision of the Departmental Manual at 613 DM 1. Simply put, these lands remain primarily designated for support of Reclamation project purposes, but are managed by BLM for all non-Reclamation project (i.e. natural resource and recreation) purposes. Reclamation remains involved in land management decisions to prevent conflicts with the specific water and power project operation and maintenance uses for which these lands are set aside.

A significant portion of the Havasu National Wildlife Refuge ("Refuge"), on and under which releases from the Topock Site have migrated, was also acquired or withdrawn for Reclamation project uses. These lands are also subject to the primary operation and maintenance needs of Reclamation, but are managed by FWS for wildlife and related resource management purposes, as provided in the Executive Orders establishing the Refuge.

I. Introduction

This memorandum outlines the framework for identifying future land use assumptions for the federal portion of the Topock Site to be utilized in the baseline human health risk assessment and the development of remedial alternatives conducted during the RI/FS.[1] This memo then discusses the relevant statutes, regulations, policies, land use plans, and other sources from which reasonable future land use assumptions can be derived for the Refuge and the Reclamation/BLM land.

Ecological receptors' use of property and resulting exposure to onsite contamination is not dependent on future land use assumptions for humans. Accordingly, this memorandum does not address any aspect of determining risks to ecological receptors. Similarly, the memo does not address how the results of the ecological risk assessment will be factored into the development and evaluation of remedial options. Pursuant to CERCLA and the NCP, remedial alternatives must be developed to address ongoing threats to both human health *and* the environment.

II. Legal Framework for Identifying Future Use Assumptions

Pursuant to Section 121(d)(1) of CERCLA, remedial action selected must "at a minimum…(assure) protection of human health and the environment and attain any identified legally applicable or relevant and appropriate standard, requirement, criteria, or limitation."[2] To achieve protective cleanup levels, the NCP requires that the RI must "characterize the nature of and threat posed by the hazardous substances and hazardous materials and gather data necessary to assess the extent to which the release poses a threat to human health or the environment."[3] The baseline risk assessment, comprising both a human health risk assessment and an ecological risk assessment, then must

> Characterize the current and potential threats to human health and the environment that may be posed by contaminants migrating to the groundwater or surface water, releasing to air, leaching through soil, remaining in the soil and bioaccumulating in the food chain. The results of the baseline risk assessment will help establish acceptable exposure levels for use in developing remedial alternatives in the FS…[4]

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[1] This CERCLA RI/FS is being conducted in conjunction with a RCRA Facility Investigation and Corrective Measures Study ("RFI/CMS") directed by the State of California, Department of Toxic Substances Control. In addition to the federal lands at issue, the human health risk assessment will address private land affected by the disposal of hazardous wastes from the PG&E Topock Compressor Station.

[2] 42 U.S.C. §9621(d)(1) and (2).

[3] 40 CFR §400.430(d)(1) and (2).

[4] *Id. at* §400.430(d)(4).

Both the NCP and EPA guidance discuss how future land use assumptions should be factored into determining such acceptable exposure levels through the human health risk assessment. First, the NCP Preamble specifies that future land use assumptions should be both reasonable and conservative. "In general, the baseline risk assessment will look at a future land use that is both reasonable, from land use development patterns, and may be associated with the highest (most significant) risk, in order to be protective."[5] Using reasonable but conservative future use assumptions, the human health risk assessment then develops exposure scenarios that include determinations about the frequency and duration of human exposures via different exposure pathways. Based on these exposure scenarios, and the hazardous substances present at the site, exposure levels protective of human health are then established.

More recent EPA guidance has emphasized the importance of utilizing realistic exposure assumptions based on reasonably anticipated future land use rather than the default unrestricted exposure assumptions associated with residential use. In its 1995 Land Use Directive, EPA notes that incorporating land use assumptions based on reasonably foreseeable future use "allow(s) the baseline risk assessment and feasibility study to focus on the development of practicable and cost-effective remedial alternatives, leading to site activities which are consistent with reasonably anticipated future land use."[6] Thus, by way of example, when there is no reasonably foreseeable use of a property for residential purposes, the human health risk assessment should not assume residential use. Instead, it should assume future uses that will result in more limited human exposures to hazardous substances.[7]

In determining reasonably foreseeable future uses, relevant factors that should be considered with respect to the federal lands at issue at the Topock site include: current land use; resource management guidelines; the site location in relation to urban, residential, commercial, industrial, agricultural and recreational areas; the federal land use designation of the area; development patterns in the area (historic, recent, and reasonably foreseeable development patterns); cultural factors (including the presence of Native American religious sites); the proximity of the site to critical habitats of endangered or threatened species; and geographic and geologic information.[8] For land under federal jurisdiction and control, final determinations about current and future land use are subject to the discretion of the relevant federal land manager.

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[5] *Final Rule, National Oil and Hazardous Substances Pollution Contingency Plan*, 55 Fed. Reg. 8666, 8710 (March 8, 1990). EPA guidance echoes the NCP on this issue. "The potential land use associated with the highest level of exposure and risk that can reasonably be expected to occur should be addressed in the baseline risk assessment." *Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions*, OSWER Directive 9355.0-30 (April 22, 1991).

[6] *Land Use in the CERCLA Remedy Section Process* ("Land Use Directive"), OSWER Directive No. 9355-7-04 (May 25, 1995).

[7] *Id. at* p. 2.

[8] *Id. at* pp. 2 and 5.

Reasonably foreseeable future land uses adopted for the human health risk assessment, however, are not synonymous with so-called institutional controls. An important distinction exists between such institutional controls and such future use. First, future use assumptions are developed relatively early in the RI/FS process, during the baseline risk assessment to identify the human exposures to hazardous substances that can be expected if no response action is taken. In contrast, institutional controls are not fully developed and analyzed until the development and evaluation of remedial alternatives, as a potential component of a remedial action.[9] Unlike future land use assumptions, the NCP preamble specifies that institutional controls should not be considered during the baseline risk assessment because "the role of the baseline risk assessment is to address the risk associated with a site in the absence of any remedial action or control, including institutional controls."[10]

Second, the purpose of identifying future use assumptions is to establish protective cleanup levels based on reasonable but conservative human exposure scenarios. By contrast, the purpose of institutional controls is to ensure that, if hazardous substances remain on site after cleanup, human exposure to such substances is limited to the extent necessary for the remedy to remain protective. EPA guidance provides that institutional controls are "legal and administrative tools used to maintain protection of human health and the environment at sites."[11] In other words, when waste is left onsite institutional controls can be used as an enforcement tool, if necessary, "to limit the activities that can safely take place at the site" and therefore limit human exposure.[12]

For example, at some sites (e.g. on private property), future use assumptions may need to be enforced through institutional controls adopted as a component of the remedy.[13] At other sites (e.g. on property remaining under federal jurisdiction and control), the ability of the federal land manager to ensure that future uses remain consistent with the assumptions adopted in the human health risk assessment may obviate any need for

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[9] If land is not cleaned up to a level that supports unlimited human use and unrestricted exposure, institutional controls generally must be adopted by the remedy to ensure that the assumptions about future land use remain valid. See, e.g., EPA, *Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Sites*, OSWER Directive 9355.0-74FS-P (Sept. 2000) *at* 5.

[10] 55 Fed. Reg. *at* 8710-11.

[11] EPA, *Institutional Controls: A Citizen's Guide to Understanding Institutional Controls at Superfund, Brownfields, Federal facilities, Underground Storage Tank and Resource Conservation and Recovery Act Cleanups*,("A Citizen's Guide to Institutional Controls"), OSWER Directive 9355.0-98 (Feb. 2005).

[12] *Id. at* 2.

[13] Institutional controls are contemplated as a component of any cleanup on private land to less than residential standards to ensure the long-term protective nature of the remedy selected. *See* Land Use Directive at p. 9. The need for institutional controls at such sites is tied to the need for an enforcement mechanism to assure that future uses are consistent with those assumed in the remedy.

institutional controls that might otherwise be necessary to ensure that the remedy is protective.

When considering remedial options, the NCP articulates a preference for active treatment wherever practicable.[14] Engineering controls are to be used for waste that poses a low-level threat or where treatment is impracticable[15] and institutional controls are to be used "as appropriate" for treatment of residual and untreated waste left onsite.[16] The NCP warns that institutional controls "shall not substitute for active response measures … as the sole remedy unless active measures are determined not be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of [the] remedy."[17]

Ultimately, the decision about whether to use institutional controls, and if so, how many and what types of institutional controls may be used at Topock will be site-specific.[18]

III. Reasonable Future Land Use Assumptions at the Havasu National Wildlife Refuge and Reclamation/BLM Land affected by the Topock CERCLA Site

As a threshold matter, the use and management of federal land under the jurisdiction of the Department of the Interior is governed by federal law - statutes, regulations, and Executive Orders - and the land use plans and policies that flow from these laws. Current uses are prescribed, and proscribed, by applicable federal law. Future uses can be expected to be substantially consistent with current uses to the extent that such applicable federal laws do not change. A logical starting point, therefore, to determine reasonable future use assumptions for the Refuge and the Reclamation/BLM lands is to identify the current uses of these lands and the uses that are expressly authorized in existing statutes, regulations, and land use planning documents. From these current, and currently authorized, land uses certain other future uses may also be identified.

A. Management of the Refuge

1. Applicable Laws and Regulations

Current and future land use on national wildlife refuges is guided by the National Wildlife Refuge System Administration Act of 1966, as amended by the National

[14] 40 CFR §430(a)(1)(iii)(A).

[15] 40 CFR §430(a)(1)(iii)(B).

[16] 40 CFR §430(a)(1)(iii)(C).

[17] 40 CFR §430.(a)(1)(iii)(D).

[18] A Citizen's Guide to Institutional Controls *at* 4.

Wildlife Refuge System Improvement Act of 1997 ("FWS Organic Act.").[19] The FWS Organic Act describes the mission of the National Wildlife Refuge System ("System") as the administration of

> a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.[20]

In addition to outlining the conservation mission of the System, the FWS Organic Act details requirements for the management and use of refuge property:

- Continuing and future use of refuge property must be compatible with both the conservation mission of the System as well the specific purposes for which a particular refuge is established;[21]

- Six wildlife-dependent recreational uses of refuge property, hunting, fishing, wildlife observation and photography, and environmental education and interpretation are compatible with the refuge system as well as the specific purposes of many refuges, and shall receive priority consideration in refuge planning and management. [22]

- A comprehensive conservation plan must be prepared describing ongoing and future uses of refuge property.[23]

The FWS Organic Act has two additional requirements for land use planning at each refuge:

(1) a comprehensive conservation plan ("CCP") must be prepared for each refuge describing desired future conditions at a refuge;[24] and

(2) detailed compatibility determinations must be made for all proposed and existing refuge uses**.**[25]

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[19] National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 USC §§668dd-668ee.

[20] *Id. at* §668dd(a)(2).

[21] *Id. at* §668dd(a)(3)

[22] *Id. at* §6688dd(a)(3).

[23] *Id. at* §668dd(e).

[24] *Id. at* §668dd(e).

[25] *Id. at* §668dd(3)(A)(iii).

The requirement for a CCP has not yet been implemented at the Refuge. Instead, the *Lower Colorado River National Wildlife Refuges Comprehensive Management Plan 1994-2014* ("the CMP"), adopted in 1994, currently guides land management at the Refuge. This CMP will be replaced by a CCP by 2012.[26] To implement the compatible use requirement, the Secretary of the Interior has issued "appropriate use" and "compatibility" policies that result in a two-tiered analysis of existing and proposed uses of refuge property. These policies and the CMP are discussed below.

2. Applicable Land Use Plans and Policies

As described in the CMP, the Refuge is part of a larger Area of Ecological Concern (now known as the Lower Colorado River Ecosystem), under which a variety of uses of the Refuge are limited or prohibited including camping, off-road vehicle use, water skiing, beach use, and swimming.[27] Notwithstanding these prohibitions and despite the Refuge's best efforts, water skiing, swimming, and beach use do, in fact, occur within the Refuge. In addition, people come to the Refuge for a variety of wildlife-dependent recreation activities, such as waterfowl hunting (upland, big game, and waterfowl), fishing, and wildlife observation, as well as other activities, such as hiking, camping in Five Mile Landing concession area (removed from the Site), and water-based recreation, including kayaking and canoeing. [28]

The CMP describes the following long-term management goals that guide future land use at all lower Colorado River Refuges: compatibility, biological diversity and habitat management, endangered species management, migratory waterfowl management, revegetation of natural flora and fauna, and wildlife-oriented public uses.[29] To reach these management goals, the CMP emphasizes that the Refuge should be used in a manner that will facilitate protection of the endangered and threatened species found at the Refuge, marsh and wetland habitat for both endangered and threatened species, as well as habitat for migratory, wintering and nongame avian species and their habitat.[30]

In discussing future management of the Refuge, the CMP articulates long-range management strategies. Compatibility is described as

> the central and most critical factor in planning and managing the National Wildlife Refuge System. All management activities and allowable uses,

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[26] *Id. at* §668dd(e).

[27] U.S. Fish and Wildlife Service *Lower Colorado River National Wildlife Refuges, Comprehensive Management Plan, 1994-2014* (1994) at 220.

[28] *Havasu National Wildlife Refuge Brochure* (Jan. 1999).

[29] CMP *at* 158-9.

[30] CMP *at* 157-163.

> including public uses, will undergo analysis to determine whether or not these activities are compatible with the purposes for which the refuges were established, the goals of the national Wildlife Refuge system, and refuge's comprehensive management plan objectives.[31]

To implement the compatible use requirement, each refuge manager must make appropriate use and compatibility determinations to decide whether to renew, expand, or extend an existing land use at a refuge or to allow new proposed uses. First, the refuge manager must make a threshold determination as to whether or not an existing or proposed land use is an "appropriate use."[32] An appropriate use must satisfy at least one of three conditions. The use must:

(1) be a priority public use or necessary for the safe, practical and effective conduct of a priority public use on the refuge;

(2) contribute to System mission, or refuge purposes, goals or objectives described in a refuge management plan approved after the 1997 amendments to the Organic Act; or

(3) have been determined to be appropriate in a documented analysis by the refuge manager with the concurrence of the refuge manager's Supervisor.[33]

If a use is found to be appropriate, then a compatibility determination must be made to determine if the use is compatible with the mission of the refuge system and the specific purposes for which the refuge was established, and is not inconsistent with public safety.[34]

Appropriate use and compatibility determinations for ongoing and proposed uses of the Refuge will be developed in the CCP that will replace the CMP by 2012.[35]

The primary conservation mission of FWS as it applies to the Refuge, articulated in the FWS Organic Act, the CMP, and appropriate use and compatibility policies, limits human use of Refuge property and reduces the likelihood of transferring refuge property out of federal ownership. Therefore, for purposes of the baseline risk assessment, it is appropriate to assume that human use of Refuge property will continue be restricted to recreational uses consistent with these statutory, regulatory, and policy guidelines.

B. Management of Reclamation/BLM Land

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[31] CMP *at* 158.

[32] U.S. Fish and Wildlife Service Manual, 603 FWS 1 (July, 2006).

[33] *Id.*

[34] 603 FWS 2.

[35] 603 FWS 1 (November 17, 2000).

1. Applicable Laws and Regulations

Reclamation water operations and related water management activities on the affected portion of the Colorado River are authorized by and conducted pursuant to multiple statutes and authorities.[36]

FLPMA authorizes and guides BLM's management of public lands based on the overall mission of "multiple use and sustained yield unless otherwise specified by law."[37] FLPMA requires, among other things, that BLM prepare land use plans ("Resource Management Plans" or "RMPs") for all such lands.[38] In preparing such plans required by FLMPA, BLM is directed to:

- give priority to designating and protecting areas of critical environmental concern (ACECs); [39]
- consider present and potential uses of public lands; [40]
- give priority for compliance with applicable Tribal, Federal and state pollution control laws, standards, and implementation plans;[41] and
- coordinate land management with other Federal departments/agencies and state/local governments, and policies of approved Tribal and state resource management plans.[42]

Land use planning regulations at 43 CFR §1600 *et. seq.* describe the process and criteria for preparing RMPs required by FLPMA.

2. Applicable Land Use Plans and Policies

[36] Statutory authority for Reclamation water operations and related water management activities stems from the Reclamation Act of 1902, as amended, 43 U.S.C. §391 et. seq., the Act of January 21, 1927, 44 Stat. 1010 (commonly referred to as the Colorado River Front Work and Levee Act), the Boulder Canyon Project Act of 1928, 43 U.S.C. §617 et. seq., the Parker-Davis Project Act, Act of May 28, 1954, the Colorado River Basin Project Act, 43 U.S.C. §1501 et. seq., or pursuant to the Supreme Court's Consolidated Decree in *Arizona v. California*, 547 U.S. 150 (2006)(which includes water accounting activities on behalf of Reclamation undertaken by the U.S. Geological Survey).

[37] Federal Land Policy Management Act of 1976 ("FLPMA"), 43 USC §1701 *et seq,* §1701(a).

[38] FLPMA *at* §1701(a).

[39] *Id. at* §1712 (c).

[40] *Id.*

[41] *Id.*

[42] *Id.*

Reclamation (as well as certain BLM and FWS) activities and land uses stretching from "the area along the Lower Colorado River from the southern boundary of the Lake Mead National Recreation Area on the north to the international boundary with Mexico on the South" are governed by the *Lower Colorado River Land Use Plan (Jan. 1964)* ("the 1964 Plan") [43] The 1964 Plan describes Reclamation's water operation and water management activities for the Lower Colorado River, which include "river control, the conservation of water and regulation and delivery of water."[44] To carry out its responsibilities, Reclamation's specific activities include operation of various dams and levees,[45] "construction of storage reservoirs and control structures, river channelization, the eradication of phreatophyte growth … the drainage of lowlands,"[46] and "maintain[ing] jurisdiction around its control structures as a matter of national security, as well as a necessary measure to insure proper operation."[47] The 1964 Plan notes that Reclamation's water control operations "necessarily place certain limitations on land use and development along the river."[48]

Subject to Reclamation water operation and management activities, and FWS administration of national wildlife refuges, non-Reclamation project land management responsibilities for the DOI land governed by the 1964 Plan has been transferred to BLM by DOI Manual, 613 DM 1.[49] BLM's current land use planning document, the Lake Havasu Field Office Resource Management Plan and Final Environmental Impact Statement ("RMP/FEIS"), has been developed "to provide direction that will guide future land management actions for BLM-administered land within the planning area."[50] The RMP/FEIS, finalized in May 2007, is a land use plan for an area encompassing more than 1.3 million acres of BLM-administered land, resources and uses.[51] To achieve BLM's management goal "to sustain the health, diversity, and productivity of the public lands for use and enjoyment of present and future generations," the RMP/FEIS focuses on a variety of issues including:

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[43] U.S. Department of the Interior, *Lower Colorado River Land Use Plan (Jan. 1964)* (" RECLAMATION Land Use Plan") at 1.

[44] *Id.*

[45] *Id. at* p. 15.

[46] *Id. at.* p. 48.

[47] *Id. at* p. 51.

[48] *Id. at* p.15.

[49] U.S. Department of the Interior, *Departmental Manual*, 613 DM 1 (Sept. 25, 1984).

[50] U.S. Department of the Interior, Bureau of Land Management, *Resource Management Plan and Final Environmental Impact Statement* (May 2007) ("RMP/FEIS"), *at* 1-2.

[51] *Id. at* S-1.

- Biological resources (including special status species, aquatic species, vegetation, wildlife habitat management);

- Special Designations (including Areas of Critical Environmental Concern [ACECs], Wilderness Areas, proposed Wild and Scenic River Segments, and Back Country Byways;

- Cultural Resources; and

- Lake Havasu/Colorado River Regional Management Area (covering the body of water from Davis Dam to Parker Dam.[52]

The RMP/FEIS evaluates five alternatives for the long-term management of the planning area and ultimately proposes an alternative designed to "provide the optimal balance between authorized resource use and the protection and long-term sustainability of sensitive resources within the planning area."[53]

The planning area is divided into three Managements Units ("MUs"). The primary management goals of the Colorado River MU, which includes migratory bird and endangered species habitat, are to "enhance recreational opportunities while preserving important resources, including the riparian ecosystem and visual elements of the surrounding landscape."[54] Regarding future use of the Colorado River MU, the RMP/FEIS states that the Colorado River MU has a high level of recreational use and that "high levels of resource and visitor use may be expected for the foreseeable future."[55] The BLM-managed lands within the Topock CERCLA Site include the Topock Maze, a culturally significant area for several Native American Tribes.

Unless otherwise posted or restricted, dispersed camping (in undeveloped areas) is allowed throughout the lands managed by BLM's Lake Havasu Field Office, without permit, for up to 14 days within any 28-day period. After the 14th day, campers must move beyond a 25-mile radius of their previous camp.[56] Beale Slough is part of an Area of Critical Environmental Concern ("ACEC") designated under the RMP/FEIS. This ACEC includes 2,395 acres that incorporate much of the Topock Site, including locations B and C of the Topock Maze and the floodplain. The Topock-Needles area (1,127 acres including portions of the Topock Site) is designated more generally as a Special Cultural Resource Management Area ("SCRMA"). Within the ACEC, camping is only authorized

[52] *Id. at* S-4.

[53] *Id. at* 2-4.

[54] *Id. at* 2-6

[55] *Id. at* 2-7.

[56] *Id. at* p. 99, Decision #RR-46.

in developed or signed sites (locations are yet to be determined).[57] Neither the ACEC nor SCRMA designations prohibit future camping within those areas. When the CERCLA response actions have been completed, therefore, it is reasonably foreseeable that camping would be authorized in areas along the floodplain.

BLM's designation of campground in the floodplain would be considered an undertaking, pursuant to Section 106 of the National Historic Preservation Act (NHPA) and implementing regulations.[58] BLM would need to determine whether camping would create any visual impacts to the Topock Maze or other eligible properties. If BLM concluded that designation of such a campground would result in impacts and that those impacts were adverse, BLM would then need to determine whether and how those impacts could be mitigated.[59] Pursuant to Section 106 of NHPA, BLM would consult with affected Tribes and the California State Historic Preservation Officer (SHPO).[60]

For the Topock-Needles SCRMA, management prescriptions would protect selected sites that are scarce, that are of singular importance, and that should not be subjected to invasive studies or other uses that would threaten their present condition. Management of these sites also would seek to accommodate the traditional cultural practices of Indian tribes or other cultural groups that ascribe religious or other heritage values to specific places within the SCRMA. In addition, two intaglios (Park Moabi intaglio and the Topock Maze) within the Topock Site have been allocated to Traditional Use. Allowable uses on these properties are limited to those that are compatible with the objective of preserving these resources for the future.[61]

In addition to future use expectations established by the RMP/FEIS, there is a lease between San Bernardino County and Reclamation/BLM which runs from 1964 to 2039[62] and which addresses the use of public land adjacent to the Topock Site.[63] The lease allows for limited, seasonal residential use of the leased property by certain County

[57] Recreational shooting and firewood collection will be prohibited. In addition, no new utilities or roads will be authorized, with the exception of utilities and access roads that provide service to nonfederal land within these areas. Motorized vehicle use will be limited to existing routes and trails outside of the current emergency closure. Following route designation, anticipated for this area in 2007-2008, "Limited to Existing Roads and Trails" areas would be converted to "Limited to Designated Roads and Trails." *Id. at* 2-258-260.

[58] National Historic Preservation Act of 1966, as amended, 16 USC §470f ; 36 CFR Part 800.

[59] 36 CFR §§800.5, 800.6.

[60] 36 CFR §800.2.

[61] *Id. at* 2-17.

[62] *25-Year Lease Extension Granted Updated Plan of Development Approved*, BLM Decision, Lease CAAZRI3327 (Approving San Bernardino's request to extend the original least, which ran from Sept. 15, 1964 to September 14, 2014 to extend 25 years through September 14, 2039).

[63] *Lease of Land for Park and Recreational Purposes (Park Moabi)* between the United States and San Bernardino County, CAAZRI3327(BOR#14-06-300-1496), (Sept. 15, 1964), p.8.

employees.[64] Amendments to the lease in 1967 and 1995 have both expanded the area covered by the original lease and limited seasonal residential use by the public to no more than five months or 150 days in any calendar year.[65] County staff employed at Park Moabi and their employees and dependents may be exempt from the five month or 150 day occupancy limit with written permission from the Director of San Bernardino County Parks.[66] A limited number of County staff has been authorized to live in the leased area year-round pursuant to this exemption. The number of employees and lessees living onsite varies over time.

In November of 2004, San Bernardino County submitted to BLM a "Fieldwork Authorization Request" proposing an expansion of the leased premises into the Topock Site, stretching along the floodplain from the currently leased property south to the railroad bridge. Staff from the Lake Havasu Field Office met with representatives of the San Bernardino County Regional Parks office in September 2005 to discuss the proposed expansion and plan of development. The purposes for the proposed expansion included a variety of seasonal residential and recreational uses, including mobile homes, expansion of tent camping and RV areas, a hotel, and reconstruction of an old restaurant.[67] According to drawings submitted by San Bernardino County in connection with the proposed expansion, new pull-through recreational vehicle camping sites and tent camping areas would be located south and east of Bat Cave Wash, west of the beach area, east of Old Route 66, and north of the Railroad.[68]

Because of the ongoing investigation and anticipated remedial action to address contamination in the area proposed for the expansion, BLM has not acted on this request. However, in light of the continuing development and increasing recreational and residential uses of adjacent public and private property, it is reasonably foreseeable that San Bernardino will renew its request after the CERCLA remedy has been implemented.

In the event San Bernardino formally submits a proposal to expand camping and other uses on the floodplain, it is also reasonably foreseeable that BLM could grant this request. Just as BLM would need to conduct Section 106 consultation pursuant to NHPA

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[64] *Id. at* p. 14 (The lease states "No private residential use of the leased premises, other than management and administrative housing and commercial accommodation facilities such as motels and trailer camps consistent with the operation of the leased premises for park and recreational purposes, shall be allowed by the Lessee.").

[65] *Amendment of Lease of Land for Park and Recreational Purposes (Park Moabi)* between the United States and San Bernardino County (May 22, 1967) *at* p.2; Lease CA 3227 (BOR#14-06-300-1496) *ADDENDUM FOR CLARIFICATION.*

[66] Lease CA 3227 (BOR#14-06-300-1496) *ADDENDUM FOR CLARIFICATION.*

[67] *Moabi Regional Park Opportunities and Constraints.*

[68] *Moabi Pull Through RV Sites South Campground 77 Campsites (drawing); MOABI REGIONAL PARK, Site Key Map: Photos of Existing Conditions, MOABI REGIONAL PARK, Photos of Existing conditions: South Campground Addition (see also PG&E Topock Site map produced by CH2MHill).*

for its own designation of camping in the floodplain, BLM would need to conduct Section106 consultation when considering San Bernardino's proposal.

The continuing development of adjacent property combined with BLM's broad land management discretion, articulated in FLPMA and the RMP/FEIS, leaves open the possibility that BLM land may be transferred out federal ownership. Under CERCLA §120(h)(3)(A), a federal agency conveying property to out of federal ownership must provide a covenant warranting that all remedial action necessary to protect human health and the environment has been taken and that additional remedial action found to be necessary will be conducted by the United States.[69] For purposes of the Site investigation and baseline risk assessment, therefore, it is appropriate to assume that cleanup levels should be based on unrestricted future uses that might be adopted by non-federal owners .

In sum, at this stage of the CERCLA response action, the future use assumptions adopted in the baseline risk assessment for the BLM/Reclamation portion of the Site should take into consideration three factors: (1) it is reasonably foreseeable that land may be transferred out of federal ownership; (2) human use of the Park Moabi-leased portion will continue to include both seasonal residential use by the public and year-round residential use by a limited number of San Bernardino County staff; and (3) it is reasonably foreseeable that camping on the floodplain will occur under either San Bernardino's proposed expansion or BLM's future use of non-leased areas under the RMP.

[69] 42 U.S.C. §9620(H)(3)(A).