Environmental Assessment

US Army Reserve
Proposed Military Construction Project
Sloan, Clark County, Nevada

DOI-BLM-NV-S010-2009-0127-EA

Prepared for:

Assistant Chief of Staff for Installation Management
Army Reserve Division
2511 Jefferson Davis Highway
Arlington, Virginia 22202-3926

63rd Regional Support Command
4235 Yorktown Avenue
Los Alamitos, California 90270

US Department of the Interior, Bureau of Land Management
Las Vegas Field Office
4701 North Torrey Pines Drive
Las Vegas, Nevada, 89130
and

US Army Corps of Engineers, Louisville District
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202-2232

August 2009

Prepared by

CH2MHILL

DRAFT FINDING OF NO SIGNIFICANT IMPACT (FNSI)

U.S. Army Reserve
Proposed Military Construction Project
Clark County, Nevada

Pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508) for implementing the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] 4321 et seq.) and 32 CFR Part 651 (Environmental Analysis of Army Actions), the U.S. Army Reserve (USAR), 63rd Regional Support Command and the U.S. Department of the Interior, Bureau of Land Management (BLM) performed an environmental assessment (EA) of the potential environmental and human health effects associated with the construction and operation of a new USAR Center (USARC) located in Clark County, Nevada.

Purpose and Need

The purpose of the Proposed Action is to acquire land and construct and operate a new USARC to support a new 800-member unit as part of the Grow the Army (GTA) Initiative. This new unit would be part of the Army's Combat Service Support Reset Initiative to support new brigade combat teams.

The two existing USAR facilities located in the Las Vegas area are over capacity; Nellis Air Force Base (130 percent utilization) and 2901 Sahara Avenue (180 percent utilization). Neither of the existing facilities has adequate space to support the GTA Initiative.

If the Proposed Action is not implemented, the USAR will not be able to provide adequate facilities to support the activation of new units. The lack of adequate facilities would negatively affect training and operations, resulting in a reduced ability to achieve the units' mission, which could potentially compromise readiness and security.

Description of the Proposed Action

The Proposed Action includes construction and operation of a USARC in 2009-2010 and an expansion of the facility in 2013. The location of the Proposed Action is a 45-acre parcel of BLM-owned land located near Sloan, Nevada, hereafter referred to as the Property. The Proposed Action also includes establishing an access route to the Property, which includes acquiring rights-of-way, easements, and improving the existing roadway along Hinson Street and approximately 1,000 feet of new road from Hinson Street to the southwest corner of the Property.

The 2009-2010 construction would include a 79,618-square-foot training center, a 16,540-square-foot vehicle maintenance shop, a 4,100-square-foot unheated storage building, and 204,030 square feet of organizational parking. The extent of the future expansion and ultimate configuration of the USARC is presently unknown; however, the USAR anticipates that the entire Property will be affected by the expansion.

The USARC would include classrooms, administrative space, offices, maintenance areas, and storage areas. The buildings would be of permanent construction with reinforced

mechanical; security; and electrical systems. Additional construction activities would include paving, fencing, general site improvements, and extending utilities to serve the USARC. Accessibility for the disabled would be provided. Berms, heavy landscaping, and bollards would be used to prevent access when standoff distances could not be maintained.

The parking areas would provide approximately 348 standard parking spaces for military and privately owned vehicles. Additional parking will be provided for military equipment parking. The military equipment parking would provide secured parking for 313 wheeled vehicles, 411 trailers, and 1 tracked vehicle. A chain-link fence would enclose the parking lot. The final surface elevation would be roughly equivalent to the existing grade.

Disturbed areas that are not within the footprint of the proposed buildings or parking lot would be landscaped and used to meet security requirements. Physical security measures or antiterrorism/force protection would be incorporated into the design and would include setbacks from roads, parking areas, and vehicle unloading areas.

Description of the Alternative Action

The Alternative Action includes the same USARC construction and operation on the Property with an alternative access route. The Alternative Action would include establishing an access route to the Property that includes acquiring rights-of-way, easements, and improving the existing roadways along Hinson Street to Paplinski Parkway to Schuster Street and approximately 750 feet of new road from Schuster Street to the Property.

No Action Alternative

Under the No Action Alternative, no new facilities would be constructed, and the BLM would not grant a right-of-way to the USAR. If the No Action Alternative were implemented, the USAR would not be able to provide the facilities to support the training of assigned USAR units. The lack of adequate facilities would negatively affect training and operations, resulting in a reduced ability to achieve the units' mission, which could potentially compromise readiness and security. As such, the No Action Alternative does not fulfill the project's purpose and need. It is included in this analysis because it provides a baseline against which the benefits and negative impacts of the alternatives can be compared.

Alternatives Considered and Eliminated from Further Consideration

The USAR conducted a search for potential construction sites. The criteria for site selection included a contiguous 45-acre, federally managed property within close proximity to the southwest Las Vegas Valley area with good access to major transportation corridors. The Property was the only available federally owned or managed site in the southwest Las Vegas Valley area that met the site selection criteria. Because none of the other available federally owned or managed sites located near a major transportation corridor contained at least 45 contiguous acres, they were eliminated from further consideration.

The USAR did not conduct a search for non-government or managed alternative construction sites because there was available government-managed land near Sloan that

met the site selection criteria, which is consistent with the intent of Army Regulation 140-483, Chapter 5, Section 5-6a., which states:

> "Select and acquire sites for the construction of Army Reserve facilities according to the following priorities: (1) *Priority one – Army-controlled property or other Government –owned land.* Use only suitable and available Army or government-owned land for construction for MCAR [military construction, Army Reserve] projects."

Potential Environmental Impacts

The attached EA contains a comprehensive evaluation of the existing conditions and environmental consequences of the Proposed Action, Alternative Action, and the No Action Alternative, as required by NEPA.

Implementation of the Proposed and Alternative Actions would not affect cultural resources. Resources that could be impacted by the Proposed and Alternative Actions include land use, soils, water resources, air quality, natural and biological resources, noise, visual resources, transportation and traffic, utility infrastructure, hazardous materials, public services, and socioeconomic and environmental justice; although effects to these resources are expected to be insignificant.

Implementation of the No Action Alternative would not result in a change in current conditions, and therefore, no significant direct or indirect impacts would occur under the No Action Alternative.

The potential for cumulative effects to the environment was evaluated by reviewing other projects in the vicinity of the Property that could affect the same environmental resources as construction and operation of the USARC. Based on a review of aerial photographs dating back to 1972, development within a mile radius of the Property includes a mine to the west, residential areas to the southwest, and various commercial/industrial operations to the south and east. Based on the Comprehensive Land Use Plan for Clark County, land in the vicinity of the Property has been approved for industrial use and has been classified as Industrial, Business, and Design Research Park land use.

Although no projects are currently underway in the vicinity of the Property, transportation projects and additional facilities will likely be developed in the future. The USAR has plans to expand the facilities on the Property in 2013. The extent of the future expansion and ultimate configuration of the USARC is presently unknown; however, this EA has evaluated disturbance of the entire Property. A subsequent NEPA analysis would be necessary to evaluate the impacts from future expansion to resources such as threatened and endangered species. These projects, including the Proposed and Alternative Action, are not expected to have significant cumulative effects to the quality of the human or natural environment.

Table 1 summarizes the impacts of the Proposed and Alternative Actions. All identified impacts were determined to be insignificant. Table 1 also identifies the activities that could be conducted to avoid or minimize impacts. Activities to reduce impacts would likely be required by federal or state regulations.

TABLE 1

Summary of Environmental Impacts and Minimization/Avoidance Measures for the Proposed and Alternative Actions

USAR Proposed Military Construction Project, Clark County, Nevada

Impact Category	Proposed Action Degree of Impact			Alternative Action Degree of Impact			Summary of Impacts and Activities to Avoid or Minimize Impacts
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Land Use		X			X		Both alternatives would remove 45 acres of BLM-managed land from public use. The Proposed Action would convert approximately 1.3 acres of undeveloped BLM-owned property to roadway. The Alternative Action would convert approximately 2.6 acres of undeveloped BLM-owned property to roadway. The access routes for each alternative would remain consistent with the planned Industrial, Business, and Design Research Park land uses. The USAR will coordinate with the Department of Comprehensive Planning to resolve a zoning change; however, the USAR is exempt from complying with local zoning ordinance requirements. Neither alternative is expected to cause significant impacts to land use because they are consistent with the Industrial land use planned for the Property and adjacent developed properties.
Geology and Topography		X			X		Both alternatives would require disturbance to the existing soils and changes in topography to construct building footings and provide access along the access routes. The Proposed Action could potentially generate excess mineral material. If excess mineral material is exported from the Property, an appropriate BLM permit or mineral material contract would be required per 43 CFR 3600. Impacts to geology would occur during construction. Blasting may be required on the northeastern portion of the Property at the base of the hill to grade the site as needed. If blasting is necessary, it would be conducted in accordance with the Blasting Permit guidelines issued by the Clark County Fire Department, Fire Hazard and Preventions Services.

TABLE 1

Summary of Environmental Impacts and Minimization/Avoidance Measures for the Proposed and Alternative Actions

USAR Proposed Military Construction Project, Clark County, Nevada

Impact Category	Proposed Action Degree of Impact			Alternative Action Degree of Impact			Summary of Impacts and Activities to Avoid or Minimize Impacts
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Water Resources		X			X		Neither alternative would cause adverse impacts to permanent surface water features such as lakes, rivers, or wetlands because none exist on the Property or either potential access route. Groundwater could potentially be affected depending on the final wastewater treatment design. Any wastewater discharges will comply with NDEP requirements. Both alternatives could cause direct adverse impacts to dry washes determined to be jurisdictional Waters of the US. Direct impacts would be minimized by avoiding jurisdictional Waters where possible. For unavoidable impacts, the USAR will coordinate with USACE to identify permit and mitigation requirements, which may include Section 401 and 404 Permits. Both alternatives could cause indirect adverse impacts to jurisdictional Waters of the US from soil erosion and sedimentation during facility and access route construction and operation, as well as through an increase in impervious surfaces. Impacts from soil erosion and sedimentation would be minimized pursuant to a construction storm water permit obtained from the Nevada Division of Environmental Protection-Bureau of Water Pollution Control.
Air Quality		X			X		Both alternatives would result in a temporary and minor impact on overall air quality during construction and minor impact from operation. Emissions from construction vehicles would be minimized by requirements in the construction specifications that the contractor keep equipment maintained and operate in a clean manner. Construction dust would be reduced by implementation of fugitive dust control measures, such as applying water to exposed ground. A dust control permit would be obtained from DAQEM.

TABLE 1

Summary of Environmental Impacts and Minimization/Avoidance Measures for the Proposed and Alternative Actions

USAR Proposed Military Construction Project, Clark County, Nevada

Impact Category	Proposed Action Degree of Impact			Alternative Action Degree of Impact			Summary of Impacts and Activities to Avoid or Minimize Impacts
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Natural and Biological Resources		X			X		Both alternatives could introduce noxious weeds during transportation of equipment to the USARC. A noxious weed management plan will be prepared and submitted to the BLM for approval prior to construction. Construction of the USARC could impact succulent plant species. The USAR will coordinate with a BLM botanist regarding the salvage of succulent plant species prior to construction to prevent impacts. Both alternatives could affect the federally threatened desert tortoise. Based on the recent survey data and known occurrence records near the Property, USFWS estimated that five desert tortoise may be taken as a result of the Proposed Action. The USAR will implement the Reasonable and Prudent Measures and associated terms and conditions provided in the USFWS's Amended Biological Opinion. If blasting is required, the USAR will contact BLM to determine the appropriate methods to avoid and mitigate potential impacts to the desert tortoise, including the need for additional tortoise surveys. Both alternatives could affect the state-protected Gila monster. Impacts to this species would not be significant because the USAR will adhere to recommendations provided by the Nevada Department of Wildlife (NDOW). Both alternatives could affect the state-protected burrowing owl. The NDOW recommended impact minimization measures for migratory birds, including the burrowing owl, that may breed and nest on the Property by restricting construction during the reproductive season (March 15 – August 30). If this is not practicable, the NDOW recommends a biologist survey the Property prior to construction. If migratory nesting birds are found during the preconstruction survey, those areas of the Property containing nesting migratory birds would not be disturbed or cleared until the young have naturally vacated.
Cultural Resources			X			X	Neither alternative would affect known cultural resources. If unanticipated archaeological deposits or human remains are encountered during construction, activities would be halted and appropriate authorities and specialists would be contacted.

TABLE 1

Summary of Environmental Impacts and Minimization/Avoidance Measures for the Proposed and Alternative Actions

USAR Proposed Military Construction Project, Clark County, Nevada

Impact Category	Proposed Action Degree of Impact			Alternative Action Degree of Impact			Summary of Impacts and Activities to Avoid or Minimize Impacts
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Noise		X			X		Each alternative would have short-term, insignificant impacts on noise during construction. Construction activities would be limited to normal working hours, to the extent possible, and construction equipment would be maintained to keep noise impacts to a minimum. Blasting may be required on the northeastern portion of the Property during site grading. If blasting is necessary, the USAR will ensure it will be conducted without exceeding the ground vibration threshold regulated by the Clark County Fire Department.
Visual Resources		X			X		Neither alternative would result in significant impacts to visual and aesthetic resources. The Nevada Division of State Lands requested the USAR consider using lighting and building materials that minimize visual impacts. The USAR will consider the use of lighting and building materials that minimize visual impacts when possible.
Transportation and Traffic		X			X		Neither alternative is anticipated to have a significant impact on transportation or traffic; however, both alternatives would likely cause short-term traffic increases during construction. The increased traffic would have a minor traffic impact on streets and roads near the Property but is unlikely to impact the level of service on these roads.
Utilities Infrastructure		X			X		Neither alternative is anticipated to have a significant impact on local utilities because the USAR would coordinate the required utility loads and service with the respective utility companies. Utility connections would be performed in accordance with the requirements of the respective utility companies and local building officials.
Hazardous Materials		X			X		Neither alternative would have a significant impact on hazardous materials. Small quantities of hazardous materials may be stored and used at each site. Staff would be trained in spill prevention, spill handling and containment. Containment and cleanup equipment and materials would be available onsite.
Public Services		X			X		Neither alternative would result in significant impacts on public services in the region because the additional services needed to support the USARC would be very minor compared to the existing need of the Clark County service area.

TABLE 1

Summary of Environmental Impacts and Minimization/Avoidance Measures for the Proposed and Alternative Actions

USAR Proposed Military Construction Project, Clark County, Nevada

Impact Category	Proposed Action Degree of Impact			Alternative Action Degree of Impact			Summary of Impacts and Activities to Avoid or Minimize Impacts
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Socioeconomics and Environmental Justice		X			X		Neither alternative would result in significant environmental health or safety risks that could disproportionately affect children. Both alternatives would result in temporary beneficial impacts on the local economy from construction activities and purchases of goods and services in the Sloan area.

NEPA Considerations

Based upon the findings of this EA, neither the Proposed nor Alternative Action would have a significant adverse direct, indirect, or cumulative impact on the quality of the human or natural environment on the Property, access route(s) or adjacent properties. Because there would be no significant impact resulting from implementation of the Proposed or Alternative Action, a FNSI has been prepared to accompany this EA and concludes that an EIS, the next higher level of environmental impact investigation under NEPA, is not required.

Public Review and Comment

The EA and draft FNSI were submitted to federal, state, and local agencies for review and were available for public review at the Lydia Malcolm Library, located at 2960 Sunridge Heights Parkway 100, Henderson, Nevada, 89052, and on the Internet at ftp://ClarkCo:Nevada@ftp.ch2m.com/Sloan. Public comment was invited for 30 days after publication of a notice of availability in the *Las Vegas Review Journal*. Written comments were received and considered up to 30 days from the publication of this notice.

SIGNATURE:

Approved by: _____

BRUCE A. CASELLA Date
Major General, Commanding
United States Army Reserve

ENVIRONMENTAL ASSESSMENT
SIGNATURE SHEET

Approved by: _____

BRUCE A. CASELLA
Major General, Commanding
United States Army Reserve

Approved by: _____

KIMBER LIEBHAUSER
Assistant Field Manager
Division of Lands
Bureau of Land Management

Reviewed by: _____

LAURA CABALLERO
Chief, Environmental Branch
63rd Regional Support Command, DPW

Prepared by: _____

NICHOLAS MOORE
Environmental Scientist
CH2M HILL

Executive Summary

This Environmental Assessment (EA) has been prepared for the US Army Corps of Engineers (USACE), the Assistant Chief of Staff for Installation Management—Army Reserve Division, the 63rd Regional Support Command of the US Army Reserve (USAR), and the US Department of the Interior, Bureau of Land Management (BLM) to evaluate the effects of construction and operation of a US Army Reserve Center (USARC) on land managed by the BLM, located near Sloan, Clark County, Nevada. The BLM and USAR have agreed to serve as joint-lead agencies for this EA.

The objective of conducting this EA is to identify the socioeconomic and environmental impacts of the Proposed and Alternative Actions including the No Action Alternative. If such impacts are found not to be significant, a Finding of No Significant Impact (FNSI) document will be prepared for the Proposed and Alternative Actions, and the USAR would proceed with constructing the USARC.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), Section 102(2)(C); the Council on Environmental Quality "Regulations for Implementing the Procedural Provisions of NEPA," 40 Code of Federal Regulations (CFR) Parts 1500 through 1508; and 32 CFR 651, "Environmental Analysis of Army Actions."

Purpose and Need

The purpose of the Proposed Action is to acquire land and construct and operate a new USARC to support a new 800-member unit as part of the Grow the Army (GTA) Initiative. This new unit would be part of the Army's Combat Service Support Reset Initiative to support new brigade combat teams.

The two existing USAR facilities located in the Las Vegas area are over capacity, Nellis Air Force Base (130 percent utilization) and 2901 Sahara Avenue (180 percent utilization). Neither of the existing facilities has adequate space to support the GTA Initiative.

If the Proposed Action is not implemented, the USAR will not be able to provide adequate facilities to support the activation of new units. The lack of adequate facilities would negatively affect training and operations, resulting in a reduced ability to achieve the units' mission, which could potentially compromise readiness and security.

Alternatives

Proposed Action

The Proposed Action includes construction and operation of a USARC. The location of the Proposed Action is a 45-acre parcel of land located near Sloan, Nevada, hereafter referred to as the Property. The BLM owns the land and would grant the USAR a right-of-way to use the Property. The Proposed Action also includes establishing an access route to the Property, which includes acquiring rights-of-way, easements, and improving the existing roadway along Hinson

Street and approximately 1,000 feet of new road from Hinson Street to the southeast corner of the Property. The Property and the Proposed Action access route are depicted on Figure 2-1.

The 2009-2010 construction would include a 79,618-square-foot training center, a 16,540-square-foot vehicle maintenance shop, a 4,100-square-foot unheated storage building, and 204,030 square-feet of organizational parking (Figure 2-2).

The USARC would include classrooms, administrative space, offices, maintenance areas, and storage areas. The buildings would be of permanent construction with reinforced concrete foundations; concrete floor slabs; structural steel frames; masonry veneer walls; standing seam metal roofs; heating, ventilation, and air conditioning; plumbing and mechanical; security; and electrical systems. Additional construction activities would include paving, fencing, general site improvements, and extending utilities to serve the USARC. Accessibility for the disabled would be provided. Berms, heavy landscaping, and bollards would be used to prevent access when standoff distances could not be maintained.

The parking areas would provide approximately 348 standard parking spaces for military and privately owned vehicles. Additional parking will be provided for military equipment parking. The military equipment parking would provide secured parking for 313 wheeled vehicles, 411 trailers, and 1 tracked vehicle. A chain-link fence would enclose the parking lot. The final surface elevation would be roughly equivalent to the existing grade.

Disturbed areas that are not within the footprint of the proposed buildings or parking lot would be landscaped and used to meet security requirements. Physical security measures or antiterrorism/force protection would be incorporated into the design and would include setbacks from roads, parking areas, and vehicle unloading areas.

Alternative Action

The Alternative Action includes the same USARC construction and operation on the Property with an alternative access route. The Alternative Action would include establishing an access route to the Property that includes acquiring rights-of-way, easements, and improving the existing roadways along Hinson Street to Paplinski Parkway to Schuster Street and approximately 750 feet of new road from Schuster Street to the Property. The Alternate Action access route is depicted on Figure 2-1.

No Action Alternative

Under the No Action Alternative, no new facilities would be constructed, and the BLM would not grant a right-of-way to the USAR. If the No Action Alternative were implemented, the USAR would not be able to provide the facilities to support the training of assigned USAR units. The lack of adequate facilities would negatively affect training and operations, resulting in a reduced ability to achieve the units' mission, which could potentially compromise readiness and security. As such, the No Action Alternative does not fulfill the project's purpose and need. It is included in this analysis because it provides a baseline against which the benefits and negative impacts of the alternatives can be compared.

Alternatives Considered and Eliminated from Further Consideration

The USAR conducted a search for potential construction sites. The criteria for site selection included a contiguous 45-acre, federally owned or managed property within close proximity to the southwest Las Vegas Valley area with good access to major transportation corridors. The Property was the only available federally managed site in the southwest Las Vegas Valley area that met the site selection criteria. Because none of the other available federally owned or managed sites located near a major transportation corridor contained at least 45 contiguous acres, they were eliminated from further consideration.

The USAR did not conduct a search for non-government-owned or managed alternative construction sites because there was available government-managed land near Sloan that met the site selection criteria, which is consistent with the intent of Army Regulation 140-483, Chapter 5, Section 5-6a., which states:

> "Select and acquire sites for the construction of Army Reserve facilities according to the following priorities: (1) Priority one – Army-controlled property or other Government – owned land. Use only suitable and available Army or government-owned land for construction for MCAR [military construction, Army Reserve] projects."

Summary of Environmental Consequences and Mitigation Measures

This EA contains a comprehensive evaluation of the existing conditions and environmental consequences of the Proposed Action, Alternative Action, and the No Action Alternative, as required by NEPA.

Implementation of the Proposed and Alternative Actions would not affect cultural resources. Resources that could be impacted by the Proposed and Alternative Actions include land use, soils, water resources, air quality, natural and biological resources, noise, visual resources, transportation and traffic, utility infrastructure, hazardous materials, public services, and socioeconomic and environmental justice.

The No Action Alternative would not result in a change in current conditions, and therefore, no direct or indirect impacts would occur under the No Action Alternative.

The potential for cumulative effects to the environment was evaluated by reviewing other projects in the vicinity of the Property that could affect the same environmental resources as construction and operation of the USARC. Based on a review of aerial photographs from 1990, and 2006, there have been only minor changes to the area near the Property since 1990. Based on the Comprehensive Land Use Plan for Clark County, land in the vicinity of the Property has been approved for industrial use and has been classified as Industrial, Business, and Design Research Park land use. Although no projects are currently underway in the vicinity of the Property, transportation projects and additional USAR facilities will likely be developed in the future.

Conclusion/Recommendation

The Proposed and Alternative Action would provide the necessary training facilities for the USAR, including adequate classroom, administrative, storage and parking facilities to support all assigned unit requirements and operations. Impacts from construction of both alternatives have been evaluated and presented in this EA.

A draft FNSI has been prepared to accompany this EA and concludes that an Environmental Impact Statement, the next higher level of environmental impact investigation under NEPA, is not required. The FNSI will be signed and the project completed after the public review period if the BLM and USAR conclude that the Proposed Action would not result in significant impacts.

Public Involvement/Comments

The NEPA process is designed to inform the public of the potential environmental consequences of the Proposed and Alternative Actions and involve the public in the federal decision-making process. The USAR and BLM recognize public involvement and intergovernmental coordination and consultation as essential elements in developing an EA. Formal notification and opportunities for public participation, as well as informal coordination with government agencies and planners are incorporated into the EA process.

Agencies, organizations, and members of the public having a potential interest in the Proposed and Alternative Actions are invited to participate in the decision-making process. Agency consultation letters were submitted to the US Fish and Wildlife Service, Nevada Department of Conservation and Natural Resources Natural Heritage Program, the Nevada State Historic Preservation Office, and other government agencies to request information regarding the resources on and near the Property and Proposed and Alternative Action access routes.

The EA and draft FNSI are made available to the public for comment for a period of 30 days. At the end of the 30-day period, the USAR and BLM will consider all comments submitted by individuals, agencies, and organizations. As appropriate, the USAR and BLM may then execute the FNSI and proceed with implementing either the Proposed or Alternative Action. If it is determined that implementing the alternatives would result in potentially significant impacts, the USAR and BLM will publish in the Federal Register a Notice of Intent to prepare an Environmental Impact Statement or not to proceed with the Proposed or Alternative Action.

Contents

Executive Summary ..... **i**
Acronyms and Abbreviations ..... **viii**
1 Introduction **1-1**
1.1 Purpose and Need 1-1
1.2 Public Involvement 1-1
2 Description of the Proposed Action and Alternatives **2-1**
2.1 Overview 2-1
2.2 Proposed Action 2-1
2.3 Alternative Action 2-2
2.4 No Action Alternative 2-2
2.5 Alternatives Considered and Eliminated from Further Consideration 2-2
3 Existing Environment, Environmental Consequences, and Mitigation **3-1**
3.1 Land Use 3-2
3.1.1 Definition of Resource 3-2
3.1.2 Existing Environment 3-3
3.1.3 Environmental Consequences 3-3
3.2 Geology and Topography 3-4
3.2.1 Definition of Resource 3-4
3.2.2 Existing Environment 3-4
3.2.3 Environmental Consequences 3-5
3.3 Water Resources 3-6
3.3.1 Definition of Resource 3-6
3.3.2 Existing Environment 3-6
3.3.3 Environmental Consequences 3-7
3.4 Air Quality 3-8
3.4.1 Definition of Resource 3-8
3.4.2 Existing Environment 3-10
3.4.3 Environmental Consequences 3-10
3.5 Natural and Biological Resources 3-14
3.5.1 Definition of Resource 3-14
3.5.2 Existing Environment 3-14
3.5.3 Environmental Consequences 3-18
3.6 Cultural Resources 3-20
3.6.1 Definition of Resource 3-20
3.6.2 Existing Environment 3-20
3.6.3 Environmental Consequences 3-21
3.7 Noise 3-21
3.7.1 Definition of Resource 3-21
3.7.2 Existing Environment 3-22
3.7.3 Environmental Consequences 3-22
3.8 Visual Resources 3-24
3.8.1 Definition of Resource 3-24

3.8.2 Existing Environment 3-25
3.8.3 Environmental Consequences 3-25
3.9 Transportation and Traffic 3-26
3.9.1 Definition of Resource 3-26
3.9.2 Existing Environment 3-26
3.9.3 Environmental Consequences 3-26
3.10 Utility Infrastructure 3-27
3.10.1 Definition of Resource 3-27
3.10.2 Existing Environment 3-28
3.10.3 Environmental Consequences 3-28
3.11 Hazardous Materials 3-29
3.11.1 Definition of Resource 3-29
3.11.2 Existing Environment 3-29
3.11.3 Environmental Consequences 3-30
3.12 Public Services 3-32
3.12.1 Definition of Resource 3-32
3.12.2 Existing Environment 3-32
3.12.3 Environmental Consequences 3-32
3.13 Socioeconomics and Environmental Justice 3-32
3.13.1 Definition of Resource 3-32
3.13.2 Existing Environment 3-33
3.13.3 Environmental Consequences 3-35
3.14 Cumulative Effects 3-35
3.14.1 Past and Future Actions 3-36
3.14.2 Summary of Impacts 3-36
4 Conclusions 4-1
4.1 Direct Impacts Identified 4-1
4.2 Indirect Impacts Identified 4-1
4.3 Cumulative Effects Identified 4-1
4.4 NEPA Determination 4-1
5 List of Preparers 5-1
5.1 Preparers 5-1
5.2 Persons and Agencies Contacted 5-2
5.3 Distribution List 5-2
6 References 6-1

Appendices

A Correspondence with Agencies and Native American Organizations
B Notice of 30-Day Period for Public Comment
C Wetlands and Jurisdictional Waters of the US Report
D Air Quality Calculations
E Record of Non-Applicability
F Biological Evaluation
G Environmental Condition of Property Report

Tables

Table 3-1 Supplemental Authorities Considered for Inclusion in the EA.....3-1
Table 3-1 National Ambient Air Quality Standards.....3-9
Table 3-2 Summary of Proposed and Alternative Action Emissions for 2009-2010.....3-12
Table 3-3 Federal Listed Threatened and Endangered Species Occurring in Clark County, Nevada.....3-15
Table 3-4 State-Listed Species.....3-18
Table 3-5 Typical Construction Equipment Noise Levels.....3-22
Table 3-6 US Bureau of Mines Scaled Distance Formula.....3-24
Table 3-7 Hazardous Materials Likely Stored at the USARC a.....3-31
Table 3-8 Minority and Low-Income Population Information in 2000.....3-34
Table 3-9 Economic and Population Information from 2000 US Census.....3-34

Figures

2-1 Property Location Map.....2-3
2-2 Site Layout Plan.....2-4

Acronyms and Abbreviations

$\mu g/m^3$	micrograms per cubic meter
AADT	annual average daily traffic
AAM	annual arithmetic mean
AGM	annual geometric mean
ASTM	American Society for Testing and Materials
bgs	below ground surface
BLM	Bureau of Land Management
BMP	best management practice
CAA	Clean Air Act
CDP	census designated place
CFR	Code of Federal Regulations
CO	carbon monoxide
CT	census tract
DAQEM	Department of Air Quality and Environmental Management
dB	decibel
dBA	A-weighted decibels
EA	Environmental Assessment
ECP	Environmental Condition of Property
EDR	Environmental Data Resources, Inc.
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FNSI	Finding of No Significant Impact
GTA	Grow the Army
HAP	hazardous air pollutant
I-15	Interstate 15
ITE	Institute of Transportation Engineers
L_{dn}	day-night average sound level

LVRMP	Las Vegas Resource Management Plan
MCAR	military construction, Army Reserve
mg/m^3	milligrams per cubic meter
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NDEP	Nevada Department of Environmental Protection
NDF	Division of Forestry
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NNSR	Nonattainment New Source Review
NO_x	nitrogen oxides
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
NVCRIS	Nevada Cultural Resources Information Services
OSHA	Occupational Safety and Health Administration
pCi/L	picoCuries per liter
PM_{10}	respirable particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$	respirable particulate matter less than or equal to 2.5 micrometers in diameter
ppm	parts per million
PPV	peak particle velocity
PSD	Prevention of Significant Deterioration
RPMs	Reasonable and Prudent Measures
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
T&E	threatened and endangered
tpy	tons per year
USACE	United States Army Corps of Engineers

USAR	United States Army Reserve
USARC	United States Army Reserve Center
USBM	US Bureau of Mines
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
UST	underground storage tank
VOC	volatile organic compound
VRM	Visual Resource Management
WMA	Wildlife Management Area

SECTION 1

Introduction

This Environmental Assessment (EA) has been prepared for the US Army Corps of Engineers (USACE), the Assistant Chief of Staff for Installation Management—Army Reserve Division, the 63rd Regional Support Command of the US Army Reserve (USAR), and the US Department of the Interior, Bureau of Land Management (BLM) to evaluate the effects of construction and operation of a US Army Reserve Center (USARC) on land managed by the BLM, located near Sloan, Clark County, Nevada. The BLM and USAR have agreed to serve as joint-lead agencies for this EA.

The objective of conducting this EA is to identify the socioeconomic and environmental impacts of the Proposed and Alternative Actions. If such impacts are found not to be significant, a Finding of No Significant Impact (FNSI) document will be prepared for the Proposed and Alternative Actions, and the USAR would proceed with constructing the USARC.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), Section 102(2)(C); the Council on Environmental Quality "Regulations for Implementing the Procedural Provisions of NEPA," 40 Code of Federal Regulations (CFR) Parts 1500 through 1508; and 32 CFR 651, "Environmental Analysis of Army Actions."

1.1 Purpose and Need

The purpose of the Proposed Action is to acquire land and construct and operate a new USARC to support a new 800-member unit as part of the Grow the Army (GTA) Initiative. These new units would be part of the Army's Combat Service Support Reset Initiative to support new brigade combat teams.

The two existing USAR facilities located in the Las Vegas area are over capacity, Nellis Air Force Base (130 percent utilization) and 2901 Sahara Avenue (180 percent utilization). Neither of the existing facilities has adequate space to support the GTA Initiative.

If the Proposed Action is not implemented, the USAR will not be able to provide adequate facilities to support the activation of new units. The lack of adequate facilities would negatively affect training and operations, resulting in a reduced ability to achieve the units' mission, which could potentially compromise readiness and security.

1.2 Public Involvement

The NEPA process is designed to inform the public of the potential environmental consequences of the Proposed and Alternative Actions and involve the public in the federal decision-making process. The USAR and BLM recognize public involvement and intergovernmental coordination and consultation as essential elements in developing an EA. Formal notification and opportunities for public participation, as well as informal coordination with government agencies and planners are incorporated into the EA process.

Agencies, organizations, and members of the public having a potential interest in the Proposed and Alternative Actions are invited to participate in the decision-making process. Agency consultation letters were submitted to the US Fish and Wildlife Service (USFWS), Nevada Department of Conservation and Natural Resources Natural Heritage Program, the Nevada State Historic Preservation Office (SHPO), and other government agencies to request information regarding the resources on and near the Property. These letters, as well as the responses received, are included in Appendix A.

The EA and draft FNSI are made available to the public for comment for a period of 30 days. A copy of the Public Notice is included in Appendix B. At the end of the 30-day period, the USAR and BLM will consider all comments submitted by individuals, agencies, and organizations. As appropriate, the USAR and BLM may then execute the FNSI and proceed with implementing either the Proposed or Alternative Action. If it is determined that implementing the Proposed or Alternative Action would result in potentially significant impacts, the USAR and BLM will publish in the *Federal Register* a Notice of Intent to prepare an Environmental Impact Statement or decide not to proceed with the Proposed or Alternative Action.

SECTION 2

Description of the Proposed Action and Alternatives

2.1 Overview

The USAR proposes to acquire land to construct and operate a USARC on approximately 45 acres of vacant land managed by the BLM to support the GTA Initiative. The BLM would grant the USAR a right-of-way to use the Property. The USAR has submitted a right-of-way application to the BLM under the authority of the Federal Land Policy and Management Act of 1976, as amended. In accordance with the regulations found in 43 CFR 2800, the BLM will make a decision to approve or deny the right-of-way application.

2.2 Proposed Action

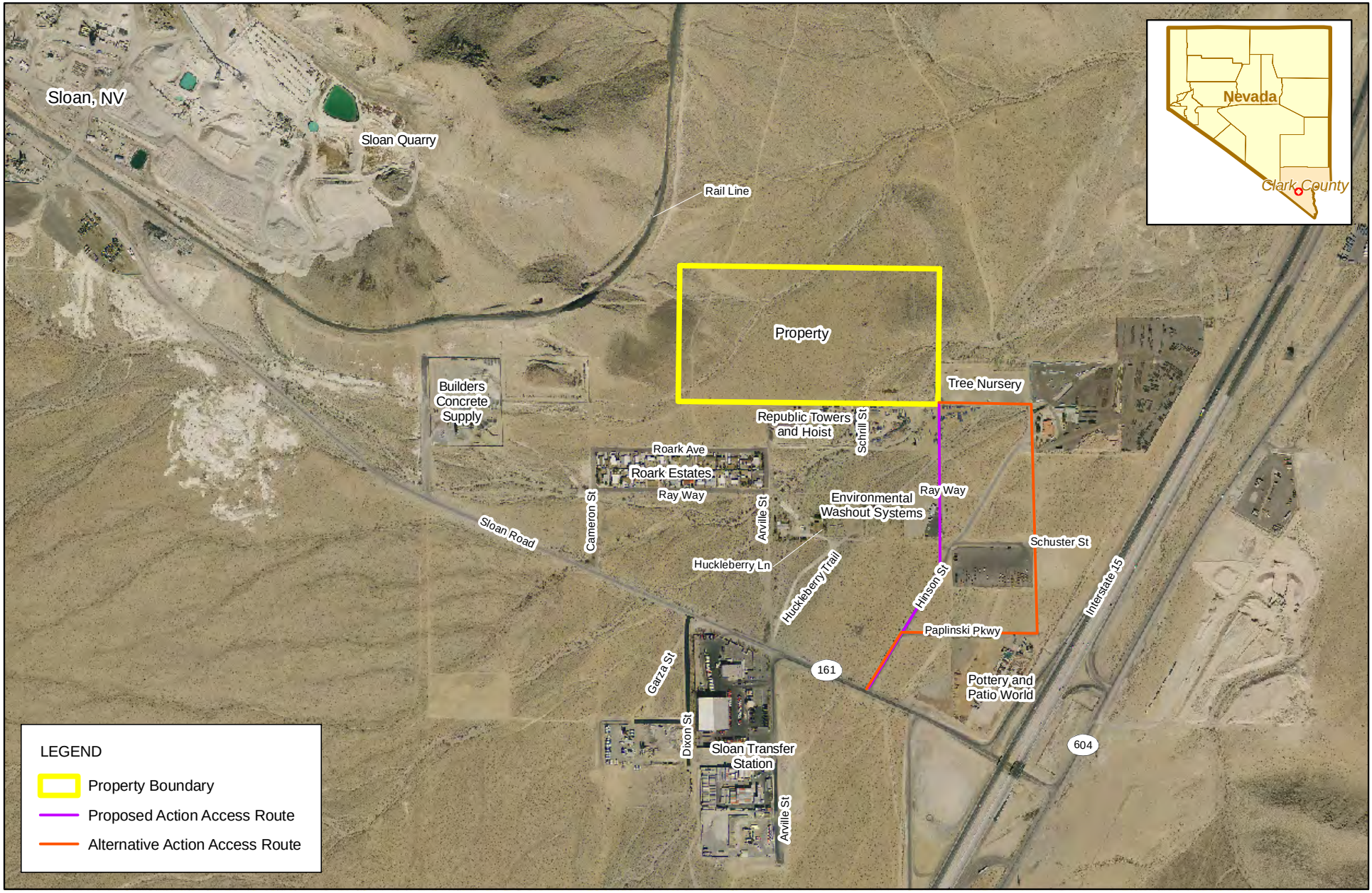
The Proposed Action includes construction and operation of a USARC in 2009-2010. The location of the Proposed Action is a 45-acre parcel of BLM-managed land located near Sloan, Nevada, hereafter referred to as the Property. The Proposed Action also includes establishing an access route to the Property, which includes acquiring rights-of-way, easements, and improving the existing roadway along Hinson Street and approximately 1,000 feet of new road from Hinson Street to the southwest corner of the Property. The Property and the Proposed Action access route are depicted on Figure 2-1.

The Proposed Action would include a 79,618-square-foot training center, a 16,540-square-foot vehicle maintenance shop, a 4,100-square-foot unheated storage building, and 204,030 square feet of organizational parking (Figure 2-2).

The USARC would include classrooms, administrative space, offices, maintenance areas, and storage areas. The buildings would be of permanent construction with reinforced concrete foundations; concrete floor slabs; structural steel frames; masonry veneer walls; standing seam metal roofs; heating, ventilation, and air conditioning; plumbing and mechanical; security; and electrical systems. Additional construction activities would include paving, fencing, general site improvements, and extending utilities from the intersection of Sloan and Hinson Roads to serve the USARC. Accessibility for the disabled would be provided. Berms, heavy landscaping, and bollards would be used to prevent access when standoff distances could not be maintained.

The parking areas would provide approximately 348 standard parking spaces for privately owned vehicles. Additional parking will be provided for military equipment parking. The military equipment parking would provide secured parking for 313 wheeled vehicles, 411 trailers, and 1 tracked vehicle. A chain-link fence would enclose the parking lot. The final surface elevation would be roughly equivalent to the existing grade.

Disturbed areas that are not within the footprint of the proposed buildings or parking lot would be landscaped and used to meet security requirements. Physical security measures or



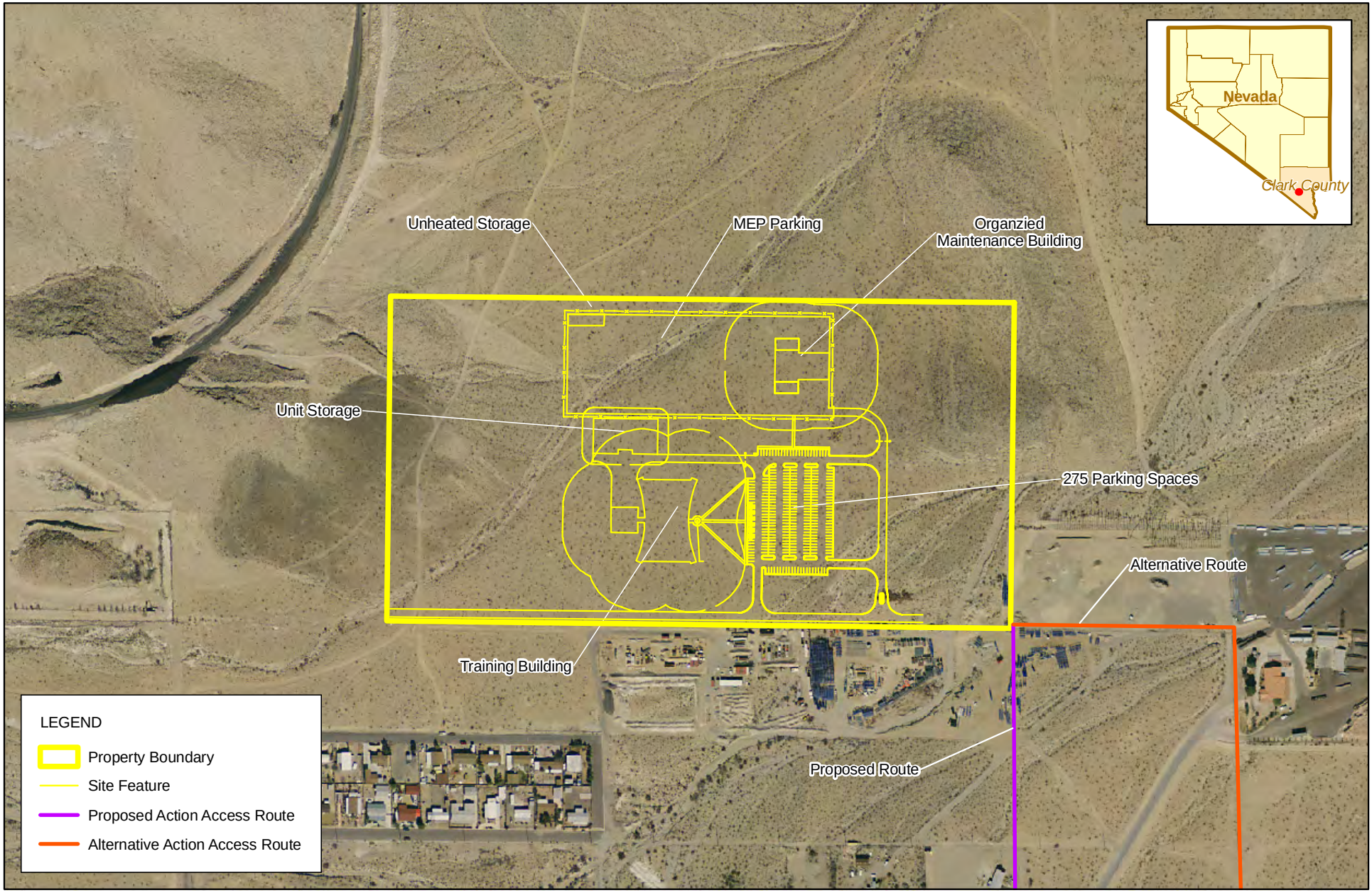
N

0 200 400
Feet

Figure 2-1
Property Location Map
Proposed U.S. Army Reserve Military Construction Site Location
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\Fig1_SloanNV_PropertyLayout85x11.mxd, Date: March 17, 2009 4:51:10 PM, User: KBUCKVOL



N

0 200 400
Feet

Figure 2-2
Site Layout
Proposed U.S. Army Reserve Military Construction Project
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\Fig2_SloanNV_SiteLayout85x11.mxd, Date: March 9, 2009 3:26:05 PM, User: KBUCKVOL

antiterrorism/force protection would be incorporated into the design and would include setbacks from roads, parking areas, and vehicle unloading areas.

2.3 Alternative Action

The Alternative Action includes the same USARC construction and operation on the Property with an alternative access route. The Alternative Action would include establishing an access route to the Property that includes acquiring rights-of-way, easements, and improving the existing roadways along Hinson Street to Paplinski Parkway to Schuster Street and approximately 750 feet of new road from Schuster Street to the Property. The Alternate Action access route is depicted on Figure 2-1.

2.4 No Action Alternative

Under the No Action Alternative, no new facilities would be constructed, and the BLM would not grant a right-of-way to the USAR. If the No Action Alternative were implemented, the USAR would not be able to provide the facilities to support the training of assigned USAR units. The lack of adequate facilities would negatively affect training and operations, resulting in a reduced ability to achieve the units' mission, which could potentially compromise readiness and security. As such, the No Action Alternative does not fulfill the project's purpose and need. It is included in this analysis because it provides a baseline against which the benefits and negative impacts of the alternatives can be compared.

2.5 Alternatives Considered and Eliminated from Further Consideration

The USAR conducted a search for potential construction sites. The criteria for site selection included a contiguous 45-acre, federally managed property within close proximity to the southwest Las Vegas Valley area with good access to major transportation corridors. The Property was the only available federally owned or managed site in the southwest Las Vegas Valley area that met the site selection criteria. Because none of the other available federally owned or managed sites located near a major transportation corridor contained at least 45 contiguous acres, they were eliminated from further consideration.

The USAR did not conduct a search for non-government- or managed alternative construction sites because there was available government-managed land near Sloan that met the site selection criteria, which is consistent with the intent of Army Regulation 140-483, Chapter 5, Section 5-6a., which states:

> "Select and acquire sites for the construction of Army Reserve facilities according to the following priorities: (1) *Priority one – Army-controlled property or other Government –owned land.* Use only suitable and available Army or government-owned land for construction for MCAR [military construction, Army Reserve] projects."

SECTION 3

Existing Environment, Environmental Consequences, and Mitigation

This section describes the existing environment that could be affected by the Proposed and Alternative Actions. Information gathered from site visits, interviews, existing documentation, and correspondence with federal, state, and local agencies was used to characterize the existing environment.

This section also identifies the potential environmental consequences of the Proposed Action, Alternative Action, and No Action Alternatives to the resources listed in Table 3-1. The table provides a screening level assessment of whether resources may be affected by an alternative and an assessment of those impacts are included in the EA. In order to evaluate the impact on each resource category, this EA has assumed disturbance of the entire 45-acre Property.

TABLE 3-1

Supplemental Authorities Considered for Inclusion in the EA

Supplemental Authority	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Air Quality			✓	The proposed project is not within an area of non-attainment or areas where total suspended particulates or other criteria pollutants exceed Nevada air quality standards. There would be temporary increased particulate matter during the project construction. Impacts assessed in EA.
Area of Critical Environmental Concern (ACEC)	✓			Resource is not present.
Cultural/Historical	✓			Impacts assessed in EA.
Environmental Justice	✓			No minority or low-income groups would be disproportionately affected by health or environmental effects.
Farmlands Prime or Unique	✓			Resource is not present.
Noxious Weeds/Invasive Non-native Species			✓	A Noxious Weed Risk Assessment would be completed and appropriate prevention measures identified and implemented during the project. Impacts assessed in EA.
Native American Religious Concerns	✓			All applicable tribal consultation requirements have been complied with and no issues were identified.
Floodplains	✓			Resource is not present.

TABLE 3-1

Supplemental Authorities Considered for Inclusion in the EA

Supplemental Authority	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Riparian/Wetlands			✓	Impacts assessed in EA.
Threatened, Endangered and Special Status Species			✓	Impacts assessed in EA.
Migratory Birds			✓	Impacts assessed in EA.
Waste – Hazardous/Solid	✓			None of the alternatives would result in creation of hazardous wastes.
Water Quality			✓	Impacts Assessed in EA.
Wild & Scenic Rivers	✓			Resource is not present.
Wilderness	✓			Wilderness Area is not present.
Forests and Rangelands (HFRA only)	✓			Project does not meet HFRA criteria.
Human Health and Safety	✓			Project will not affect human health and safety.

3.1 Land Use

3.1.1 Definition of Resource

Land use classifications characterize the natural and/or human activities that occur at, or are planned for, a given location. Natural land uses include open grassland, forest, open water, and other undeveloped areas. Developed land uses are generally classified as residential, commercial, industrial, airfield, and other types of development. Comprehensive plans, policies, and zoning regulate the type and extent of land uses allowable in specific areas and often protect sensitive resources. Land use impacts typically result from actions that negatively affect or displace an existing use, or the suitability of an area for its current, designated, or formally planned use.

3.1.2 Existing Environment

Proposed Action

The Property is undeveloped and vacant with miscellaneous debris scattered throughout. Off-road vehicle traffic has disturbed the soil in various areas. Several non-improved trails are located on the western portion of the Property. According to the Comprehensive Land Use Plan for Clark County (Clark County, 2008), the Property is planned for industrial land use and is within Community District 3, which includes those areas designated as being beyond the County's service reach (Appendix A). The soil survey for Clark County (Lato, 2006) indicated there are no prime or unique farmland soils in Clark County. No farmlands of statewide importance exist near the Property or Proposed Action access route (McKay, 2009).

Land use surrounding the Property includes a mix of undeveloped, commercial/industrial, and residential properties. A tree nursery is located to the east. Republic Towers & Hoist and a small equipment and material storage yard are located south of the Property. Roarke Estates, a single-family residential community, is located southwest of the property. Union Pacific Railroad tracks are located less than 0.1 mile west of the Property. Builders Concrete Supply (a cement production facility) is located approximately 0.25 mile west of the Property and the Sloan Quarry a limestone quarry is located approximately 0.3 mile west of the Property.

The Proposed Action access route would utilize Hinson Street and cross BLM-managed land from its point of departure from Hinson Street to near the southeast corner of the Property. This land is mostly vacant but contains gravel entrances to the Environmental Washout Systems, Inc. and Republic Tower & Hoist Services commercial properties. The access route would likely require a ROW, lease or fee purchase of property from BLM and/or private property owners. The Comprehensive Land Use Plan for Clark County (Clark County, 2008) shows the Proposed Action access route as a mix of Industrial, Business, and Design Research Park land uses within Community District 3.

Alternative Action

Land use surrounding the 45-acre Property is the same as described in the Proposed Action. Land use in the vicinity of the Alternative Action access route is similar to the Proposed Action. The Alternative Action access route measures approximately 3,800 feet. The route follows existing Hinson Street northeasterly, then east along existing Paplinski Parkway. From the existing eastern end of Paplinski Parkway, the route proceeds north along Schuster Street, then west along undeveloped land to the southeast corner of the Property.

3.1.3 Environmental Consequences

Proposed Action

The Proposed Action would remove approximately 45 acres of BLM-managed land from public use. The Proposed Action access route would convert 1.3 acres of undeveloped BLM-managed property to roadway and would impact the existing driveway to Republic Towers & Hoist and Environmental Washdown Service, Inc. Access to these businesses will be maintained during construction. The Clark County Department of Comprehensive Planning indicated the Proposed Action would require a non-conforming zoning change because the Property and Proposed Action access route are with Community District 3. The USAR will coordinate with the Department of Comprehensive Planning to resolve the zoning change; however, the USAR

is exempt from complying with local zoning ordinance requirements. Impacts to land use from implementing the Proposed Action would be consistent with those considered in the Comprehensive Land Use Plan for Clark County (Clark County, 2008).

Alternative Action

The Alternative Action would remove approximately 45 acres of BLM- managed land from public use. Implementing the Alternative Action would result in similar impacts as described for the Proposed Action. The Alternative Action access route would convert 2.6 acres of undeveloped BLM-managed property to roadway and would impact an existing driveway to the tree nursery property. Impacts to land use from implementing the Alternative Action would be consistent with the Comprehensive Land Use Plan for Clark County (Clark County, 2008).

No Action Alternative

The No Action Alternative would not result in impacts to land use because land use would not change under this alternative.

3.2 Geology and Topography

3.2.1 Definition of Resource

Geologic resources consist of the earth's surface and subsurface materials. Soils are the unconsolidated surface materials that form from underlying bedrock or other parent material. Soil drainage, texture, strength, shrink/swell potential, and rates of erosion affect the suitability of the ground to support manmade structures and facilities. Topography refers to an area's surface features including its shape, height, and depth.

3.2.2 Existing Environment

Proposed Action

Clark County is located within the Basin and Range physiographic province that is composed of alternating normal faulted mountains and valleys. The geology of the Las Vegas Valley near Sloan consists of undifferentiated Quaternary alluvium that overlies Mississippian and Devonian age limestone (Nevada Bureau of Mining and Geology, 2009).

Clark County contains variable topography because of the normal faulting of the region that began in the mid to late Cenozoic and continues through present day. The approximate average elevation of the Property is 2,680 feet above mean sea level (US Geologic Survey [USGS], 1989). Topographical variations on the Property include several dry washes which cross the Property in a southwest to northeast direction, and a hill in the northeastern corner of the Property which rises above the remaining Property elevation by approximately 40 feet.

The primary soil types on the Property and Proposed Action access route are classified as Cave gravelly fine sandy loam and Jean-Goodsprings Complex (Natural Resources Conservation Service [NRCS], 2009a). Cave soils consist of very shallow well drained soils that formed on fan terraces, fan piedmonts, and stream terraces of mixed alluvium (NRCS, 2009b). Cave soils have a maximum slope of approximately 4 percent, are excessively drained, have moderate permeability, and have high to very high runoff. Jean series soils consist of very deep,

excessively drained soils that formed in sandy alluvial or Aeolian materials over unconforming sediments from mixed rock sources (NCRS, 2009c). The Jean soils occur on erosional fan remnants, inset fans, and channels in the Mojave Desert of southern Nevada (NRCS, 2009c). Jean soils have very low runoff and rapid permeability. The Goodsprings series soils consist of shallow, well-drained soils overlying petrocalcic materials that formed in mixed alluvium primarily from limestone and sandstone on erosional fan remnants and alluvial flats (NRCS, 2009d). Goodsprings soils have slow or medium runoff with moderate permeability.

Alternative Action

The geology and topography of the Alternative Action access route is similar to that described for the Proposed Action.

3.2.3 Environmental Consequences

The Proposed Action, Alternative Action, and No Action Alternatives were evaluated to determine whether they would (1) substantially alter or damage a unique or recognized geologic feature; (2) adversely affect geologic conditions or processes; (3) result in a substantial loss of soil; or (4) expose people or property to geologic hazards that could result in injury or loss of use.

Proposed Action

The Proposed Action would require disturbance to the existing soils and changes in topography to construct building footings and provide access along the Proposed Action route. Excavation and filling would be required given the proposed shallow footings and relatively flat topography of the Property. The Proposed Action could potentially generate excess mineral material. If excess mineral material is exported from the Property, an appropriate BLM permit or mineral material contract would be required per 43 CFR 3600.

Impacts to geology would occur during construction. Blasting may be required on the northeastern portion of the Property at the base of the hill to grade the site as needed. Forces generated from blasting would cause intact rock near the blast site to vibrate, transmitting vibrations to the materials around it. The transmission of this vibration is referred to as propagation, which would radiate in all directions from the blast. After the initial blast, the intact rock and surrounding material would return to its original position without permanent deformation of the existing geology and topography. If blasting is necessary, it would be conducted in accordance with the Blasting Permit guidelines issued by the Clark County Fire Department, Fire Hazard and Preventions Services.

Construction best management practices (BMPs) would be implemented to minimize the potential for soil erosion, and impacts to the soils, geology, and topography on the Property and Proposed Action route. BMPs may include installing silt fencing and sediment traps, applying water to disturbed soil, and revegetating disturbed areas as soon as possible after disturbance. Operation of the proposed facility would not result in additional soil disturbance.

Alternative Action

Impacts to geology, topography, and soils on the Property under the Alternative Action would be the same as described for the Proposed Action.

Impacts to topography and soils from construction of the Alternative Action access route would be similar to but slightly greater than the Proposed Action because of the slightly larger impact area. There would be no impacts to geology as a result of construction of the Alternative Action access route. BMPs would be implemented to minimize soil erosion as described for the Proposed Action.

No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions. There would be no impacts to geology, soils, or topography.

3.3 Water Resources

3.3.1 Definition of Resource

Water resources include surface water and groundwater. Surface water resources include lakes, rivers, wetlands, and other jurisdictional Waters of the US. These resources can be important economic, ecological, recreational, and human health resources. Groundwater includes the subsurface hydrologic resources and is an essential resource. Groundwater properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition.

The USACE and the US Environmental Protection Agency (USEPA) define wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are identified and evaluated by three parameters: vegetation, soils, and hydrology. Wetlands generally include marshes, bogs, and similar areas" (33 CFR 328.3[b], 1984). USACE regulates wetlands under Section 404 of the Clean Water Act. In addition, the Department of the Army is directed under Executive Order 11990 to minimize the destruction, loss, and degradation of regulated wetland environments. The Executive Order also directs the preservation and enhancement of the natural and beneficial values of the regulated wetland environments.

Other water resources include the downstream water and watershed areas affected by site runoff and flood hazards associated with 100-year floodplains. Floodplains are regulated by Executive Order 11988, *Floodplain Management*, and are defined as "the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, the area subject to a 1 percent or greater chance of flooding in any given year" (that area inundated by a 100-year flood). Floodplain functions include natural attenuation of floods, water quality maintenance, groundwater recharge, as well as habitat for many plant and animal species.

3.3.2 Existing Environment

Proposed Action

Surface Water. CH2M HILL conducted a determination of jurisdictional Waters of the US (CH2M HILL, 2009a; Appendix C) on the Property and within a 200-foot-wide corridor centered on the Proposed Action access route. The Property and Proposed Action access route do not contain permanent surface water features such as streams, rivers, wetlands, or lakes; however,

eight dry washes are present. Six of the dry washes were identified as jurisdictional Waters of the US. The USACE St. George Regulatory Office issued a Jurisdictional Determination which concurred with these findings. The Jurisdictional Determination is included in Appendix A. During storm events, water in the washes flows northeast to Duck Creek, approximately 7 miles northeast of the Property. Duck Creek flows northeast to Las Vegas Wash. The Las Vegas Wash is a tributary that channels storm water, urban runoff, shallow groundwater, and treated wastewater into the Las Vegas Bay of Lake Mead. Lake Mead is an impoundment of the Colorado River, a traditional navigable waterway.

Floodplains. The Property and Proposed Action access route are not within a 100-year floodplain (Clark County Regional Flood Control District, 2009).

Wetlands. The determination of jurisdictional Waters of the US (CH2M HILL, 2009a; Appendix C) did not identify wetlands on the Property or the Proposed Action access route. This finding is consistent with the lack of wetlands on the USFWS National Wetland Inventory maps (USFWS, 2009a).

Groundwater. Clark County is located in the Las Vegas Wash Sub-basin, which is comprised of basin-fill deposits, carbonate-rock, and volcanic-rock aquifer systems. Each of the aquifer systems is recharged by precipitation falling in the surrounding mountains and these are typically interconnected. Little precipitation is available for aquifer recharge because of the arid climate of Clark County. A large portion of water used in the greater Las Vegas area is obtained from the Colorado River because of the comparatively limited recharge of groundwater (USGS, 2009a).

Based on well records from wells installed in the vicinity of the Property, the water table depth is approximately 490 feet below ground surface (bgs).

Alternative Action

Surface Water. Based on the jurisdictional determination, the Alternative Action access route does not contain surface water resources or jurisdictional Waters of the US

Floodplains. The Property and Alternative Action access route are not within a 100-year floodplain (Clark County Regional Flood Control District, 2009).

Wetlands. The determination of jurisdictional Waters of the US (CH2M HILL, 2009a; Appendix C) did not identify wetlands on the Property or the Alternative Action access route.

Groundwater. The Property and Alternative Action access route contain the same groundwater resources as described for the Proposed Action.

3.3.3 Environmental Consequences

Proposed Action

Surface Water. No adverse impacts to permanent surface waters would result from implementation of the Proposed Action because none exist on the Property or Proposed Action access route. Direct adverse impacts to jurisdictional Waters of the US could occur, depending on the final site layout. Direct impacts would be minimized by avoiding jurisdictional Waters where possible. For unavoidable impacts, the USAR will coordinate with USACE to identify

permit and mitigation requirements, including flood control measures that would safely channel flood waters around or through the Property or proper culvert sizing for road crossings along the access route.

Indirect adverse impacts to jurisdictional Waters of the US could occur from soil erosion and sedimentation during facility and access route construction and operation, as well as through an increase in impervious surfaces. Impacts from soil erosion and sedimentation would be minimized pursuant to a construction storm water permit obtained from the Nevada Division of Environmental Protection Bureau of Water Pollution Control. The permit would require preparation of a Storm Water Pollution Prevention Plan listing the BMPs to be used during construction and submittal of a Notice of Intent.

Floodplains. Floodplains will not be affected by the Proposed Action because none exist on the Property or Proposed Action access route.

Wetlands. Wetlands will not be affected by the Proposed Action because none exist on the Property or Proposed Action access route.

Groundwater. Groundwater could potentially be affected depending on the final wastewater treatment design. Any wastewater discharges will comply with NDEP requirements.

Alternative Action

Surface Water. Direct and indirect impacts to surface waters and jurisdictional Waters of the US would be similar to those described for the Proposed Action.

Floodplains. Floodplains will not be affected by the Alternative Action because none exist on the Property or Alternative Action access route.

Wetlands. Wetlands will not be affected by the Alternative Action because none exist on the Property or Alternative Action access route.

Groundwater. Groundwater could potentially be affected by the Alternative Action for the same reasons as described for the Proposed Action.

No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions, and therefore, there would be no impacts to water resources.

3.4 Air Quality

3.4.1 Definition of Resource

Under the authority of the Clean Air Act (CAA), USEPA has established nationwide air quality standards to protect public health and welfare, with an adequate margin of safety. These federal standards, known as National Ambient Air Quality Standards (NAAQS), represent the maximum allowable atmospheric concentrations for six criteria pollutants: ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide (SO_2), lead, and particulate matter (which includes respirable particulate matter less than or equal to 10 micrometers in diameter [PM_{10}] and respirable particulate matter less than or equal to 2.5 micrometers in diameter [$PM_{2.5}$]).

NAAQS include both primary and secondary standards for each criteria pollutant (Table 3-1). Primary standards protect against adverse health effects, while secondary standards protect against welfare effects such as damage to crops, vegetation, and buildings.

The criteria provided under the CAA classify the country into attainment and nonattainment areas, usually designated by county or metropolitan statistical area. Any areas not meeting NAAQS is designated as nonattainment for the specific pollutant or pollutants. In addition, designated nonattainment areas may be expanded per Section 107(d) of the CAA, which defines a nonattainment area as "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standards for the pollutant." Nonattainment status can be further classified as marginal, moderate, serious, severe, or extreme, with extreme having the highest level of NAAQS exceedances. Each state is required to demonstrate how nonattainment area will be brought into compliance with NAAQS and other components of the CAA through a State Implementation Plan.

TABLE 3-1

National Ambient Air Quality Standards
USAR Proposed Military Construction Project, Clark County, Nevada

Air Pollutant	Averaging Time	NAAQS	
		Primary	Secondary
Carbon Monoxide	8-hour	9 ppm (10 mg/m^3)	---
	1-hour	35 ppm (40 mg/m^3)	---
Nitrogen Dioxide	AAM	0.053 ppm (100 μg/m^3)	Same as primary
Sulfur Dioxide	AAM	0.03 ppm (80 μg/m^3)	---
	24-hour	0.14 ppm (365 μg/m^3)	---
	3-hour	---	0.5 ppm (1,300 μg/m^3)
Particulate Matter (PM_{10})	24-hour	150 μg/m^3	Same as primary
Particulate Matter ($PM_{2.5}$)	AAM	15 μg/m^3	Same as primary
	24-hour	35 μg/m^3	Same as primary
Ozone	8-hour [a]	0.075 ppm (2008 std)	Same as primary
	8-hour [b]	0.08 ppm (1997 std)	Same as primary
	1-hour [c]	0.12 ppm	Same as primary
Lead and Lead Compounds	Quarterly	1.5 μg/m^3	Same as primary
	Rolling 3-month average	0.15 μg/m^3	Same as primary

TABLE 3-1

National Ambient Air Quality Standards
USAR Proposed Military Construction Project, Clark County, Nevada

Air Pollutant	Averaging Time	NAAQS	
		Primary	Secondary

Notes:
Source: USEPA Web site: http://epa.gov/air/criteria.html

AAM = annual arithmetic mean; AGM = annual geometric mean; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter.
[a] This is an updated standard, effective May 27, 2008.
[b] The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as USEPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
[c] As of June 15, 2005, USEPA revoked the 1-hour ozone standard in all areas except the 8-hour ozone nonattainment Early Action Compact areas.

3.4.2 Existing Environment

Proposed Action

The Proposed Action is located in a portion of Clark County that is currently classified as nonattainment areas for the 8-hour ozone standard (Subpart 1), CO (serious), and PM_{10} (serious) (Koswan, 2009). Clark County is in attainment for all other criteria pollutants. Nevada State Legislation has delegated Clark County the authority to establish an air pollution control program. Under this authority, the Clark County Department of Air Quality and Environmental Management (DAQEM) regulates air quality in Clark County.

There are no sources of pollutant air emissions on the Property or Proposed Action access route. Nearby sources of air emissions would primarily consist of fuel combustion emissions from neighboring residential, commercial, and industrial buildings and vehicle traffic.

Alternative Action

The air quality characteristics of the Alternative Action access route are the same as those described in the Proposed Action.

3.4.3 Environmental Consequences

Potential air quality impacts associated with the Proposed and Alternative Action were evaluated based on the following factors: (1) whether potential emissions are localized and temporary; and (2) whether a reasonable potential exists for a violation of an ambient air quality standard.

Proposed Action

The Proposed Action includes construction and operation of a USARC in 2009-2010. The Proposed Action would result in a temporary and minor impact on overall air quality near the Property and Proposed Action access route during the construction phase. The operation of heavy construction equipment would increase exhaust emissions and generate dust and other construction-related particles in the air. Emissions from construction vehicles would be minimized by requirements in the construction specifications that the contractor keep

equipment maintained and operate in clean a manner. Construction dust would be reduced by implementation of fugitive dust control measures, such as applying water to exposed ground. A dust control permit would be obtained from DAQEM and the stipulations of the permit will be adhered to for the duration of the project. Construction activities are not expected to result in emissions that would violate applicable air quality control regulations.

Operation of the USARC would introduce additional emissions associated with building operations (such as a heating, ventilation, and air conditioning operation) and onsite vehicles. These emissions from USARC operations would not trigger air quality control permitting requirements nor would they increase the level of ambient air pollutant concentrations to levels that would exceed corresponding NAAQS.

The projected total air emissions from stationary sources, construction equipment, and vehicles are included in Table 3-2. The projected emissions have been estimated using typical equipment from similar construction projects. Actual specifications of fuel usages, construction equipment, and vehicle mileage have been estimated based on similar USARC construction projects. The air quality calculations used to develop these estimates are included in Appendix D.

TABLE 3-2
Summary of Proposed and Alternative Action Emissions for 2009-2010
USAR Proposed Military Construction Project, Clark County, Nevada

Activities	Annual Emissions (tons per year)						
	SO_2	NO_x	CO	PM_{10}	$PM_{2.5}$	VOC	HAPs
Operational Sources							
Heating Units	0.006	0.97	0.71	0.075	0.075	0.05	0.019
Government-Owned and Privately Owned Vehicles	4.67E-04	0.081	1.08	0.002	0.002	0.054	0.001
Total Operational Source Emissions	**0.006**	**1.05**	**1.79**	**0.077**	**0.076**	**0.11**	**0.020**
Construction Sources							
Construction Worker Commute	0.003	0.39	8.92	0.008	0.004	0.31	0.019
Asphalt	-	-	-	-	-	0.009	-
Equipment	0.048	1.34	0.73	0.11	0.11	0.13	0.032
Material Hauling	1.81E-03	1.20E+00	1.94E-01	3.31E-02	2.72E-02	4.04E-02	2.90E-06
Site Grading Fugitive Dust Emissions	-	-	-	3.52	-	-	-
Demolition Emissions	-	-	-	0	-	-	-
Total Construction Source Emissions	**0.053**	**2.92**	**9.84**	**3.68**	**0.14**	**0.49**	**0.051**
Regulatory Levels							
PSD Thresholds	100	N/A	N/A	N/A	100	N/A	10/25
NNSR Thresholds	N/A	50	70	70	N/A	50	N/A
General Conformity *de minimis* Levels	N/A	100	100	70	N/A	100	N/A

Lead is not a significant pollutant generated from this type of action. Lead emissions generated from the proposed action have been included as part of the HAP emissions.
PSD thresholds for HAPs are 10 tpy for any individual HAP and 25 tpy for any combination of HAPs.

CO – carbon monoxide; HAP – hazardous air pollutant; NO_x – nitrogen oxides; NNSR –New Source Review; PSD – Prevention of Significant Deterioration: tpy – tons per year; VOC – volatile organic compound
PM_{10} – respirable particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ – respirable particulate matter less than or equal to 2.5 micrometers in diameter

The threshold limits for the Prevention of Significant Deterioration (PSD) provisions (for attainment areas), Nonattainment New Source Review (NNSR), and General Conformity (see below) are not likely to be exceeded by implementation of the Proposed Action or Alternative Action. While the emission estimates provided in Table 3-2 are substantially lower than the thresholds.

Prevention of Significant Deterioration (PSD) - The PSD program is designed to keep an attainment area in continued compliance with the NAAQS. PSD seeks to limit the amount of

air pollutants released by operational sources of a new or modified facility in an area that meets NAAQS. Compliance with the PSD program will be required for the Proposed Action as a new source in an attainment area. Clark County considers operational emissions of 100 tons per year (tpy) or more of SO_2 and $PM_{2.5}$, and 0.6 tpy or more of lead to be a PSD major source. Additionally, Clark County has established PSD thresholds of 10 tpy for any individual hazardous air pollutant (HAP) and 25 tpy for any combination of HAPs (Clark County, 2004a). The USARC would not be a PSD major source in Clark County because its operation will not likely emit pollutants that exceed PSD thresholds (Table 3-2). Therefore, the Proposed Action will be compliant with PSD requirements.

Nonattainment New Source Review (NNSR) - NNSR approval is required for new stationary sources or modifications to a stationary source in nonattainment areas. Clark County considers NNSR major sources those with potential to emit 70 tpy or more of CO or PM_{10}, and 50 tpy or more of nitrogen oxides (NO_x) or volatile organic compounds (VOCs), precursors to ozone (Clark County Air Quality Regulations, 2004a, 2004b). The Proposed Action would not require NNSR approval because it would not emit pollutants that exceed NNSR thresholds (Table 3-2).

General Conformity. The CAA General Conformity Rule (40 CFR Parts 6, 51, and 93) requires federal agencies to make written conformity determinations for federal actions in or affecting nonattainment or maintenance areas. Proposals for federal actions must include evaluations of potential changes in direct and indirect air emissions caused by the actions and must determine whether the actions conform to applicable state and federal implementation plans.

The maximum increase in air emissions that is exempt from a detailed air quality analysis is called the *de minimis* level. If the total direct and indirect emissions of a pollutant are above the *de minimis* level, a formal general conformity determination is required for that pollutant. The *de minimis* level for each pollutant varies depending on the pollutant and the severity of the nonattainment status.

The *de minimis* criterion for the nonattainment pollutants and the estimated project-related emissions are shown in Table 3-2. The Proposed Action's estimated project-related emissions are not expected to result in an exceedance of the *de minimis* levels for NO_x, VOCs, CO, or PM_{10}. Therefore, on the basis of the *de minimis* criteria set forth in the General Conformity Rule, the Proposed Action is exempt from the CAA conformity requirements and does not require a detailed analysis of air quality. Appendix E contains a general conformity record of non-applicability for the Proposed Action.

Alternative Action

Air quality impacts from the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions, and therefore, no impacts to air quality would occur.

3.5 Natural and Biological Resources

3.5.1 Definition of Resource

Biological resources consist of plants, animals, and their habitats. These resources provide aesthetic, recreational, and socioeconomic benefits to society. This section describes plant and animal species that occur or are likely to occur in the project area.

The Endangered Species Act (ESA) of 1973, as amended, requires the government to protect threatened and endangered (T&E) plants and animals (listed species) and the habitats upon which they depend. The ESA requires federal agencies to ensure that any action it authorizes, funds, or conducts does not "adversely impact" listed species or "destroy or adversely modify" critical habitat for that species.

The Migratory Bird Treaty Act of 1918 implements various treaties and conventions between the US and Canada, Japan, Mexico, and Russia for the protection of migratory birds. Under this Act, taking, killing or possessing migratory birds is unlawful, unless permitted by regulation.

The Federal Noxious Weed Act, Public Law 93-629 (7 USC. 2801 et seq.; 88 Stat. 2148), enacted January 3, 1975, established a Federal program to control the spread of noxious weeds. Executive Order 13112 issued February 3, 1999 further defines the responsibilities of federal agencies to prevent the introduction of invasive species and provide for their control by minimizing the economic, ecological and human health impacts caused by invasive species.

3.5.2 Existing Environment

Proposed Action

Vegetation. Vegetation on the Property and Proposed Action access route is characterized as Mojave Desert scrub, predominantly composed of a creosote bush-white bursage (*Larrea tridentata – Ambrosia dumosa*) community. A sparse desert riparian community is present along the jurisdictional Waters of the US that is composed of shrubs adapted to the disturbed soils of drainages. Succulent plant species located on the Property and the Proposed Action access route include Mojave yucca (*Yucca schidigera*), diamond cholla (*Opuntia ramosissima*), and Mojave silver cholla (*O. echinocarpa*). A limestone outcrop in the eastern edge of the property supports cotton-top barrel cacti (*Echinocactus polycephalus*) and hedgehog cacti (*Echinocereus engelmannii*). A cryptogamic crust including mosses of the genera Tortula occupies several infrequently active washes.

Wildlife. The Property and Proposed Action access route support a variety of desert wildlife. Mounds and burrows on the Property and Proposed Action access route suggests the presence of small mammals/reptiles, such as the kangaroo rat (*Dipodomys* sp.). A desert tortoise (*Gopherus agassizii*) burrow was observed on a portion of the Property with friable soils, and two shelter sites were observed in the limestone outcrop in the eastern portion of the Property. Several other burrows were found in the friable soil or in the banks of dry washes. Signs of intensive digging in several small mammal/reptile mounds suggest the presence of carnivores such as the North American badger (*Taxidea taxus*). Common raven (*Corvus corax*) and desert cottontail (*Sylvilagus audubonii*) were observed during the site visit. Black-tailed jack rabbits (*Lepus californicus*) are presumed to use the Property, based on a skull that was found on the limestone outcrop. Other common desert wildlife species, such as coyotes (*Canis latrans*),

migratory birds, and others are expected to utilize the Property, although they were not observed during the site visit.

Threatened and Endangered Species

Federally Listed Species. Review of the USFWS Web site (USFWS, 2009a) and the Nevada Department of Conservation and Natural Resource Natural Heritage Program (NVNHP) database (NVNHP, 2009a, 2009b, 2009c) revealed that 15 federally threatened, endangered, or candidate species are known to occur in Clark County (Table 3-3).

TABLE 3-3
Federal Listed Threatened and Endangered Species Occurring in Clark County, Nevada
USAR Proposed Military Construction Project, Clark County, Nevada

Scientific Name	Common Name	Federal Status
Birds		
Coccyzus americanus	Yellow-billed cuckoo	Candidate
Empidonax traillii extimus	Southwestern willow flycatcher	Endangered
Rallus longirostris yumanensis	Yuma clapper rail	Endangered
Reptiles		
Gopherus agassizii	Desert tortoise (Mojave population)	Threatened
Amphibian		
Rana onca	Relict leopard frog	Candidate
Fish		
Empetrichthys latos	Pahrump poolfish	Endangered
Gila cypha	Humpback chub	Endangered
Gila elagans	Bonytail chub	Endangered
Gila seminuda	Virgin River chub	Endangered
Moapa coriacea	Moapa dace	Endangered
Oncorhynchus clarkia henshawi	Lahonton cutthroat trout	Threatened
Plagopterus argentissimus	Woundfin	Endangered
Ptychocheilus lucius	Colorado pikeminnow	Endangered
Xyrauchen texanus	Razorback sucker	Endangered
Plants		
Eriogonum corymbosum var. *nilesil*	Las Vegas Buckwheat	Candidate

Source: USFWS 2009b; NVNHP 2009a, 2009b, 2009c

The **yellow-billed cuckoo** was historically found nesting in Nevada along the lower Truckee and Carson rivers and in southern Nevada along the Colorado and Virgin rivers; however, in the most recent surveys completed in 2006, only eight birds were observed along the Lower Colorado River. Yellow-billed cuckoos occurring in the western United States breed in large

blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). Dense understory foliage appears to be an important factor in nest site selection, while cottonwood trees are an important foraging habitat in areas where the species has been studied in California (USFWS, 2008a). No riparian forests occur in the vicinity, and therefore no potentially suitable habitat for this species occurs on the Property or along potential access routes.

The **southwestern willow flycatcher** breeds and nests in widely scattered riparian habitats composed of cottonwood (*Populus fremontii*) and willow (*Salix* spp.) trees, as well as tamarisk (*Tamarix ramosissima*) thickets in the desert Southwest. The flycatcher feeds on insects within the multilayered riparian zones. In Nevada, this species can be found along the Virgin River, lower Muddy River, Colorado River, and water resources within the Pahranagat Valley (USFWS, 2004). No potentially suitable breeding, foraging, or nesting habitat for this species is located on the Property or along potential access routes because there are no riparian thickets with cottonwood or willow trees.

The **Yuma clapper rail** (*Rallus longirostris yumanensis*) occurs in Nevada along the Colorado River from Lake Mead to Mexico. The Yuma clapper rail inhabits freshwater or brackish stream sides and marshlands under 4,500 feet in elevation with dense riparian and marsh vegetation. It requires a wet substrate, such as a mudflat, sandbar, or slough bottom that supports cattail and bulrush stands of moderate to high density adjacent to shorelines (USFWS, 2009c). Yuma clapper rail movement patterns, including migration and dispersal, between the United States populations are not well understood; therefore, the location of the winter range for migrants from the United States is unknown, but presumed to be in Mexico (USFWS, 2006). No potentially suitable habitat for this species occurs on the Property or along potential access routes because there are no wetlands or dense riparian areas.

The **Mojave population of the desert tortoise** occurs in the Mojave Desert, north and west of the Colorado River in southwestern Utah, southern Nevada, southeastern California, and northwestern Arizona (USFWS, 2008b). The desert tortoise spends up to 95 percent of its life underground and occurs in a variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes, and canyons where friable soils, suitable for burrow construction is found. The desert tortoise is found from near sea level to approximately 3,500 feet in elevation in primarily creosote bush and mixed desert scrub. Desert tortoises may live 50 or more years in the wild, consuming primarily wildflowers, grasses, and cacti from which they receive almost their entire water intake (USFWS, 2008c). Nesting occurs underground in burrows, caliche caves, or other shelter sites during late spring or early summer. They hibernate for up to five months each year, becoming most active from March to June and from September to October. Suitable desert tortoise habitat occurs throughout the Property. The potential access routes provide less suitable habitat because of the ongoing disturbance, presence of existing roads, or close proximity to commercial and residential development. Three tortoise shelter sites (one burrow and two caves in the limestone outcrop) were identified during the pedestrian survey (Figure 2-2). Tortoise scat was found at the entrance of the two limestone caves. Several other burrows were found on the Property and one near the Alternative Action access route that may have been formed by desert tortoise, but have been abandoned and are now likely used by other burrowing mammals or reptiles.

Las Vegas buckwheat is a genetically unique subspecies of buckwheat located in Clark and Lincoln counties, Nevada. Las Vegas buckwheat is woody perennial shrub up to 4 feet high

with very conspicuous small yellow flowers in late September and early October. Las Vegas buckwheat prefers gypsum soils. Typically, the gypsum soil outcroppings occupied by Las Vegas buckwheat are sparsely vegetated with bare, exposed soils covered with a cryptogammic soil crust (Mrowka, 2008). Although a specific vegetation classification for Las Vegas buckwheat habitat does not exist, buckwheat habitat can generally be differentiated from typical Mojave creosote-bursage scrub and saltbush scrub by the presence of gypsophiles (gypsum obligate species) and other gypsoclines that occasionally share habitat. These species, include the Las Vegas bearpoppy, Parry sandpaper plant (*Petalonyx parryi*), Palmer's phacelia (*Phacelia palmeri*), wingseed blazing star (*Mentzelia pterosperma*), and froststem suncup (*Camissonia multijuga*) (Mrowka, 2008). No potentially suitable habitat exists for this species on the Property or along potential access routes because gypsum soils are not present.

USFWS has designated areas in southern Nevada as critical habitat for the southwestern willow flycatcher and the desert tortoise. Approximately 18.6 miles of the Virgin River from the Arizona border to the Overton Wildlife Management Area (WMA) in Nevada was designated as critical habitat for the southwestern willow flycatcher (50 CFR Part 17). The Overton WMA is located approximately 80 miles northeast of the Property and supports desert riparian habitat, associated with the floodplain of the Muddy and Virgin rivers, dense shrubbery of washes close to the local groundwater table, wet meadows, ponds, and portions of Lake Mead. There is no southwestern willow flycatcher habitat (riparian thickets or similar vegetation) in or nearby the Property or potential access routes.

USFWS designated 14 desert WMAs as critical habitat for the desert tortoise (59 CFR 5820-5846). The desert WMAs encompass over 6 million acres in portions of the Mojave and Colorado deserts. The closest designated desert WMA to the Proposed Action area is northeast of Las Vegas along the west side of Interstate 15 (I-15), approximately 30 miles northeast of the Property (USFWS, 2008d).

A biological evaluation was prepared (CH2M HILL, 2009b; Appendix F) in accordance with the USAR's guidance document, *Standing Operating Procedure: Implementing Section 7 ESA Requirements for Real Property Exchanges*. Section 7 of the ESA requires federal agencies to consult with USFWS to ensure any action they authorize, fund, or carry out will not jeopardize federally listed species. The biological evaluation concluded that the Property contains suitable habitat for the desert tortoise and does not contain suitable habitat for other federally listed species.

State-Listed Species. State-listed animal species are protected in Nevada as designated by the Nevada Department of Wildlife (NDOW), which establishes the authority for the Department to issue permits with special conditions to mitigate negative effects to state-listed species and state-designated critical habitats. NDOW provided a list of seven species (Table 3-4) of notable conservation interest that could potentially occur at or near Property or Proposed Action access route (Appendix A).

State-listed plant species are protected in Nevada as designated by the Nevada Department of Conservation and Natural Resources, Division of Forestry (NDF), which establishes the authority for the Division to issue permits with special conditions to mitigate negative effects to state-listed species and state-designated critical habitats. Correspondence with the NDF indicated that no state-listed plant species were known to inhabit the Property or the Proposed Action access route (Appendix A).

TABLE 3-4
State-Listed Species
USAR Proposed Military Construction Project, Clark County, Nevada

Scientific Name	Common Name	State Status
Mammals		
*Myotis thysanoides**	Fringed myotis	Protected
*Antrozous pallidus**	Pallid bat	Protected
*Euderma macilatum**	Spotted bat	Protected - Threatened
*Corynorhinus townsendii**	Townsend's big-eared bat	Protected - Sensitive
Birds		
Athene cunicularia	Burrowing Owl	Protected
Reptiles		
Heloderma suspectum	Gila monster – lizard	Protected
Gopherus agassizi	Desert tortoise	Protected - Threatened

* Expected use of the Property is primarily for foraging (Appendix A).

State-listed species were not observed during site reconnaissance, but evidence of desert tortoise use of the Property was observed as described above.

The NDOW indicated habitat exists for the state-listed burrowing owl and Gila monster. The NDOW also indicated that foraging habitat is available for the bat species listed on Table 3-4.

Alternative Action

Natural and biological resources on the Property and the Alternative Action access route are similar to those described for the Proposed Action.

3.5.3 Environmental Consequences

The assessment of effects on natural and biological resources considered direct and indirect impacts to T&E species, designated critical habitat, or otherwise ecologically sensitive areas. Impacts were assessed based on whether the proposed project would result in any of the following: (1) potential "take" of a T&E species, as defined by the ESA; (2) loss or impairment of sensitive or other native habitats, including wetlands or riparian corridors; (3) interference with the movement of native resident or migratory wildlife; or (4) introduction or spread of invasive or otherwise undesirable non-native species.

Proposed Action

Vegetation. The Proposed Action could potentially cause incremental increases in noxious weeds through the transportation of equipment to the USARC. The USAR will prepare a noxious weed management plan and submit to the BLM for approval prior to construction. The noxious weed management plan will provide mitigation and control measures that will minimize the risk of introducing noxious weeds.

The USAR will coordinate with a BLM botanist regarding the salvage of succulent plant species (cacti and yucca) prior to construction.

The Proposed Action would not impact known federal or state-listed plant species or critical plant habitat because none have been identified on the Property or Proposed Action access route.

Wildlife. The USAR has completed formal consultation with the USFWS under Section 7 of the ESA (Appendix A). The USFWS indicated the Proposed Action is within the scope of the Las Vegas Valley Programmatic Biological and Conference Opinion and is therefore not likely to jeopardize the continued existence of the Mojave population of the desert tortoise. The USFWS issued an Amended Biological Opinion, which included an Incidental Take Statement (Appendix A). Based on the recent survey data and known occurrence records near the Property, USFWS estimated that five desert tortoise may be taken as a result of the Proposed Action. The USFWS also provided several Reasonable and Prudent Measures (RPMs) with terms and conditions necessary and appropriate to minimize take of the desert tortoise. The USAR will implement these RPMs and associated terms and conditions provided in the USFWS's Amended Biological Opinion included in Appendix A. If blasting is required, the USAR will contact BLM to determine the appropriate course of action for avoidance and mitigation measures to the desert tortoise, including the need for additional tortoise surveys.

The Proposed Action may affect the state-protected burrowing owl. The NDOW recommended impact minimization measures for migratory birds, including the burrowing owl, that may breed and nest on the Property by restricting construction during the reproductive season (March 15 – August 30). If this is not practicable, the NDOW recommends a biologist survey the Property prior to construction (Appendix A). If migratory nesting birds are found during the preconstruction survey, those areas of the Property containing nesting migratory birds would not be disturbed or cleared until the young have naturally vacated the nest.

The Proposed Action may affect the state-protected Gila monster. The NDOW indicated that detection of a Gila monster through biological surveys is not effective. However, NDOW requested adherence to the Department's protocol for encounters with the Gila monster, which include being able to properly identify the Gila monster, reporting Gila monster sightings to the NDOW, being aware of the dangerous Gila monster bite, and being aware of the protective measure provided under state law (Appendix A).

Impacts to the state-listed bat species will not occur because construction of the USARC would not decrease foraging opportunities.

Alternative Action

Impacts to biological resources, including vegetation, wildlife, and threatened or endangered species under the Alternative Action would be similar to that described for the Proposed Action.

No Action Alternative

No new construction or development activities would occur under the No Action Alternative; therefore, the No Action Alternative would not impact natural or biological resources.

3.6 Cultural Resources

3.6.1 Definition of Resource

Cultural resources are defined as prehistoric or historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic architectural or engineering resources, and other traditional resources.

Section 106 of the National Historic Preservation Act (NHPA) requires that federal agencies identify whether historic or cultural resources that are listed, or potentially eligible for listing, on the National Register of Historic Places (NRHP) could potentially be affected by the Proposed Action. The NRHP is an index of America's historic places. It identifies districts, sites, buildings, structures, and objects that are significant in American history, architecture, engineering, and culture.

3.6.2 Existing Environment

Proposed Action

CH2M HILL conducted a cultural resource inventory to investigate the presence of cultural resources within the Property and Proposed Action access route (CH2M HILL, 2009c). The inventory included a review of the Nevada Cultural Resources Information Services (NVCRIS) database files and a Class III pedestrian survey.

A literature review identified more than 25 inventories and 11 previously recorded cultural resources within a 1-mile radius; however, no previous work has been conducted and no known sites are located on the Property. With the exception of historic cans found in two washes, no cultural resources were identified on the Property or potential access routes during the inventory.

The known cultural resources located near the Property are historic, and most are associated with the construction of the nearby railroad. The lack of historic sites on the Property could be attributed to the distance between the Property and the railroad. While historic era cans are located within the larger washes that cross the Property, they are out of context and do not meet the definition of a site nor add to our knowledge of the past in a meaningful way.

Under the BLM State Protocol Agreement developed pursuant to 36 CFR Part 800 (the programmatic agreement between the BLM and SHPO), the BLM is the lead federal agency for administering compliance with Section 106 of the NHPA. The BLM forwarded its Section 106 finding based on the Class III Cultural Resource Inventory that indicated no historic properties would be affected by the Proposed Action. In addition, the BLM has determined there are no Native American issues concerning the undertaking (Appendix A).

Alternative Action

The cultural resource inventory also reviewed the presence of cultural resources along the Alternative Action access route. No prehistoric or historic archaeological resources were encountered during the course of the investigation, and no aboveground resources that might qualify for nomination to the NRHP were present on the Alternative Action access route. The BLM concurrence with these findings is included in Appendix A.

3.6.3 Environmental Consequences

Proposed Action

The cultural resource investigation concluded no prehistoric or historic archaeological resources were encountered during the course of the investigation, and no aboveground resources that might qualify for nomination to the NRHP were present on the Property and Proposed Action access route; therefore, the Proposed Action will not affect cultural resources. If, during construction, unanticipated archaeological deposits or human remains are encountered, construction activities would be halted in that location and appropriate authorities and specialists would be immediately contacted.

Alternative Action

The cultural resource investigation concluded no prehistoric or historic archaeological resources were present on the Alternative Action access route and no aboveground resources that might qualify for nomination to the NHRP were present, therefore, the Alternative Action would not impact cultural resources.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, the No Action Alternative would not impact cultural resources.

3.7 Noise

3.7.1 Definition of Resource

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with human activities. Public annoyance is the most common impact associated with exposure to elevated noise levels. Noise associated with construction is evaluated in this section to assess impacts. The actual impact of noise is not a function of loudness alone. The frequency, content, time of day during which noise occurs, and duration of noise also are important factors in determining impacts. The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, or dissatisfaction
- Interference with activities such as speech, sleep, or learning
- Physiological effects such as startling and hearing loss

The physical characteristics of sound include intensity, frequency, and duration. Sound is created by acoustic energy, which produces pressure waves that travel through air and are sensed by the eardrum. As the acoustic energy increases, the intensity or amplitude of these pressure waves increase, and the ear senses louder noise. The unit used to measure the intensity of sound is the decibel (dB).

Based on numerous sociological surveys and recommendations of federal interagency councils, the most common noise benchmark referred to is a day-night average sound level (L_{dn}) of 65 A-weighted decibels (dBA). A weighting emphasizes sounds in the range of human hearing (USEPA, 1974). This threshold is often used to determine residential land use compatibility around airports, highways, or other transportation corridors. The L_{dn} measure is a cumulative noise metric that integrates multiple time-varying noise events. This metric sums the individual

noise events and averages the resulting level over a specified length of time; thus, it is a composite metric that considers the maximum noise levels, duration of the events, number of events that occur, and time of day during which they occur. This metric adds 10 dB to those events that occur between 10 p.m. and 7 a.m. to account for the increased intrusiveness of noise events that occur at night, when ambient noise levels are normally lower.

USEPA identified an L_{dn} of 55 dBA as a level that is protective of public health and welfare and has an adequate margin of safety (USEPA, 1974). An L_{dn} of 75 dBA is a threshold above which effects other than annoyance may occur, but is 10 to 15 dBA below levels where hearing damage is a risk (Occupational Safety and Health Administration [OSHA] 1983).

3.7.2 Existing Environment

Proposed Action

The noise environment on the Property and adjacent lands is dominated by roadway noise generated by traffic on I-15 and Sloan Road. No permanent existing noise sources are located on the Property. Additional noise sources near the Property and Proposed Action access route include the Republic Towers & Hoist storage area, the Sloan Transfer Station, and Builder's Concrete Supply. Clark County does not have a noise ordinance in place (Clark County, 2008).

Alternative Action

Noise characteristics surrounding the Alternative Action access route are similar to those described in the Proposed Action.

3.7.3 Environmental Consequences

Proposed Action

The US Department of Transportation (USDOT) provides methodology for estimating potential noise levels in *Highway Construction Noise: Measurement, Prediction, and Mitigation* (USDOT 1977). Activities typically involved in construction would generate noise levels ranging from 82 to 86 dBA at a distance of 100 feet (Table 3-5, USDOT, 1977).

TABLE 3-5
Typical Construction Equipment Noise Levels
USAR Proposed Military Construction Project, Clark County, Nevada

Construction Activity	Loudest Equipment	Maximum Noise Level at 100 Feet (dBA)
Clearing and grubbing	Bulldozer, backhoe	83
Earthwork	Scraper, bulldozer	85
Foundation	Backhoe, loader	82
Superstructure	Crane, loader	83
Base preparation	Truck, bulldozer	85
Paving	Paver, truck	86

Source: USDOT 1977
dBA – A-weighted decibel

Noise levels in Table 3-5 were used to estimate anticipated construction noise levels at the nearest receptor to the Property and access route. Sound intensity decreases in proportion with the square of the distance from the source. Typically, sound levels for a point source will decrease 6 dBA for each doubling of distance (USDOT, 2009). Therefore, construction noise at Roark Estates, approximately 400 feet south of the Property, would be between 70 and 74 dBA. Persons outdoors at nearby residences and businesses would experience annoyance from a difficulty in conducting conversations during the construction period of 365 days. Residential and small business structures typically provide an attenuation of 15 to 25 dBA relative to outdoor noise levels (USEPA, 1974). With the additional attenuation provided by the structures, no impacts to indoor activities near the Property and access route from construction noise would be anticipated. To further minimize the potential for impacts, construction activities could be limited to typical working hours to the extent possible and the contractor would be required to maintain construction equipment in accordance with manufacturer's specifications to keep unnecessary noise to a minimum.

Noise associated with the operations of the USARC would increase slightly compared to the existing conditions. The noise sources would mainly include operation of light-duty vehicles that would enter and exit the premises, and occasional movement of heavy-duty vehicles onsite. Noise created by these vehicles would be similar to noise generated on I-15 and Sloan Road. While onsite, military vehicles and equipment would be inactive, with the exception of movement of vehicles for maintenance purposes. Vehicular maintenance operations would be performed inside the maintenance garage. As these activities are similar to existing conditions near the Property and Proposed Action access route, the activities and operations proposed at the USARC would not unreasonably disturb the public and would be consistent with surrounding development.

Blasting may be required on the northeastern portion of the Property during site grading. An analysis of potential blasting-induced impacts was conducted at the site to provide the estimated charge weight per delay capable of meeting the construction requirements while limiting impacts to the surrounding environment. Impacts caused from blasting are based on the charge weight per delay used, the type of subsurface material (e.g. soil, sandstone, limestone, granite) in and near the blasting area, the distance to the nearest receptor, and the ground vibration criteria allowable at that receptor.

Clark County Fire Department, Fire Hazard and Prevention Services has established ground vibration criteria for intermittent blasting activities. Blast-induced ground variations are limited to a maximum peak particle velocity (PPV) of 0.5 inches per second at an occupied structure or building. The nearest occupied structure or building to the potential blasting area is approximately 700 feet to the southeast. Based on geotechnical borings conducted at the site, the type of material near the blasting area includes alluvial sands and gravels to depths ranging from 5 to 83 feet bgs.

The US Bureau of Mines (USBM) Scaled Distance formula was used to calculate the charge weight per delay that could be used without exceeding the PPV of 0.5 inches per second limitation required by Clark County. Specific values needed to calculate the PPV that are dependent upon the type of material present in and near the blasting area (alluvial sands and gravels) were not available; therefore, values associated with comparable material (sandstone and sandstone-alluvium) were taken from available literature and used for this analysis. In addition, an analysis using a default USBM formula, typically used when no site-specific

geological information is present, was also completed. The default USBM formula provides the most conservative estimate of charge weight per delay (Table 3-6).

TABLE 3-6
US Bureau of Mines Scaled Distance Formula
USAR Proposed Military Construction Project, Clark County, Nevada

Prediction Formula	PPV	Charge Weight	B	K	Geology
USBM	0.30	1000	0.825588	50.4234	Sandstone
	0.50	815	1.98017	1483.48	Sandstone - Alluvium
USBM - English Units	0.50	360	1.6	160	No specific information

PPV= peak particle velocity
B = slope of the best-fit straight line of the PPV vs. Scaled Distance
K= intercept on the particle velocity axis when the Scaled Distance equals 1.

The B and K values for all formulas, with the exception of the USBM case for no specific site information, are based on metric-unit inputs.

Results from the analysis indicated the maximum allowable charge weight per delay in sandstone or sandstone-alluvium conditions is over 500 pounds, and the default USBM evaluation allows up to 360 pounds per delay. Preliminary analyses have indicated these charge weights would be sufficient to accomplish site grading. If blasting is necessary, the USAR will ensure it will be conducted without exceeding the PPV of 0.5 inches per second, as required by Clark County.

Alternative Action

Noise impacts from implementing the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, no noise impacts would occur.

3.8 Visual Resources

3.8.1 Definition of Resource

Visual resources refer to the natural and constructed features that give a particular environment its aesthetic qualities. In undeveloped areas, landforms, water surfaces, and vegetation are the primary components that characterize the landscape. Constructed elements such as buildings, fences, and streets also may be visible. These may dominate the landscape or be relatively unnoticeable. Attributes used to describe the visual resource value of an area include significant views or vistas, landscape character, perceived aesthetic value, and uniqueness.

In developed areas, the natural landscape is likely to provide a background for more obvious constructed features. The size, forms, materials, and functions of buildings, structures,

roadways, and infrastructure, along with surrounding landscape features, define the visual context of an area. These features form the overall impression that an observer receives of its visual character. Some urbanized areas or developments prescribe standards or design guidelines for achieving or preserving visual quality. In urban areas, there may be ordinances or zoning provisions that guide physical development.

In non-urban contexts, laws such as the National Wild and Scenic Rivers Act and management objectives protect scenic quality of some special areas. Federal land managers also clarify the scenic value of lands in accordance with federal land management regulations.

The BLM prepared the Las Vegas Resource Management Plan (LVRMP) to manage resources on public lands in Clark and Nye counties. The LVRMP manages visual resources through the Visual Resource Management (VRM) Program with the objectives of retaining the quality of the visual environment and reducing the visual impact of development activities. The VRM Program classifies lands into distinct areas and manages them based on their visual character.

3.8.2 Existing Environment

Proposed Action

The Property and Proposed Action access route are designated by the LVRMP VRM Class III areas (BLM, 1998). Class III areas are characterized as areas that may be altered, but "not to the extent that they attract or focus attention of the casual viewer" (BLM, 1998). The visual setting surrounding the Property and Proposed Action access route include undeveloped land to the north with views of the surrounding mountains. Commercial properties and I-15 are visible to the east. A mix of residential, commercial, and light industrial properties is visible to the south.

Alternative Action

The visual characteristics of the Property and Alternative Action access route are similar to those described for the Proposed Action and classified by the LVRMP as Class III areas.

3.8.3 Environmental Consequences

Proposed Action

The Proposed Action is consistent with the developed nature of the area south of the Property. The Proposed Action also is consistent with the LVRMP VRM Class III designation because the USARC would be a visual extension of adjacent developed properties and would not attract or focus the attention of the casual observer. The Nevada Division of State Lands (Appendix A) requested the USAR consider using lighting and building materials that minimize visual impacts. The USAR will consider the use of lighting and building materials that minimize visual impacts when possible.

Alternative Action

Impacts to the visual and aesthetic resources for the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, no impacts to visual resources would occur.

3.9 Transportation and Traffic

3.9.1 Definition of Resource

Transportation and traffic resources generally include the roadway and street systems surrounding the affected environment. This section also considers the movement of vehicles, pedestrian and bicycle traffic, and mass transit.

3.9.2 Existing Environment

Proposed Action

The Property is located approximately 0.4 mile north of Sloan Road and approximately 0.5 mile west of I-15. The Proposed Action includes establishing an access route from Sloan Road to the southeastern corner of the Property (Figure 2-1). The Proposed Action access route originates at the intersection of Sloan Road and Hinson Street and follows Hinson Street northeast to a point at which a new north/south access road would be constructed to access the southeastern corner of the Property.

I-15 is the primary north-south highway south of Las Vegas. The 2007 annual average daily traffic (AADT) count on I-15 near the Sloan Road interchange was 46,000 vehicles (Nevada Department of Transportation [NDOT] 2007). The 2007 AADT count on Sloan Road near the intersection with I-15 was 3,200 vehicles (NDOT, 2008). The 2007 combined on ramp/off ramp AADT for I-15 at the Sloan Road Interchange was 6,800 vehicles (NDOT, 2006). The AADT counts for roads north of Sloan Road have not been calculated.

Alternative Action

The Alternative Action also includes establishing an access route from Sloan Road to the Property. The Alternative Action would include establishing an access route to the Property that includes acquiring rights-of-way, easements, and improving the existing roadways along Hinson Street to Paplinski Parkway to Schuster Street and approximately 750 feet of new road from Schuster Street to the Property (Figure 2-1). Traffic conditions surrounding the Alternative Action are similar to those described in the Proposed Action.

3.9.3 Environmental Consequences

Factors considered in determining whether a traffic-related impact could occur, include the extent to which the Proposed and Alternative Actions would result in (1) an increase in vehicle trips that would disrupt or alter local circulation patterns; (2) lane closures or other impediments to traffic; (3) activities that would create potential traffic safety hazards; (4) increased conflict with pedestrian and bicycle routes or fixed-route transit; and (5) parking demand that exceeds the supply.

Proposed Action

Implementation of the Proposed Action access route would require upgrades to Hinson Street and construction of a new road from Hinson to the southeast corner of the Property. Clark County will operate and maintain these access roads and has applied for a right-of-way from BLM, separate from this project. Clark County would continue to operate and maintain control of these roads following completion of the project. While upgrading Hinson Street, constructing the new road, and during construction of the USARC, construction equipment and personnel would enter and leave the Property from Sloan Road. Access to area businesses will be maintained during construction. No lane closures or other disruptions to circulation patterns are required for construction, and no activities that would create traffic hazards are anticipated. The increased traffic would have a minor traffic impact on streets and roads near the Property but is unlikely to impact the level of service on these roads.

The USARC will employ approximately 47 full-time employees. Based on the Institute of Transportation Engineers (ITE) Trip Generation Handbook, for a single tenant office building (3.62 multiplier), the full time employees will result in at least 170 new vehicle trips per day. The personnel at the site would increase to a maximum of 348 during drill weekends, which, based on the ITE handbook (2.125 multiplier) would result in at approximately 740 additional vehicle trips per day during training weekends (three separately focused training weekends per month) (USAR, 2009). Additional minor vehicle trips would be expected from visitors, mail service, and vendors. Impacts on training weekends would be minor because the access roads would be upgraded and/or constructed for the purpose of the USAR operation. The highest USAR traffic volumes would typically occur on weekends when the traffic volumes in the surrounding area are lowest.

Large vehicle and truck traffic would be heaviest on drill weekends and intermittent special operations. Convoy training is not expected to be conducted at the USARC. Sufficient parking would be provided at the site to accommodate the vehicular needs. Parking spaces for assigned USAR personnel, as well as for assigned military vehicles and equipment, are provided in the project design. On-street parking would not be required and would not be constructed under the Proposed Action.

Alternative Action

Impacts to traffic for the Property under the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, no impacts to transportation or traffic would occur.

3.10 Utility Infrastructure

3.10.1 Definition of Resource

Utility infrastructure refers to the system of public works that provides the underlying framework for a community. Utilities include electric, gas, telephone, sanitary sewer, and domestic water.

3.10.2 Existing Environment

Proposed Action

Nevada Energy provides electricity to the developed parcels south of the Property. Embarq provides phone services to the developed parcels south of the Property (Turner, 2009). Natural gas, municipal water, or waste water treatment service is not provided to the Sloan area. The residential and commercial entities in the Sloan area use alternate energy sources and withdraw groundwater through well systems. The nearest natural gas supply facility is provided by Southwest Gas Corporation and is located approximately 2 miles northeast of the Property near the I-15/St. Rose Parkway interchange (Trombley, 2009). The nearest municipal water source is available from the Las Vegas Valley Water District, with a terminus approximately 1.75 miles northeast of the Property near the I-15/St. Rose Parkway interchange (Jordan, 2009). The Las Vegas Valley Water District also indicated that a reservoir is planned for construction approximately 1 mile southeast of the Property. The reservoir is also being considered as a potential water source to the Property. The reservoir is currently at 60% design. The construction contract is scheduled to be awarded in November 2009 with construction scheduled for completion in May 2011. The reservoir is scheduled to be fully operational by the fall of 2011 (Jacobson, 2009). The Clark County Water Reclamation District indicated that wastewater generated from the nearby residences and businesses is likely treated by a privately operated wastewater package treatment plant (Starman, 2009). The USAR is coordinating with the NDEP for approval of a septic field or wastewater package treatment plant. Discharges from the wastewater package treatment plant will meet NDEP standards.

Alternative Action

The utility services available for the Alternative Action are the same as those described for the Proposed Action.

3.10.3 Environmental Consequences

Proposed Action

Utilities required to support the USARC would be brought to the Property along the Proposed Action access route. The USAR would coordinate availability for the required utility loads and service with the respective utility companies once the final USAR design is advanced sufficiently to proceed with this action. All utility connections would be performed in accordance with the requirements of the respective utility companies and local building officials. If environmental clearance through NEPA will be required for extension of the utilities to the Sloan Road and Hinson Street intersection, the clearance would be conducted under a separate action when sufficient information is available to complete the NEPA analysis.

Alternative Action

Impacts to utilities under the Alternative Action would be similar to those described in the Proposed Action.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, no impacts to utilities would occur.

3.11 Hazardous Materials

3.11.1 Definition of Resource

This section describes the affected environment associated with hazardous materials used or stored at the Property. The terms "hazardous materials" refers to any item or agent (biological, chemical, or physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.

Issues associated with hazardous materials typically center around waste streams, underground storage tanks (USTs), aboveground storage tanks, and the storage, transport, use, and disposal of pesticides, fuels, lubricants, and other industrial substances. When such materials are improperly used, they can threaten the health and well-being of wildlife species, habitats, soil and water systems, and humans.

Radon also was considered as part of the affected environment associated with hazardous materials. The Indoor Radon Abatement Act of 1988 established a long-term goal that indoor air be as free from radon as the ambient air outside buildings. In general, elevated indoor radon gas concentrations may present public health concerns.

3.11.2 Existing Environment

Proposed Action

An Environmental Condition of Property (ECP) report was prepared in conjunction with this EA to assess the current environmental conditions at the Property and potential access routes (CH2M HILL, 2009d; Appendix G). The findings of the ECP were based upon a visual reconnaissance, interviews with the current Property owner, surrounding property personnel, Nevada Department of Environmental Protection (NDEP) personnel, Southern Nevada Department of Environmental Health personnel, and a review of historical information.

No hazardous materials are currently stored on the Property, and there is no evidence that hazardous materials have been used at the Property. No hazardous material use, storage, or disposal information was identified in the regulatory database information or historical documentation reviewed for the Property.

No known landfills are located on the Property, and there is no evidence to suggest that the Property was historically used for solid waste disposal. No evidence of excavation or fill activities was observed on the historical aerial photographs. Interviews with the property owner indicated that the Property has been used as public open land since 1848 (CH2M HILL, 2009d).

No structures or foundations of former structures were observed at the Property, and there was no indication of any structure on historical aerial photographs. The current owner indicated there were never structures located on the property (CH2M HILL, 2009d). No USTs are present at the Property, and no records were found indicating hazardous spill occurrences at the Property.

Environmental Data Resources, Inc. (EDR) conducted a search of available environmental records. According to the EDR report (EDR, 2009), one property was identified within the American Society for Testing and Materials (ASTM) minimum search distance from the

Property specified by ASTM E1527-05; however, the ECP report (CH2M HILL, 2009d; Appendix G) concluded that there was no evidence of recognized environmental conditions in connection with the Property.

CH2M HILL reviewed information on the USEPA Map of Radon Zones Web site (USEPA, 2008). Clark County, Nevada, was listed as a Zone 3 county with an average predicted indoor radon screening level of less than 2 picoCuries per liter (pCi/L), less than the USEPA action level of 4 pCi/L. Radon information from nearby sites was found through the EDR report (EDR, 2009).

Alternative Action

The existing conditions for the Alternative Action are similar to those described for the Proposed Action.

3.11.3 Environmental Consequences

Proposed Action

Potential hazardous materials at the USARC are not expected to negatively impact human health or the environment. During construction of the USARC, no hazardous wastes are expected to be generated. The ECP concluded that no known hazardous materials, which would require remedial action, are known to exist at the Property or potential access routes (CH2M HILL, 2009d).

The Proposed Action would not likely include a release of hazardous materials; however, it is likely that hazardous materials would be used and stored at the USARC to support unit-level and area-wide maintenance activities. Table 3-7 provides a list of hazardous materials typically used in a facility similar to the USARC.

TABLE 3-7
Hazardous Materials Likely Stored at the USARC [a]
USAR Proposed Military Construction Project, Clark County, Nevada

Solvent-based cleaners	Solder/Flux
Aqueous cleaners / degreasers	Dry cell batteries
Household cleaners	Lithium batteries
Paints	Wet cell lead acid batteries
Primer	Kerosene
Lacquer thinner / mineral spirits	Propane
Sealant	Diesel fuel
Epoxy resin	Gasoline
Insect repellant	Oil
Starter fluid	Hydraulic fluid
Inhibitor	Gear oil
Antifreeze	Grease
Transmission fluid	Tire and rim lubricant
Brake fluid	Used oil / oil filters
Power steering fluid	Denatured alcohol
Fuel additive	Isopropyl alcohol
Refrigerant	Methanol
Refrigeration lubricant	Acetone
Sulfuric acid	Xylene (paint component)

[a] Storage of these hazardous materials would be rotational in nature to support maintenance activities at the site.

Once operational, small amounts of hazardous materials associated with maintenance activities would likely be generated and managed at the USARC. Such wastes would be disposed of regularly through a contracted hazardous waste hauler in accordance with applicable federal and state waste management regulations. No long-term storage or onsite disposal of these materials would occur. In addition, no onsite disposal of materials would occur. Staff would be trained in proper spill prevention and spill handling and containment. Containment and cleanup equipment and materials would be available onsite. Since both municipal and hazardous wastes would be removed from the USARC by licensed handlers and disposed of at appropriate offsite locations, there would be no impact caused by the generation of hazardous wastes under the Proposed Action. The volume of both municipal and hazardous wastes generated is not anticipated to place a measurable burden on regional disposal sites.

The anticipated radon level at the USARC is not expected to negatively impact human health or the environment. Elevated radon levels are not anticipated to be a consequence of the Proposed Action because no basements are proposed and the design of the buildings would incorporate adequate ventilation.

Alternative Action

Impacts from implementing the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, no impacts to human health or the environment from hazardous materials would be anticipated.

3.12 Public Services

3.12.1 Definition of Resource

Public services refer to the availability and capacity of police, fire, and hospital services in relation to the Proposed Action area.

3.12.2 Existing Environment

Proposed Action

Clark County operates a police and fire department that provide police and fire protection services to Sloan, Nevada. The nearest hospital, St. Rose Dominican Hospital, is located at 3001 St. Rose Parkway, Las Vegas, Nevada, approximately 6 miles north of the Property.

Alternative Action

Existing public services would be the same for the Alternative Action as under the Proposed Action because they are located adjacent to each other and are under jurisdiction of the same emergency facilities.

3.12.3 Environmental Consequences

Proposed Action

The Proposed Action would impact public services in the region; however, the additional services needed to support the USARC would be minor compared to the existing need of the Clark County service area.

Alternative Action

Impacts of the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative, therefore, the No Action Alternative would not create adverse impacts on public services.

3.13 Socioeconomics and Environmental Justice

3.13.1 Definition of Resource

Socioeconomic resources are defined as the basic attributes associated with the human environment, particularly population and economic activity. Population is described as the magnitude, characteristics, and distribution of people. Economic activity is described in terms of employment distribution, personal income, and business growth.

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was enacted ensure fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, tribal, and local programs and policies.

For purposes of this analysis, the region of influence for environmental justice analysis consists of the census tracts (CTs) considered as locations for the USARC. For purposes of comparison, reference area populations are defined as those in Clark County, Nevada and the state of Nevada. Because there are larger populations of individuals of Hispanic origin and other minorities in Clark County than in most of Nevada and the US, "disproportionate" impacts are defined as impacting a meaningfully greater population, which is considered approximately 20 percentage points higher, than the reference population.

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was introduced in 1997 to prioritize the identification and assessment of environmental health risks and safety risks that may affect children, and to ensure that federal agency policy, programs, activities, and standards address environmental risks and safety risks to children. These risks are defined as "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest." This section identifies the distribution of children and locations where the number of children in the affected area may be proportionately high (for example, schools, childcare centers, etc.).

3.13.2 Existing Environment

Proposed Action

The Property is located in CT 6088, which is primarily composed of country land, and Enterprise Census Designated Place (CDP), which incorporates the Sloan area, country land, and a portion of Las Vegas. Most of the population is located within the city limits.

Table 3-8 displays the population demographics for the CT 6088, Enterprise CDP, Clark County, and the state of Nevada. Clark County has a larger proportion of Hispanics and Latinos than the state of Nevada, CT 6088, and Enterprise CDP. The Property is not in an area with meaningfully greater minority populations than the reference areas.

TABLE 3-8
Minority and Low-Income Population Information in 2000
USAR Proposed Military Construction Project, Clark County, Nevada

Geographic Area	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Hispanic*	Two or More Races
Census Tract 6088 (Proposed Action)	92.4%	0.9%	0.1%	1.0%	0.4%	9.0%	2.8%
Enterprise CDP (Proposed Action)	82.3%	3.2%	0.8%	5.2%	0.5%	12.0%	4.0%
Clark County	71.6%	9.1%	0.8%	5.3%	0.5%	22.0%	4.2%
State of Nevada	75.2%	6.8%	1.3%	4.5%	0.4%	19.7%	3.8%

Source: US Census Bureau, 2000 Census *Totals do not equal 100% because those of Hispanic origin may be of multiple races.

Table 3-9 presents population, economic information, and proportion of the population living below the poverty level in Enterprise CDP, Clark County, and the state of Nevada. Economic data were not available for CT 6088. Enterprise CDP has comparable proportions of low-income populations to those in Clark County and the state of Nevada. The population of low-income persons is less than the reference populations. The Property is not in an area with a meaningfully greater proportion of low-income populations than the reference areas.

TABLE 3-9
Economic and Population Information from 2000 US Census
USAR Proposed Military Construction Project, Clark County, Nevada

Area	Population from 2000 US Census	Estimated Total Population in 1999	Median Household Income*	Percent of Population Below Poverty Level**
Census Tract 6088 (Proposed Action)	800	782	NA	NA
Enterprise CDP	14,676	14,361	$50,667	8.6%
Clark County	32,458	31,675	$37,860	12.4%
State of Nevada	1,998,257	1,969,713	$44,581	10.5%

Source: US Census Bureau, 2000 Census
* In 1999 US Dollars
** Based on 1999 US Dollars
NA – not applicable

The Property is undeveloped and no children or other individuals reside at the Property. The nearest public school to the Property is Steve Schorr Elementary School, located approximately 4 miles north of the Property. The school has approximately 818 students (Greene, 2009). The surrounding area contains medium-density development with a variety of land uses including residential, commercial, and light industrial. No locations in the vicinity of the Property were identified that would likely contain proportionally high numbers of children.

Alternative Action

The local economy, children, and environmental justice populations under the Alternative Action would be the same as those described for the Proposed Action.

3.13.3 Environmental Consequences

Proposed Action

The Proposed Action would not result in adverse impacts to socioeconomic resources or disproportionate impacts to environmental justice populations. Impacts potentially extending off the Property include air quality (dust from construction), noise (from construction and traffic) and traffic (increased traffic during construction and drill weekends). The USAR will use standard construction BMPs to reduce construction and operation impacts.

The Proposed Action would not result in environmental health or safety risks that may disproportionately affect children. There would be no families or resident populations living on the USARC after implementation of the Proposed Action; therefore, no dependent children under the age of 18 would reside onsite. Access to construction areas would be controlled, thereby limiting unauthorized access by any person, including children. All members of the public would be prohibited from accessing the facility without authorization.

The Proposed Action would result in temporary beneficial impacts on the local economy from construction activities. Operation of the USARC would also be a minor beneficial economic impact to the local community from trainee purchases of goods and services in the Sloan area.

Alternative Action

Impacts to local economy, children, and environmental justice populations under the Alternative Action would be similar to those described for the Proposed Action.

No Action Alternative

No new construction or development activities are proposed under the No Action Alternative; therefore, no disproportionate impacts to environmental justice populations or children would occur.

3.14 Cumulative Effects

Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. Principles of cumulative effects analysis in the Council on Environmental Quality guide, *Considering Cumulative Effects under the National Environmental Policy Act* (Council on Environmental Quality 1997) states: "for cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be evaluated meaningfully."

The potential for cumulative effects to the environment from the Proposed Action was evaluated by reviewing other projects within the vicinity of the Property that could affect the same environmental resources as the Proposed Action. Actions that were considered include construction projects that were recently completed, are currently underway, or are planned within the foreseeable future.

3.14.1 Past and Future Actions

Based on a review of aerial photographs dating back to 1972, development within a mile radius of the Property includes a mine to the west, residential areas to the southwest, and various commercial/industrial operations to the south and east.

Based on the Comprehensive Land Use Plan for Clark County, land in the vicinity of the Property has been approved for industrial use and has been classified as Industrial, Business, and Design Research Park land use. Although no projects are currently underway in the vicinity of the Property, transportation projects and additional facilities will likely be developed in the future.

The USAR has plans to expand the facilities on the Property in 2013. The extent of the future expansion and ultimate configuration of the USARC is presently unknown; however, this EA has evaluated disturbance of the entire Property. A subsequent NEPA analysis would be necessary to evaluate the impacts from future expansion to resources such as threatened and endangered species.

3.14.2 Summary of Impacts

As described in this EA, implementation of the Proposed and Alternative Actions would not affect cultural resources. Therefore, the Proposed Action would not contribute to cumulative effects to this resource.

The Proposed and Alternative Action in combination with past and future actions could result in cumulative impacts to land use, soils, water resources, air quality, natural and biological resources, noise, visual resources, transportation and traffic, utility infrastructure, hazardous materials, public services, and socioeconomic and environmental justice. The USAR will use BMPs and adhere to permit requirements to minimize these impacts to the quality of the human or natural environment.

Implementation of the No Action Alternative would not result in a change in current conditions; therefore, the No Action Alternative would not result in cumulative effects to the quality of the human or natural environment.

SECTION 4

Conclusions

This EA contains a comprehensive evaluation of the existing conditions and environmental consequences of the Proposed and Alternative Actions. The conclusions in this section are applicable to the Proposed Action, Alternative Action, and No Action Alternatives.

Three categories of potential impacts were evaluated: direct, indirect, and cumulative. A direct impact is the result of direct action to the built and natural environment. An indirect impact is one that affects the natural and built environment beyond the "footprint" of the project. A cumulative impact results from the incremental or collective impact to the built and natural environment by the project when combined with other past, present, and planned actions.

4.1 Direct Impacts Identified

Based on the analyses presented in this EA, it is anticipated that implementation of either the Proposed or Alternative Action would result in permanent changes to environmental resources, including land use, soils, water resources, air quality, natural and biological resources, noise, visual resources, transportation and traffic, utility infrastructure, hazardous materials, public services, and socioeconomic and environmental justice. The USAR would use BMPs, adhere to permit requirements, and limit construction to normal daytime work hours to minimize direct impacts. No direct impacts would occur under the No Action Alternative.

4.2 Indirect Impacts Identified

The environmental resources that could be indirectly impacted by implementing either the Proposed or Alternative Action include water resources as a result of erosion and sedimentation, air quality as a result of temporary construction activities and facility operation, natural and biological resources as a result of developing the Property, noise as a result of temporary construction activities, and socioeconomics as a result of purchases of goods and services by trainees. The USAR would use BMPs, adhere to permit requirements, and limit construction to normal daytime work hours to minimize indirect impacts. No indirect impacts would occur under the No Action Alternative.

4.3 Cumulative Effects Identified

There would be limited cumulative effects to the human or natural environment from the Proposed Action or Alternative Action.

4.4 NEPA Determination

The Proposed and Alternative Action would provide the necessary training facilities for the USAR, including adequate classroom, administrative, storage and parking facilities to support all assigned unit requirements and operations. Impacts from construction of both alternatives

have been evaluated and presented in this EA. The USAR and BLM will consider all comments submitted by individuals, agencies, and organizations during the 30-day public review period. As appropriate, the USAR and BLM may then execute the FNSI and proceed with implementing either the Proposed or Alternative Action. If it is determined that implementing the alternatives would result in potentially significant impacts, the USAR and BLM will publish in the Federal Register a Notice of Intent to prepare an Environmental Impact Statement or not to proceed with the Proposed or Alternative Action.

SECTION 5

List of Preparers

5.1 Preparers

Name	Education and Experience	Primary Responsibilities
Nicholas Moore	B.S., Environmental Biology/Zoology, Institute of Ecology, Michigan State University, 2000; 9 years experience in ecosystem restoration and environmental permitting and planning.	Staff Scientist; task management, data collection, analysis, and preparation of EA text.
Grant Koster	B.S., Geology, College of Liberal Arts and Sciences, Grand Valley State University, 2007; 2 years experience.	Staff Scientist; data collection, analysis, and preparation of EA text.
Amy Schrlau	B.S., Biology, Muhlenberg College, Allentown, PA, 1998; M.E.S., Environmental Biology, University of Pennsylvania, 2006; 3 years experience.	Staff Scientist; data collection, analysis, and preparation of EA text.
Cynthia Newman	M.S., Biology, University of Denver, 2004; B.A., cum laude, Environmental Studies, Conservation Biology, Middlebury College, 2000; 5 years experience.	Staff Scientist; data collection, analysis, responsible for conducting Jurisdictional Determination, and preparation of the Biological Evaluation.
Aaron Fergusson	M.B.A, Business Administration, University of Phoenix, 2004; M.A., Anthropology with an emphasis in Archaeology, BYU, 2000; B.A., Anthropology with an emphasis in Archaeology, BYU, 1996; 13 years experience.	Professional Archaeologist responsible for conducting cultural resource surveys and preparation of the cultural resource report.
Kimberly Watkins	B.S., Chemical Engineering, Howard University, 1996; 9 years experience in air quality management and site characterization.	Associate Engineer; data collection, analysis, and preparation of air quality.
Brenda Miller	B.A., Communications, Michigan State University, 1996; 22 years experience editing and writing.	Technical Editor; edited EA text.
Geof Spaulding	Ph.D., Geological Sciences – Philosophy, University of Arizona, 1981; M.S., Geological Sciences, University of Arizona, 1972; B.A. Anthropology, University of Arizona, 1972; more than 30 years of technical experience.	Senior Consultant; data collection, analysis and consultation.
Timothy Watkins	M.S., Fisheries and Wildlife, Michigan State University, 1992; B.A., Biology, Hillsdale College, 1987; 17 years experience in ecosystem restoration and environmental permitting and planning.	NEPA Manager; technical review and quality assurance of the EA.
Thomas Hutchinson	B.S., Forensic Science, Michigan State University, 1989; 20 years experience in environmental assessments and hazardous waste investigation and remediation.	Project Manager; technical review and quality assurance of the EA.

5.2 Persons and Agencies Contacted

The following agencies and groups were contacted regarding the project:

- US Fish and Wildlife Service
- Bureau of Land Management
- US Army Corps of Engineers, St. George District Office
- Nevada State Historic Preservation Office
- Nevada Department of Wildlife
- Nevada Division of Forestry
- Nevada Department of Conservation and Natural Resources
- Nevada Division of Environmental Protection
- Nevada Department of Administration
- Nevada State Clearinghouse
- Public Utilities Commission of Nevada
- Clark County Water Reclamation District
- Clark County Department of Air Quality and Environmental Management
- Clark County Regional Flood Control District
- Clark County Development Services Department
- Clark County Comprehensive Planning
- Las Vegas Valley Water District

The following Native American Tribal Agencies were contacted regarding the project:

- Fort Mojave Indian Tribe
- Chemehuevi Indian Tribe
- Colorado River Indian Tribes
- Hopi Indian Tribe
- Hualapai Indian Tribe
- Las Vegas Paiute Tribe
- Twenty-Nine Palms Band of Mission Indians
- Moapa Band of Paiute
- Paiute Indian Tribe of Utah
- Kaibab Paiute Tribe
- Pahrump Paiute Tribe

Copies of agency coordination documentation are located in Appendix A.

5.3 Distribution List

Federal Agencies

US Fish and Wildlife Service
US Environmental Protection Agency, Region 9

State Agencies

Nevada State Historic Preservation Division
Nevada Department of Conservation and Natural Resources

Local Agencies

Clark County

SECTION 6

References

Bureau of Land Management. 1998. Las Vegas Resource Management Plan and Final Environmental Impact Statement.

CH2M HILL. 2009a. Final Wetlands and Jurisdictional Waters of the USUS Report, USUS Army Reserve Proposed Military Construction Project, Sloan, Clark County, Nevada.

CH2M HILL. 2009b. Final Biological Evaluation, US Army Reserve Proposed Military Construction Project, Sloan, Clark County, Nevada.

CH2M HILL. 2009c. Final Cultural Resource Inventory Report, US Army Reserve Proposed Military Construction Project, Sloan, Clark County, Nevada.

CH2M HILL. 2009d. Final Environmental Condition of Property Report, US Army Reserve Proposed Military Construction Project, Sloan, Clark County, Nevada.

Clark County Department of Air Quality and Environmental Management (DAQEM). 2004a. Air Quality Regulations, Sections 0 and 12, October 2004. Website: http://www.accessclarkcounty.com/depts/daqem/aq/rules/pages/regs.aspx.

Clark County Department of Air Quality and Environmental Management (DAQEM). 2004b. Air Quality Regulations, Section 55, December 2004. Website: http://www.accessclarkcounty.com/depts/daqem/aq/rules/pages/regs.aspx.

Clark County Department of Air Quality and Environmental Management (DAQEM). 2004c. Air Quality Regulations, Section 94, July 2004. Website: http://www.accessclarkcounty.com/depts/daqem/aq/rules/pages/regs.aspx.

Clark County Regional Flood Control District. 2009. Website: http://flowstone.ccrfcd.org/website/arcrfc/viewer.htm.

Clark County, Nevada. 2008. Comprehensive Land Use Plan for Clark County. Website: http://www.accessclarkcounty.com/depts/comprehensive_planning/compplanelements/Pages/conservation_element_ch1_agriculture.aspx. January 30, 2009.

Clark County Multiple Species Habitat Conservation Plan. 2000. Final Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement for Issuance of a Permit to Allow Incidental Take of 79 Species in Clark County, Nevada.

Clark County, Nevada. 2008. Clark County Department of Comprehensive Planning. Website: http://www.accessclarkcounty.com/depts/comprehensive_planning/compplanelements/Documents/TransElement08.pdf

Council on Environmental Quality. 1997. *Considering Cumulative Effects under the National Environmental Policy Act.*

Environmental Data Resources, Inc. 2009. *Radius Map Report*.

Federal Emergency Management Agency (FEMA). 2009. FEMA Panel Number 32003C2925D Available online at http://msc.fema.gov. January.

Greene, Kathy. 2009. Personal Communication between Kathy Greene, Attendance Clerk for Steve Schorr Elementary School and Nicholas Moore of CH2M HILL. March 16.

International Society of Explosive Engineers (ISEE). 1998. Blasters Handbook, 17th Edition, Cleveland, OH.

Jacobson, Laura. 2009. Personal communication between Laura Jacobson, Las Vegas Valley Planning Manager, and Nick Moore of CH2M HILL. April 16, 2009.

Jordan, Roger. 2009. Personal Communication between Roger Jordan, Las Vegas Valley Water District and Alicia Esmay of CH2M HILL. February 27.

Klein, Bob. 2009. Personal Communication between Bob Klein, Senior Planner for the Clark County Department of Comprehensive Planning and Amy Schrlau of CH2M HILL. March 2.

Koswan, John. 2009. Personal communication between John Koswan, Clark County Department of Air Quality and Environmental Management and Kim Watkins of CH2M HILL. February 20.

Lato, Leon J. 2006. Soil Survey of Clark County Area, Nevada. United States Department of Agriculture, Natural Resource Conservation Service.

McKay, Tom. 2009. Personal communication between Tom McKay, United States Department of Agriculture and Grant Koster of CH2M HILL. March 16.

Mrowka, Rob. 2008. *A petition to list the Las Vegas buckwheat (Erigonun corymbosum var. nilesii) as Threatened or Endangered under the US Endangered Species Act*.

Natural Resources Conservation Service (NRCS). 2009a. Web Soil Survey: Clark County, Nevada. Website: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed on January 21, 2009.

Natural Resources Conservation Service (NRCS). 2009b. Cave Series. Website: http://www2.ftw.nrcs.usda.gov/osd/dat/C/CAVE.html. Accessed on January 21, 2009.

Natural Resources Conservation Service (NRCS). 2009c. Jean Series. Website: http://www2.ftw.nrcs.usda.gov/osd/dat/J/JEAN.html. Accessed on January 21, 2009.

Natural Resources Conservation Service (NRCS). 2009d. Goodsprings Series. Website: http://www2.ftw.nrcs.usda.gov/osd/dat/G/GOODSPRINGS.html. Accessed on January 21, 2009.

Nevada Bureau of Mines and Geology (NBMG). 2009. Geologic Map of Nevada. Website: http://www.nbmg.unr.edu/dox/stewart2.pdf. January 27, 2009.

Nevada Department of Conservation and Natural Resource Natural Heritage Program (NVNHP). 2009a. Federal Endangered Species in Nevada. Website: http://heritage.nv.gov/endanged.htm. Accessed on January 21, 2009.

Nevada Department of Conservation and Natural Resource Natural Heritage Program (NVNHP). 2009b. Federal Threatened Species in Nevada. Website: http://heritage.nv.gov/threatnd.htm. Accessed on January 21, 2009.

Nevada Department of Conservation and Natural Resource Natural Heritage Program (NVNHP). 2009c. Federal Candidate Species in Nevada. Website: http://heritage.nv.gov/candidat.htm. Accessed on January 21, 2009.

Nevada Department of Transportation. 2006. Annual Average Daily Traffic Counts. Website: http://www.nevadadot.com/

Nevada Department of Transportation. 2007. Annual Average Daily Traffic Counts. Website: http://www.nevadadot.com/

Nevada Department of Transportation. 2008. Annual Average Daily Traffic Counts. Website: http://www.nevadadot.com/

Occupational Safety and Health Administration (OSHA). 1983. Occupational Noise Exposure Standard. Code of Federal Regulations Title 29, Part 1910, Sec. 1910.95 (29 CFR 1910.95).

Starman, Cal. 2009. Personal communication between Cal Starman, Clark County Water Reclamation District and Alicia Esmay of CH2M HILL. February 27.

Trombley, Eric. 2009. Personal communication between Eric Trombley, Southwest Gas and Alicia Esmay of CH2M HILL. February 27.

Turner, Michelle. 2009. Personal communication between Michelle Turner, Embarq and Alicia Esmay of CH2M HILL. February 27.

US Census Bureau. 2000. Clark County and City of Las Vegas 2000 Census Profiles. Website: http://factfinder.census.gov. Accessed on January 30, 2009.

US Department of Transportation (USDOT). 1977. *Highway Construction Noise: Measurement, Prediction, and Mitigation.*

US Department of Transportation (USDOT), Federal Highway Administration. 2009. *Highway Traffic Noise Analysis and Abatement Policy – Noise Fundamentals.*

US Environmental Protection Agency (USEPA). 1974. Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety. EPA Report 550/9-74-004.

US Environmental Protection Agency (USEPA). 2008. Map of Radon Zones. Website: http://www.epa.gov/radon/zonemap/nevada.htm. Accessed on January 28, 2009.

US Fish and Wildlife Service (USFWS). 2004. Southwestern Willow Flycatcher Fact Sheet. Website:http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/SWWF/SWWFC.pdf. Accessed on January 22, 2009.

US Fish and Wildlife Service (USFWS). 2006. Yuma Clapper Rail 5-Year Review. Website: http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/YumaClapperRail/5-Year%20Review%209-06.pdf. Accessed on January 22, 2009.

US Fish and Wildlife Service (USFWS). 2008a. Species Assessment and Listing Priority Assignment Form Yellow-billed Cuckoo. Website: http://ecos.fws.gov/docs/candforms_pdf/r8/B06R_V01.pdf. Accessed on January 21, 2009.

US Fish and Wildlife Service (USFWS). 2008b. Website: http://www.fws.gov/nevada/desert_tortoise/dt_life.html. Accessed on January 22, 2009.

US Fish and Wildlife Service (USFWS). 2008c. Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*). Website: http://www.fws.gov/nevada/desert%5Ftortoise/documents/recovery_plan/DraftRevRP_Mojave_Desert_Tortoise.pdf. Accessed on January 22, 2009.

US Fish and Wildlife Service (USFWS). 2008d. Endangered, Threatened, Proposed and Candidate Species, Nevada Counties. Website: http://www.fws.gov/Nevada/protected_species /species_by_county.html. Accessed on January 28, 2009.

US Fish and Wildlife Service (USFWS). 2009a. National Wetlands Inventory Wetland Data on Google Earth. Accessed on January 21, 2009.

US Fish and Wildlife Service (USFWS). 2009b. Website: http://www.fws.gov/nevada/protected%5Fspecies/species_by_county.html. Accessed on January 21, 2009.

US Geologic Survey. 1989. 7.5' Quadrangle Map: Sloan, Nevada.

US Geologic Survey (USGS). 2009a. Ground Water Atlas of the United States: California, Nevada. January 22.

US Geologic Survey (USGS). 2009b. Groundwater Watch. Website: http://groundwaterwatch.usgs.gov/AWLSites.asp. January.

Appendix A
Correspondence with Agencies and Native American Organizations

AGENCY COORDINATION LETTERS

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Public Utilities Commission of Nevada
101 Convention Center Drive, Suite 250
Las Vegas, Nevada 89109

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Nevada Department of Wildlife
Southern Region
4747 Vegas Dr.
Las Vegas, NV 89108

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Nevada Department of Administration
Blasdel Building, Room 200
209 East Musser St.
Carson City, NV 89701

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Nevada Division of Forestry
Southern Regional Headquarters
4747 West Vegas Drive
Las Vegas, Nevada 89108

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Nevada Division of Environmental Protection
Bureau of Water Pollution Control
Stormwater Coordinator
2030 E Flamingo Ave Ste 230
Las Vegas, Nevada 89119

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Nevada Department of Conservation & Natural Resources
Division of Water Resources - Las Vegas Office
400 Shadow Lane, Suite 201
Las Vegas, Nevada 89106

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Clark County Water Reclamation District
5857 E. Flamingo Rd.
Las Vegas, NV 89122

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Clark County Regional Flood Control District
600 S. Grand Central Parkway, Suite 300
Las Vegas, Nevada 89106-4511

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Clark County Development Services Department
4701 West Russell Road
Las Vegas, NV 89118

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

REPLY TO
ATTENTION OF:

February 23, 2009

Clark County Department of Air Quality &
Environmental Management
500 S. Grand Central Parkway.
P.O. Box 551776
Las Vegas, Nevada 89155-1776

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63D Regional Support Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63D Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, 63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

March 23, 2009

Clark County Comprehensive Planning
Mr. Ron Gregory
500 S. Grand Central Pkwy
PO Box 555210
Las Vegas, NV 89155-5210

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

Dear Mr. Ron Gregory,

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63rd Regional Readiness Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

Printed on Recycled Paper

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63rd Regional Readiness Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

Wayne J. Alves
WAYNE J. ALVES
Chief, Environmental Division
63rd Regional Support Command

Enclosure

DEPARTMENT OF THE ARMY
HEADQUARTERS, 63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

March 23, 2009

DEPARTMENT OF ADMINISTRATION
209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

Dear Nevada State Clearinghouse,

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63rd Regional Readiness Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Please send your responses to:

Mr. Wayne Alves
Chief, Environmental Division
63rd Regional Readiness Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63rd Regional Support Command

Enclosure

Printed on Recycled Paper

DEPARTMENT OF THE ARMY
HEADQUARTERS, 63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

March 23, 2009

Las Vegas Valley Water District
1001 South Valley View Boulevard
Las Vegas, NV 89153

RE: Environmental Assessment - Early Coordination Notification
U.S. Army Reserve - Proposed Military Construction Project
Sloan, Nevada

Dear Las Vegas Valley Water District,

The U.S. Army Reserve, Assistant Chief of Staff Installation Management, Operations Directorate Reserve Division and 63rd Regional Readiness Command, and the U.S. Bureau of Land Management are preparing an Environmental Assessment (EA) for a military construction (MILCON) project located near Sloan, Nevada.

The proposed action includes property acquisition and construction of an Army Reserve Center, which includes a training building, organizational maintenance shop, unheated storage building, and organizational parking to accommodate the training of U.S. Army Reserve soldiers. The location of the proposed MILCON project is depicted on attached Figure 1.

During the course of the EA, detailed investigations will be undertaken to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being considered. These SEE impacts will be documented in the EA as required by the National Environmental Policy Act (NEPA). In addition to meeting the requirements of NEPA, compliance with other relevant environmental regulations (Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, etc.) will be accomplished during the EA.

As part of the early coordination and NEPA scoping process, we are identifying key issues that will need to be addressed as part of this study. Please provide your comments relative to the following three topics:

- Specific issues or geographic areas of concern, based on your expertise or regulatory jurisdiction.
- Available technical information regarding these issues.
- Mitigation or permitting requirements that may be necessary for project implementation.

In order to sufficiently address key project issues while maintaining the project schedule, we are requesting that you provide a written response to this letter within 30 days of receipt.

Printed on Recycled Paper

Please send your responses to:

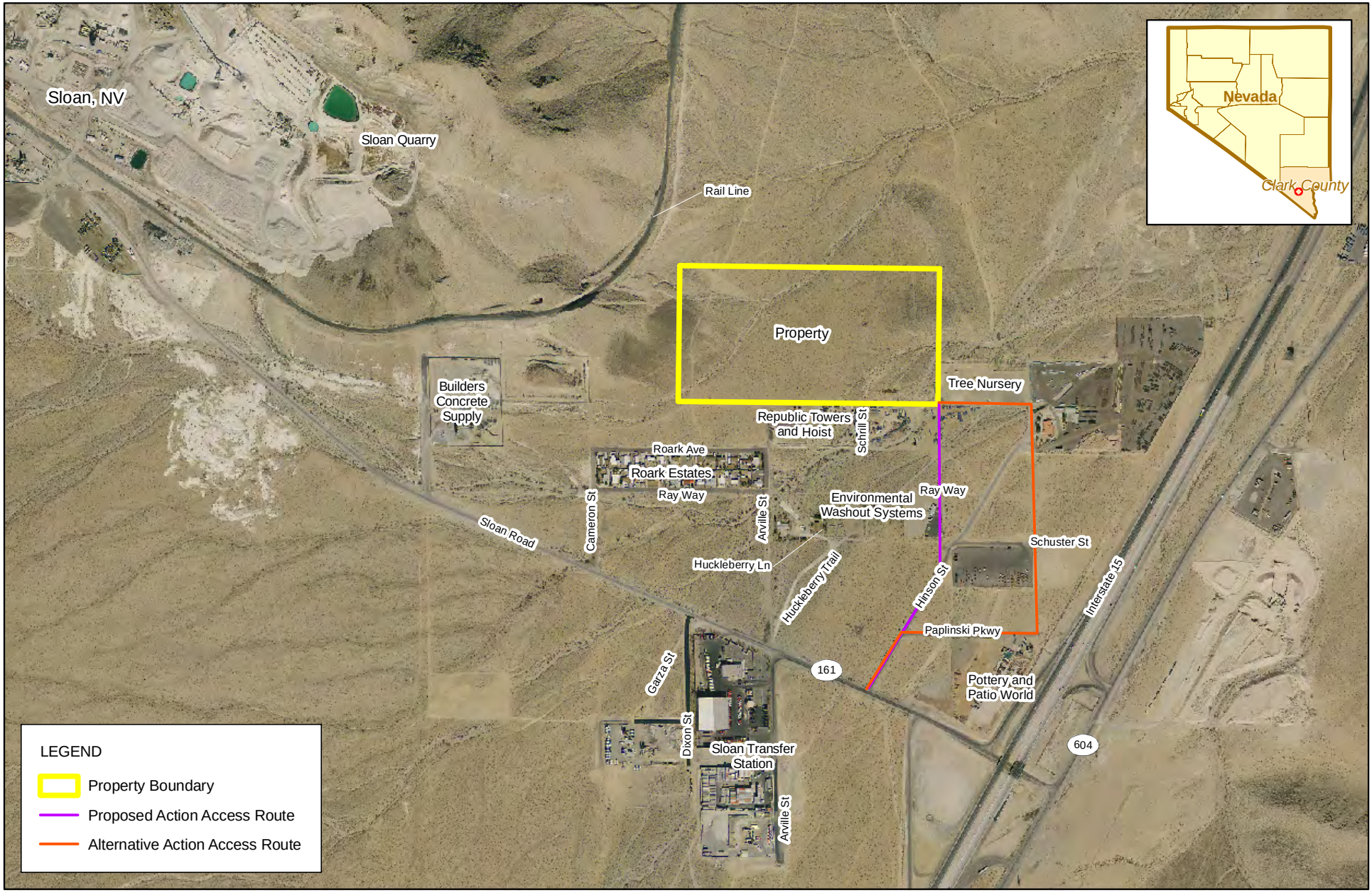
Mr. Wayne Alves
Chief, Environmental Division
63rd Regional Readiness Command
4235 Yorktown Ave.
Los Alamitos, CA, 90270

Please feel free to contact Mr. Wayne Alves at (562) 795-1444 or by e-mail at wayne.alves@usar.army.mil should you have any questions or concerns or would like additional information.

We look forward to working cooperatively with you to make this important project successful for all parties involved.

WAYNE J. ALVES
Chief, Environmental Division
63rd Regional Support Command

Enclosure



N

0 200 400
Feet

Figure 1
Property Location Map
Proposed U.S. Army Reserve Military Construction Site Location
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\Fig1_SloanNV_PropertyLayout85x11.mxd, Date: March 17, 2009 4:51:10 PM, User: KBUCKVOL

DEPARTMENT OF THE ARMY
HEADQUARTERS, 63D REGIONAL SUPPORT COMMAND
153 DAILEY ROAD, BLDG 152
MOFFETT FIELD, CA 94035-1000

April 7, 2009

Ms. Patricia McQueary
U.S. Army Corps of Engineers
St. George Field Office
321 N. Mall Dr. L-101
St. George, UT 84790

RE: U.S. Army Reserve – Proposed Military Construction Project, Clark County, Nevada

Dear Ms. McQueary:

The U.S Army Reserve, 63rd Regional Support Command (RSC), is preparing an Environmental Assessment for the construction and operation of a U.S. Army Reserve Center near Sloan, Clark County, Nevada. The 63rd RSC conducted an assessment of potential Waters of the U.S. on the Property and potential access routes.

The RSC has determined that six dry washes within the project limits are Jurisdictional Waters of the U.S. and requests concurrence from the U.S. Army Corps of Engineers on this determination. The *Final Wetlands and Jurisdictional Waters of the U.S. Report* is attached for your review.

In order to maintain the project schedule, the RSC requests written concurrence with the findings of the report within 30 days of receipt of this letter. Comments regarding this action may be sent to my attention:

Sincerely,

Wayne Alves
Chief, Environmental Division
63rd Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA 90270

Phone: (562) 795-1444
Email: wayne.alves@usar.army.mil

Enclosure

AGENCY RESPONSE LETTERS

ALLEN BIAGGI, *Director*
Department of Conservation
And Natural Resources

JIM GIBBONS
Governor

PETE ANDERSON
State Forester Firewarden

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
NEVADA DIVISION OF FORESTRY
4747 West Vegas Dr
Las Vegas, Nevada 89108
Phone (702) 486-5123 Fax (702) 4865186

March 18, 2009

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Ave.
Los Alamitos, CA 90270

RE: Environmental Assessment – Early Coordination Notification
U.S. Army Reserve – Proposed Military Construction Project
Sloan, Nevada

Dear Mr. Alves:

Thank you for inquiring about possible conflicts with State-protected plants at the above referenced location. We have determined that there are no *known* Nevada State-listed and/or proposed endangered plant species or designated and/or proposed critical habitats occurring in the project area. Therefore, no permit is expected to be required.

However, if any Nevada State-listed plants are discovered during subsequent plant surveys, additional consultation with Nevada Division of Forestry will be necessary. Information about Nevada law pertinent to threatened and endangered species, as well as a list of protected plants can be found at http://heritage.nv.gov/stplants.htm.

If you have any other questions, please contact me at (702) 486-5123. Thank you for your concern for Nevada's native plant laws.

Sincerely,

Matt Koepnick

Matthew Koepnick
Resource Management Officer

cc: Rich Harvey, Resource Program Manager

REGIONAL FLOOD CONTROL DISTRICT

Gale Wm. Fraser, II, P.E.
General Manager/Chief Engineer

BOARD OF DIRECTORS

Larry Brown
Chairman
Clark County

Robert L. Eliason
Vice-Chairman
City of North Las Vegas

David Bennett
City of Mesquite

Chris Giunchigliani
Clark County

Mayor Oscar Goodman
City of Las Vegas

Andy Hafen
City of Henderson

Steven D. Ross
City of Las Vegas

Mayor Roger Tobler
City of Boulder City

March 6, 2009

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Avenue
Los Alamitos, CA 90270

Dear Mr. Alves:

This letter is written in response to your letter dated February 23, 2009 regarding early coordination relative to your Environmental Assessment for a proposed military construction project in Sloan, Nevada.

Please be advised that the Regional Flood Control District's flood control Master Plan identifies a proposed detention basin (Pittman West Detention Basin, facility ID PTLA-0219) in the immediate vicinity of your proposed project. While these two projects do not appear to be in direct conflict with each other, we request that you coordinate with Clark County, the City of Henderson and the Regional Flood Control District throughout your planning and design process so that potential conflicts can be identified and avoided to the maximum extent possible.

In addition, the Master Plan identifies a natural wash that conveys a 100-year design flow of 10,379 cfs through the southeast corner of your project site. You are again requested to coordinate with the above listed agencies regarding all development plans for your project site.

Please don't hesitate to contact me if you have any questions or require additional information.

Sincerely,

Timothy E. Sutko
Environmental Mitigation Manager

TE:ylm

P:\Letters and Memos\Capital Improvement Projects\Sloan MILCON EA 3-6-09.doc

600 S. Grand Central Parkway, Suite 300 • Las Vegas, Nevada 89106-4511
(702) 685-0000 • FAX: (702) 685-0001
Website: *http://www.regionalflood.org*

JIM GIBBONS
Governor

STATE OF NEVADA

ANDREW K. CLINGER
Director

DEPARTMENT OF ADMINISTRATION
209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
(775) 684-0222
Fax (775) 684-0260
http://www.budget.state.nv.us/

March 26, 2009

Wayne Alves
US Department of the Army
Headquarters, United States Army
63D Regional Support Command
153 Dailey Road, Bldg 152
Moffett Field, CA 94035-1000

Re: SAI NV # **E2009-206** Reference:

Project: **Construction of military training facility, Sloan, NV**

Dear Wayne Alves:

Enclosed are comments from the agencies listed below regarding the above referenced document. Please address these comments or concerns in your final decision.

Department of Wildlife, Las Vegas

Division of State Lands

The following agencies support the above referenced document as written:

State Historic Preservation Office

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0213.

Sincerely,

R. Tietje
Nevada State Clearinghouse

JIM GIBBONS
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
1100 Valley Road
Reno, Nevada 89512
(775) 688-1500 • Fax (775) 688-1595

KENNETH E. MAYER
Director

DOUG HUNT
Deputy Director

SOUTHERN REGION
4747 WEST VEGAS DRIVE
LAS VEGAS, NEVADA 89108
(702) 486-5127; 486-5133 FAX

March 24, 2009

NDOW-SR#: 09-216

Ms. Reese Tietje
Nevada State Clearinghouse
209 East Musser Street, Room 200
Carson City, Nevada 89701-4298

SAI#: E2009-206
Project: Construction of Military Training Facility, Sloan, NV
Date Due: March 24, 2009

Dear Ms. Tietje:

Thank you for providing the Nevada Department of Wildlife (Department) with this opportunity. Based on the information contained in the Early Coordination Notification letter, the following are preliminary observations relative to wildlife resources.

While many wildlife species would be present in or use the proposed area, those of notable conservation interest expected or potentially occurring within the proposed project area include:

SPECIES		STATE OF NEVADA	FEDERAL
Desert Tortoise	(*Gopherus agassizii*)	Protected - Threatened	ESA – Threatened
Banded Gila monster	(*Heloderma suspectum cinctum*)	Protected	BLM-SS
Burrowing Owl	(*Athene cunicularia*)	Protected	MBTA ; BLM-SS
Pallid bat*	(*Antrozous pallidus*)	Protected	BLM-SS
Townsend's Big-eared bat*	(*Corynorhinus townsendii*)	Protected - Sensitive	BLM-SS
Spotted bat*	(*Euderma maculatum*)	Protected - Threatened	BLM-SS
Fringed Myotis*	(*Myotis thysanodes*)	Protected	BLM-SS

State of Nevada Classification is per Chapter 503 of Nevada Administrative Codes, online at- http://leg.state.nv.us/law1.cfm.
ESA – Endangered Species Act of 1973, as amended
MBTA – Migratory Bird Treaty Act of 1918, as amended
BLM-SS – Nevada Bureau of Land Management Sensitive Species
* Expected use of proposed MILCON site primarily for foraging

Regarding the Desert tortoise, the proposed project will likely be subject to an ESA Section 7 consultation with the U.S. Fish & Wildlife Service (Service). The Service's Las Vegas office is located at:

U.S. Fish and Wildlife Service
Nevada Ecological Services
4701 N. Torrey Pines Drive
Las Vegas Nevada 89130

Or, contacted at (702) 515-5230

Should such consultation result in Federal stipulations and approval to remove any encountered tortoises out of harms way, State of Nevada authorization is also required per Nevada Revised Statute 503.597 and Nevada Administrative Code 503.090 and 503.093. Please contact Polly Conrad of the Department's Southern Region Office at 702-486-5127 x3718 or at pconrad@ndow.org for additional assistance.

Detection of Gila monster presence is more a stroke of luck than survey methodology even under the most favorable conditions. Adherence to the Department's protocol for encounters with the Gila monster is requested. A copy is enclosed and can also be found online at http://www.ndow.org/wild/conservation/.

The Department recommends impact minimization measures for migratory birds that may breed and nest in the proposed project area. Hence, ground disturbance activities should be scheduled outside the bird reproductive season which roughly occurs between March 15 and August 30. If this seasonal avoidance is not practicable, then the Department recommends a qualified biologist survey the project area for nests prior to commencement of any activities. Surveys should include detection of ground nesting migrants additional to those nesting in shrubs, trees, or cliffs. In the event an active nest (containing eggs or young) is discovered or frequently attended by adult birds (e.g. Burrowing Owl), a buffer area around the nest appropriate for the involved species must be identified and avoided until young birds fledge. This procedure would be consistent with preventive measures advocated by the U.S. Fish & Wildlife Service for birds protected under the Migratory Bird Treaty Act.

If there are any additional questions or concerns, please contact Roddy Shepard, Habitat Biologist, at (702) 486-5127 x3613, or by e-mail at rshepard@ndow.org .

Sincerely,

D. Bradford Hardenbrook
Supervisory Habitat Biologist

RS/DBH

cc: NDOW, Files

NEVADA DEPARTMENT OF WILDLIFE

Southern Region

4747 W. Vegas Drive, Las Vegas, Nevada 89108

Phone: 702-486-5127, Fax: 702-486-5133

1 November 2007

GILA MONSTER STATUS, IDENTIFICATION AND REPORTING PROTOCOL FOR OBSERVATIONS

Gila Monster Status

- Per Nevada Administrative Code 503.080, the Gila monster (*Heloderma suspectum*) is classified as a Protected reptile.

- Per Nevada Administrative Codes 503.090, and 503.093, no person shall capture, kill, or possess any part thereof of Protected wildlife without the prior written permission by the Nevada Department of Wildlife (NDOW).

This species is rarely observed relative to other species which is the primary reason for its Protected classification by the State of Nevada. The USDI Bureau of Land Management has recognized this lizard as a sensitive species since 1978. Most recently, the Gila monster was designated as an *Evaluation* species under Clark County's Multiple Species Habitat Conservation Plan (MSHCP). The evaluation designation was warranted because inadequate information exists to determine if mitigation facilitated by the MSHCP would demonstrably cover conservation actions necessary to insure the species' persistence without protective intervention as provided under the federal Endangered Species Act.

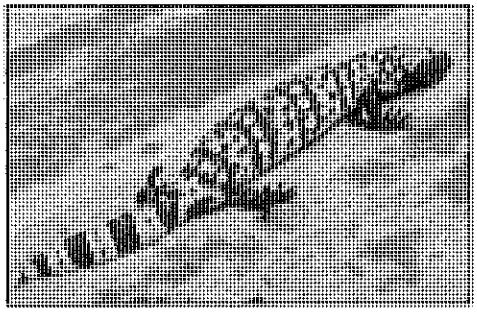
The banded Gila monster (*H.s. cinctum*) is the subspecies that occurs in Clark, Lincoln, and Nye counties of Nevada. Found mainly below 5,000 feet elevation, its geographic range approximates that of the desert tortoise (*Gopherus agasizii*) and is coincident to the Colorado River drainage. Gila monster habitat requirements center on desert wash, spring and riparian habitats that inter-digitate primarily with complex rocky landscapes of upland desert scrub. They will use and are occasionally encountered out in gentler terrain of alluvial fans (bajadas). Hence, Gila monster habitat bridges and overlaps that of both the desert tortoise and chuckwalla (*Sauromalus ater*). Gila monsters are secretive and difficult to locate, spending >95% of their lives underground.

The Gila monster is the only venomous lizard endemic to the United States. Its behavioral disposition is somewhat docile and avoids confrontation. But it will readily defend itself if threatened. Most bites are considered illegitimate and consequential to harassment or careless handling. These lizards are not dangerous unless molested or handled and should not be killed.

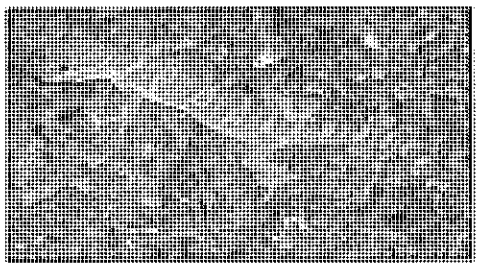
Scant information exists on detailed distribution and relative abundance in Nevada. The Nevada Department of Wildlife (NDOW) has ongoing management investigations addressing the Gila monster's status and distribution, hence additional distribution, habitat, and biological

information is of utmost interest. In assistance to gathering additional information about Gila monsters in Nevada, NDOW will be notified whenever a Gila monster is encountered or observed, and under what circumstances (see Reporting Protocol below).

Identification



The Gila monster is recognizable by its striking black and orange-pink coloration and bumpy, or beaded, skin. In keeping with its namesake, the banded Gila monster retains a black chain-link, banded appearance into adulthood. Other lizard species are often mistaken for the Gila monster. Of these, the non-venomous western banded gecko (*Coleonyx variegatus*) and non-venomous chuckwalla are most frequently confused with the Gila monster. All three species share the same habitats.



The western banded gecko is often mistakenly identified as a baby or juvenile Gila monster. Western banded geckos do have a finely granular skin and pattern that can be suggestive of the Gila monster to the untrained eye. However, western banded gecko heads are somewhat pointed at the snout and the relatively large eyes have vertical pupils. Snouts of Gila monsters are bluntly rounded and the smallish eyes have round pupils. Newly hatched Gila monsters are about 5-6 inches long with a vivid orange and black, banded pattern. Adult western banded geckos are at best cream to yellow and brown in pattern and do not exceed 5 inches.

Both juvenile and adult chuckwallas are commonly confused with the Gila monster. Juvenile chuckwallas have an orange and black, banded tail. Although banding of the tail fades as chuckwallas mature, their large adult size (up to 17 inches) rivals that of the Gila monster. Adult chuckwallas have a body shape somewhat suggestive of the Gila monster, but they lack the coarsely beaded skin and black and orange body pattern of the Gila monster.

Reporting Protocol for Gila Monster Observations

Field workers and personnel in southern Nevada should at least know how to: (1) identify Gila monsters and be able to distinguish it from other lizards such as chuckwallas and western banded geckos (see Identification section above); (2) report any observations of Gila monsters to the Nevada Department of Wildlife (NDOW); (3) be alerted to the consequences of a Gila monster bite resulting from carelessness or unnecessary harassment; and (4) be aware of protective measures provided under state law.

1) Live Gila monsters found in harms way on the construction site will be captured and then

detained in a cool, shaded environment (≤85°F) by the project biologist or equivalent personnel until a NDOW biologist can arrive for documentation, marking and obtaining biological measurements and samples prior to releasing. Despite that a Gila monster is venomous and can deliver a serious bite, its relatively slow gate allows for it to be easily coaxed or lifted into an open bucket or box carefully using a long handled instrument such as a shovel or snake hook (*Note: it is not the intent of NDOW to request unreasonable action to facilitate captures; additional coordination with NDOW will clarify logistical points*). A clean 5-gallon plastic bucket w/ a secure, vented lid; an 18"x 18"x 4" plastic sweater box w/ a secure, vented lid; or, a tape-sealed cardboard box of similar dimension may be used for safe containment. Additionally, written information identifying the mapped capture location, Global Positioning System (GPS) coordinates in Universal Transverse Mercator (UTM) using the North American Datum (NAD) 83 zone 11. Date, time, and circumstances (e.g. biological survey or construction) and habitat description (vegetation, slope, aspect, substrate) will also be provided to NDOW.

2) Injuries to Gila monsters may occur during excavation, blasting, road grading, or other construction activities. In the event a Gila monster is injured, it should be transferred to a veterinarian proficient in reptile medicine for evaluation of appropriate treatment. Rehabilitation or euthanasia expenses will not be covered by NDOW. However, NDOW will be immediately notified of any injury to a Gila monster and which veterinarian is providing care for the animal. If an animal is killed or found dead, the carcass will be immediately frozen and transferred to NDOW with a complete written description of the discovery and circumstances, date, time, habitat, and mapped location (GPS coordinates in UTM using NAD 83 Z 11).

3) Should NDOW's assistance be delayed, biological or equivalent acting personnel on site should detain the Gila monster out of harms way until NDOW personnel can respond. **The Gila monster should be detained until NDOW biologists have responded**. Should NDOW not be immediately available to respond for photo-documentation, a digital (5 mega-pixle or higher) or 35mm camera will be used to take good quality images of the Gila monster in situ at the location of live encounter or dead salvage. The pictures will be provided to NDOW at the address above or the email address below along with specific location information including GPS coordinates in UTM using NAD 83 Z 11, date, time and habitat description. Pictures will show the following information: (1) Encounter location (landscape with Gila monster in clear view); (2) a clear overhead shot of the entire body with a ruler next to it for scale (Gila monster should fill camera's field of view and be in sharp focus); (3) a clear, overhead close-up of the head (head should fill camera's field of view and be in sharp focus).

Please contact NDOW Biologist Polly Conrad at (702) 486-5127 x3718
or by e-mail at pconrad@ndow.org for additional information regarding these protocols.

Nevada State Clearinghouse

From: Skip Canfield
Sent: Wednesday, March 11, 2009 9:23 AM
To: Nevada State Clearinghouse
Subject: RE: E2009-206 Construction of military training facility, Sloan, NV - Headquarters, United States Army

The Nevada Division of State Lands provides the following comments:

There is a concern about the cumulative visual impacts to public lands users' experiences.

As multiple use concepts are employed on our public lands, a comprehensive and consistent look at visual impacts should be considered. Small and inexpensive mitigation measures can play a large role in the compatibility of the built and natural environment.

Utilize appropriate lighting:

- Utilize consistent lighting mitigation measures that follow "Dark Sky" lighting practices. Dark sky measures are inexpensive, simple to implement, and very mainstream. The result is a less obtrusive impact to other users of adjacent public lands. www.darksky.org

- Effective lighting should have screens that do not allow the bulb to shine up or out. In fact, lighting that is installed using dark sky fixtures (light is only aimed at the subject property) is more efficient, safer, and results in reduced electricity costs.

- Federal agencies should include light shields as a condition of approval for all permanent and temporary applications such as exploratory drilling rigs.

Utilize building materials, colors and site placement that are compatible with the natural environment:

- Utilize consistent mitigation measures that address logical placement of improvements and use of appropriate screening and structure colors. Existing utility corridors, roads and areas of disturbed land should be utilized wherever possible.

- For example, the use of compatible paint colors such as "sudan brown" for water tanks and other vertical structures reduces the visual impacts of the built environment. Using screening, careful site placement, and cognitive use of earth-tone colors/materials that match the environment go a long way to improve the user experience for others who might have different values than what is fostered by built environment activities.

- Federal agencies should require these mitigation measures as conditions of approval for all permanent and temporary applications.

Skip Canfield, AICP
State Land Use Planning Agency
775-684-2723

2/15

Rebecca Palmer

From: Nevada State Clearinghouse
Sent: Tuesday, March 03, 2009 3:45 PM
To: Rebecca Palmer
Subject: E2009-206 Construction of military training facility, Sloan, NV - Headquarters, United States Army

NEVADA STATE CLEARINGHOUSE
Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0213 Fax (775) 684-0260

TRANSMISSION DATE: 3/3/2009

State Historic Preservation Office

Nevada SAI # E2009-206

Project: Construction of military training facility, Sloan, NV

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.
E2009-206

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local
areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Tuesday, March 24, 2009.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.

Clearinghouse project archive

Questions? Reese Tietje, (775) 684-0213 or clearinghouse@state.nv.us

____No comment on this project ✓ Proposal supported as written

AGENCY COMMENTS:

Rebecca A Palmer 3/16/09

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Southern Nevada District
Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130
http://www.blm.gov/nv/st/en/fo/lvfo.1.html

In Reply Refer to:
NV-052
6840

Memorandum

Date: April 13, 2009

To: Field Supervisor, Nevada State Office, U.S. Fish and Wildlife Service, Reno, Nevada

From: Assistant Field Manager, Division of Renewable Resources

Subject: Request to append an action to the programmatic Biological Opinion for the Las Vegas Valley (1-5-96-F-023R.3).

In accordance with Section 7(a) 2 of the Endangered Species Act of 1973, as amended, the Las Vegas Field Office, Bureau of Land Management requests to append the US Army Reserve ROW (N-86654) to the programmatic biological opinion for the Las Vegas Valley in order to fulfill BLM consultation requirements.

The US Army Reserve through the Army Corp of Engineers has submitted an application for a ROW grant on public land that will be used for the construction and future operation of two new updated training facilities. The lands described in the ROW are in the southern portion of the Las Vegas Valley and within the biological opinion boundary but not the disposal boundary. The total amount of land requested is 46.57 acres.

In consideration of the survey data regarding desert tortoises located within and adjacent to the nominated parcels, we are requesting that the proposed project be appended to the Las Vegas Valley Biological Opinion (1-5-96-F-023R.3). It is a BLM determination that appending this action to the Valley Biological Opinion will not introduce any effects to the desert tortoise that were not previously analyzed in the Biological Opinion.

If you have any questions, please contact Katie Kleinick at (702) 515-5351.

cc: State Director (NV-930)
USFWS, Las Vegas Sub-office

Attachments (2)
Request to Append
Site Map
Draft Biological Evaluation

Department of Comprehensive Planning
Land Use Planning

500 S Grand Central Pky • Box 551744 • Las Vegas NV 89155-1744
(702) 455-4314 • Fax (702) 455-3271

Barbara Ginoulias, Director • Rod Allison, Assistant Director

April 1, 2009

Mr. Wayne Alves
Chief, Environmental Division
63D Regional Support Command
4235 Yorktown Avenue
Los Alamitos, CA 90270
Wayne.alves@usar.army.mil

Your request for an Army Reserve Center that includes a training building, organizational maintenance shop, unheated storage building, and organizational parking on 45 acres (ptn APN 191-19-501-001) would require a Non-Conforming Zone Change to the P-F zoning district. Due to the property being within Community District 3, which includes areas that have been designated as being beyond the County's service area, the application will be considered nonconforming to the South County Land Use Plan. The process would require a neighborhood meeting with property owners within 1,500 feet of the project and public hearings before the Planning Commission and Board of County Commissioners (BCC). The link below will allow you to download the application:

http://www.accessclarkcounty.com/depts/comprehensive_planning/zoning/Documents/pre_app.pdf.

Since the property is located in Commissioner Susan Brager's district, prior to submittal of the application, consent from Commissioner Brager will be required before our department can accept the application. She can be contacted at ccdistf@co.clark.nv.us or by calling (702) 455-3500.

Additionally, an amendment to the Transportation Element will be required if the planned arterial on the site requires relocation (see Map 1.3 on page 32 at the following link):

http://www.accessclarkcounty.com/depts/comprehensive_planning/compplanelements/Pages/compplantransportation.aspx.).

Currently, the Transportation Element of the Comprehensive Plan shows an arterial street bisecting the property. To relocate the planned arterial, an amendment to the Transportation Element must be submitted and approved by the BCC. The contact person for submittal is Marcus Majors. He can be reached at MMajors@co.clark.nv.us or by calling (702) 455-2526.

If you have any further questions please feel free to contact me at 455-5010.

/s/
Shane Ammerman
Assistant Planning Manager
Clark County Comprehensive Planning

BOARD OF COUNTY COMMISSIONERS
RORY REID, Chairman • SUSAN BRAGER, Vice-Chair
LARRY BROWN • TOM COLLINS • CHRIS GIUNCHIGLIANI • STEVE SISOLAK • LAWRENCE WEEKLY
VIRGINIA VALENTINE, P.E., County Manager

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, Nevada 89130-2301

May 27, 2009

8100
(NV-052)

Timothy Watkins
CH2M HILL
2127 University Park Drive, Suite 360
Okemos, Michigan 48864

RE: US Army Reserve – Proposed Military Construction Project Near Sloan, Nevada.

Dear Mr. Watkins:

This letter is in reference to the proposed construction of the US Army Reserve Center and parking lot that will be situated on 45 acres of land west of Interstate 15 and north of the Sloan Road. The proposed 45-acre property is currently a vacant parcel near Sloan in Clark County, Nevada, on lands currently managed by the Bureau of Land Management (BLM). The legal description is T 23S, R 61E, N ½ of the N ½ of Section 19. Through consultation with the US Department of the Army, BLM has been identified as the lead federal agency purposes of carrying out compliance with section 106 of the National Historic Preservation Act of 1966, as amended (Public Law 89-665) for the undertaking.

A Class III inventory of the Area of Potential Effect (APE), which the BLM has defined as coterminous with the project footprint, was completed by CH2M HILL archaeologist Aaron Fergusson, MA, listed as a Principal Investigator on the BLM Nevada State Cultural Resource Use Permit #N-83761 for the undertaking. The reconnaissance survey was performed on January 27-28 and February 24, 2009, and included the 45-acre parcel as well as the proposed access routes, also located on BLM-administered lands. A file search and literature review was performed prior to fieldwork using the Nevada Cultural Resource Inventory System (NVCRIS), which revealed over 25 archaeological surveys had been conducted within one-mile of the project area. Most of these surveys were performed to the north and east, with a few linear surveys to the west. None of the previous work covered the proposed project area.

The literature review indicated nearly of all of the cultural resources found near the 45-acre parcel was historic in nature and that these are generally situated within the historic railroad corridor to the west. The closest site to the property is approximately 2,000 feet north and is associated with the construction of the railroad.

With the exception of several historic cans found displaced in the two washes that cut across the property, no other cultural manifestations were identified during the CH2M HILL literature search or reconnaissance survey. In addition, the BLM has determined there are no Native American issues concerning the undertaking. As a result, under the BLM State Protocol Agreement pursuant to 36 CFR Part 800 (e.g. the programmatic agreement between BLM and SHPO), the BLM is issuing a finding of *no historic properties affected.* This finding shall be provided in the forthcoming project-related National Environmental Policy Act (NEPA) document for public review and CH2M HILL's summary archaeological report (BLM Report # 5-2627) shall be submitted to SHPO in compliance with the Annual Reporting requirements of the State Protocol Agreement.

If additional information is needed regarding the undertaking, please contact Mark Boatwright of my staff at 702-515-5077.

Sincerely,

Miyoshi W. Stith
Assistant Field Manager
Sloan & Red Rock NCA Division

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

May 1, 2009

Regulatory Division (SPK-2009-0514-SG)

Wayne Alves
Chief, Environmental Division
63rd Regional Support Command
4235 Yorktown Avenue
Los Alamitos, California 90270

Dear Mr. Alves:

We are responding to your request for an approved jurisdictional determination for the U.S. Army Reserve Proposed Military Construction Project. This approximately 45-acre site is located in Sections 18 and 19, Township 23 South, Range 61 East, Mount Diablo Base and Meridian, Latitude 35.93951 North, Longitude -115.19791 West, near Sloan, Clark County, Nevada.

Based on available information, we concur with the estimate of waters of the United States, as depicted on Figure 2 of the "Final Wetlands and Jurisdictional Water of the U.S. Report", dated March 5, 2009, drawing prepared by CH2MHill. Approximately 4011-ft of waters of the United States, including wetlands, are present within the survey area. These waters are regulated under Section 404 of the Clean Water Act, since they are tributaries of Duck Creek, which is a "Relatively permanent water" and a tributary of Las Vegas Wash, which is a tributary of the "Traditionally Navigable Water", Lake Mead.

The ephemeral drainages listed as S-8 and S-9 on the above drawing is an intrastate isolated water with no apparent interstate or foreign commerce connection. As such, this water is not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331.

A Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 1455 Market Street, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 60 days from the date of this letter. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number SPK-2009-0514-SG in any correspondence concerning this project. If you have any questions, please contact Patricia L. McQueary at our St. George Regulatory Office, 321 N. Mall Drive, Suite L-101, St. George, UT 84790, email *patricia.l.mcqueary@usace.army.mil*, or telephone 435-986-3979. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

Patricia L. McQueary

Patricia L. McQueary
Chief, St. George Regulatory Office

Enclosure(s)
Appeals Form
JD forms
CC:
Nick Moore, CH2MHILL, 2127 University Park Drive, Suite 360, Okemos, MI 48864
Cindy Newman, Environmental Scientist, CH2M HILL, 2285 Corporate Circle, Suite 200, Henderson, NV 89074

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Nevada Fish and Wildlife Office
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130
Ph: (702) 515-5230 ~ Fax: (702) 515-5231

May 20, 2009
File Nos. 84320-2009-F-0297,
84320-2008-B-0011 and
1-5-96-F-023R3.APD20

Memorandum

To: Assistant Field Manager, Division Renewable Resources, Las Vegas Field Office, Southern Nevada District Office, Bureau of Land Management, Las Vegas, Nevada

From: State Supervisor, Nevada Fish and Wildlife Office, Reno, Nevada

Subject: Request to Append a Proposed Issuance of a Right-of-Way to the U.S. Army Reserve for Training Facilities, Las Vegas Valley, Nevada to the Las Vegas Valley Programmatic Biological and Conference Opinion

This responds to your memorandum dated April 13, 2009, requesting the subject Bureau of Land Management (BLM) action be appended to the Programmatic Biological and Conference Opinion (PBCO) for the Las Vegas Valley (File No. 1-5-96-F-023R3). The PBCO addressed potential effects to the desert tortoise (*Gopherus agassizii*) (Mojave population), a species listed as threatened in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*) and 50 CFR § 402 of our interagency regulations governing section 7 of the Act. A PBCO on the Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*) was also provided. While the U.S. Fish and Wildlife Service (Service) has not proposed the Las Vegas buckwheat as endangered or threatened under the Act, we did elevate the taxon to candidate status on December 6, 2007. BLM and the Service agreed conferencing was appropriate to identify pertinent conservation measures that would reduce the level of effects to the Las Vegas buckwheat that are likely to occur from implementation of the proposed actions within the action area of the PBCO.

Our response to your request is attached. If we can be of any further assistance, please contact Michael Burroughs in the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230.

Robert D. Williams

Attachments

TAKE PRIDE IN AMERICA

ATTACHMENT A
APPENDED ACTION UNDER THE LAS VEGAS VALLEY PROGRAMMATIC BIOLOGICAL AND CONFERENCE OPINION (FILE NO 1-5-96-F-023R3)

Date of Request: April 13, 2009

File Nos. of Action: 84320-2009-F-0297, 84320-2008-B-0011 and 1-5-96-F-023R3.APD20

Date Received: April 13, 2009
Date of Response: May 20, 2009

Species Affected: Desert tortoise (*Gopherus agassizii*) (Mojave population)

Proposed Action: Proposed Issuance of a Right-of-Way to the U.S. Army Reserve for Training Facilities, Las Vegas Valley, Nevada

INTRODUCTION:

The Federal action for this consultation is BLM's proposed issuance of a right-of-way for development and use of training facilities near Sloan, Nevada. The proposed action is not located within designated critical habitat for the desert tortoise; therefore, no adverse effects to designated desert tortoise critical habitat are anticipated as a result of the proposed action.

Based on botanical inventories within the Las Vegas Valley, no known Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*) or its habitat occur within the project boundary; therefore, the Service agrees with BLM's determination that no adverse effects to the species are anticipated to occur. The species will not be discussed further in this document.

CONSULTATION HISTORY

On April 13, 2009, BLM requested formal consultation for the subject project by appending the action to the PBCO. The Service received the request on the same day and initiated formal consultation at that time.

Summary of Proposed Action

BLM proposes to issue a right-of-way grant to construct and operate two new training facilities to house the incoming Grow the Army structure. The facilities will house 700 soldiers over the next three years. The right-of-way grant would involve 46.57 acres which includes 1.57 acres for an access road. A detailed description of the proposed action is provided in BLM's request dated April 13, 2009, and attached biological assessment, and are hereby incorporated by reference as part of this consultation document.

Proposed Minimization Measures

In their April 13, 2009, memorandum and request to append the action to the PBCO, BLM proposed 11 measures to minimize potential effects to the desert tortoise as a result of the proposed action. Additional measures were proposed in the biological evaluation (BE) provided with BLM's memorandum. All these measures have been incorporated into the Incidental Take Statement of this appended biological opinion, as appropriate.

Status of the Species/Environmental Baseline

The range-wide status of the desert tortoise consists of information on its listing history, species account, recovery plan, recovery units, distribution, reproduction, and numbers. This information is dated October 22, 2008, and is provided on the Service's website at: http://www.fws.gov/nevada/desert%5Ftortoise/dt_life.html. If unavailable on this web site, contact the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230, and provide File No. 84320-2009-F-0297.

Status of the Species in the Action Area

During the fall and winter of 2003-2004, desert tortoise surveys were conducted on BLM land in the Las Vegas Valley. The project area was not included in the survey but surrounding areas were surveyed. Within 1 mile of the project area, a total of 149 desert tortoise sign was found during the survey. In February and March 2009, desert tortoise surveys were conducted on the project area. Based on the result of the 2009 survey, the entire project area is suitable for desert tortoises. Existing roads were observed and the site occurs in close proximity to commercial and residential development. Three desert tortoise shelter sites were found with tortoise scat at the entrance to two of the sites.

The proposed action is the 20th appended action under the PBCO. The previously appended actions in desert tortoise habitat are identified in Table 1.

EFFECTS ANALYSIS

The effects of the proposed action are within the scope of overall effects described in the *Effects of the Proposed Action on the Listed Species* section of the PBCO. A total of 46.57 acres of desert tortoise habitat is anticipated to be disturbed or adversely affected by the proposed action. The Service estimates that five desert tortoises could occur within the action area.

The direct effects of the proposed action include injury or mortality of individual desert tortoises if clearance surveys are not conducted; collapse or destruction of desert tortoise burrows possibly occupied by desert tortoises; and if the damaged burrow is occupied, the occupant may become entombed and die. If desert tortoises onsite are captured and moved off the land to be developed,

the displaced tortoises may wander back into the footprint or out into adjacent areas leading to increased incidences of predation or human encounters, including vehicles. The indirect effects of the proposed action are those effects caused by, or result from the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may include increased stress from harassment and movement into areas that contain a resident tortoise population which can create an increase in competition for forage, particularly during drought years. Increased tortoise densities may lead to increased spread of disease, thus reducing overall population health. Increased tortoise densities would lead to increased competition for shelter. Displaced tortoises would be exposed to increased predation as they learn new surroundings and find shelter.

As the development of Las Vegas Valley continues, so does the direct permanent loss of desert tortoise habitat. Continued infrastructure construction creates physical barriers to tortoise movement and gene dispersal. Desert tortoise habitat could continue to be fragmented, reduced in quality and quantity. Local desert tortoise populations could become extirpated resulting in the loss of important genetically distinct populations from the rangewide tortoise population and larger scale extirpations.

CONCLUSION

After reviewing the current status of the desert tortoise, the environmental baseline for the action area and the effects of the proposed action, it is the Service's biological opinion that the proposed action is within the scope of the Las Vegas Valley PBCO issued to BLM's Las Vegas Field Office (Service File No. 1-5-96-F-023R3) and is therefore, not likely to jeopardize the continued existence of the threatened Mojave population of the desert tortoise.

Incidental Take Statement for Proposed Action

Amount of Take

Based on the effects analysis previously described, the Service anticipates that all Mojave desert tortoises that occur on the 46.57-acre project area may be taken through direct mortality, injury, or capture as a result of the proposed action. Based on the survey data and known occurrence records in the action area, the Service estimates that five desert tortoises may be taken as a result of the proposed action.

Reasonable and Prudent Measures (RPMs)

The Service believes that the following reasonable and prudent measures (RPMs) with terms and conditions are necessary and appropriate to minimize take of desert tortoise.

RPM 1: *BLM and other jurisdictional Federal agencies, as appropriate, shall ensure implementation of measures to minimize injury or mortality of desert tortoises due to surface-disturbing activities, operation of project vehicles or equipment, and project operations:*

Term and Condition 1:

Implement Term and Condition 1.a. in PCBO except as modified by the following: the three known tortoise burrows shall be excavated by an authorized biologist and any tortoises present in the burrow or found on the project site shall be captured and transferred to the Desert Tortoise Conservation Center and identified as "Section 7 Tortoises" through the Clark County pick-up service (702-593-9027). Tortoises shall be handled in accordance with Service-approve protocol (currently Desert Tortoise Council 1994, revised 1999). Alternatively, the project proponent shall contract authorized biologists to conduct a clearance survey prior to surface disturbance as proposed in the BE.

RPM 2: *BLM and other jurisdictional Federal agencies, as appropriate, shall ensure implementation of the following measures to minimize loss and long-term degradation and fragmentation of desert tortoise habitat, such as soil compaction, erosion, crushed vegetation, and introduction of weeds or contaminants as a result of construction activities:*

Terms and Conditions:

2.a. Implement Term and Condition 2.a. in PCBO regarding payment of fees. The Section 7 Fee Payment Form shall accompany payment (Appendix A).

2.b. Cross-country travel and travel outside authorized areas will be prohibited.

2.c. Install and maintain a tortoise barrier around proposed disturbance areas during construction in accordance with fence specifications (Appendix B).

RPM 3: *BLM and other jurisdictional Federal agencies, as appropriate, shall ensure implementation of the following measures to ensure that tortoises are not injured as a result of capture and handling:*

Term and Condition 3:

Implement Term and Conditions 3a, 3.b., 3.e., 3.f., 3.g., and 3.h. in PCBO.

RPM 4: *BLM and other jurisdictional Federal agencies, as appropriate, shall implement measures to ensure compliance with the reasonable and prudent measures, terms and conditions, reporting requirements, and reinitiation requirements contained in this biological opinion:*

Terms and Conditions:

4.a. All necessary information sheets and forms shall be developed by BLM and approved by the Service prior to implementation of the proposed action (See Attachment D). These forms will be modified as necessary with the Service's concurrence.

4.b. BLM shall keep an up-to-date log of all actions taken under this consultation including acreage affected; number of desert tortoises injured, killed, or removed from project areas; and fees paid for this action. BLM will coordinate with the project proponent to ensure that any desert tortoise incidental take and habitat disturbance is accurately and promptly reported to the Service. BLM shall continue to provide the log information to the Service's Nevada Fish and Wildlife Office in Las Vegas on an annual basis. Information will be cumulative throughout the term of this consultation.

RPM 5: *BLM and other jurisdictional Federal agencies, as appropriate, shall ensure implementation of the following measures to minimize predation on desert tortoises by predators drawn to the project area:*

Term and Condition 5:

Trash and food items shall be disposed properly in predator-proof containers with resealing lids. During construction activities, trash containers will be emptied and waste will be removed from the project area daily. Trash removal reduces the attractiveness of the area to opportunistic predators such as desert kit fox, coyotes, and common ravens.

This concludes formal consultation on the action outlined in your request dated April 13, 2009. This consultation document is hereby appended to the PBCO issued to BLM's Las Vegas Field Office to fulfill their consultation requirements pursuant to section 7(a)(2) of the Act.

File Nos. 84320-2009-F-0297,
84320-2008-B-0011 and
1-5-96-F-023R3.APD20

Table 1. Prior Actions Submitted to be Appended under the PBCO

			No. Acres Affected		Take Exempted		Take Reported	
No.	Date	Action Name	BLM	Private	Lethal	Non-lethal	Lethal	Non-lethal
1	1/31/2005	Winter 2005 Land Sale	0	0	MSHCP	MSHCP	NR	NR
2	2/23/2005	State Route 160 Improvement Project	70	249	2 BLM MSHCP	2 BLM MSHCP	NR	NR
3	6/09/2005	Clark County School District High School	60	0	MSHCP	MSHCP	NR	NR
4	8/9/2005	I-15 Interchange at Silverado Ranch	33.2	83.7	1 BLM MSHCP	2 BLM MSHCP	NR	NR
5	8/29/2005	Clark County School District Elementary School	40	0	MSHCP	MSHCP	NR	NR
6	9/01/2005	November 2005 Land Sale*	2981.88	0	MSHCP	MSHCP	NR	NR
7	12/1/2005	Duck Creek Detention Basin	152	0	4 lethal or non-lethal		NR	NR
8	4/25/2006	National Guard Armory Patent	956.3	0	30 lethal or non-lethal		NR	NR
9	3/22/2006	Patent for 8 Clark County Schools	207.15	0	0	20	NR	NR
10	3/23/2006	Lease for 5 Clark County Parks	123.27	0	23 lethal or non-lethal		NR	NR
11	5/11/2006	Mineral Sale- Lone Mtn. Comm. Pit	120	0	7 lethal or non-lethal		NR	NR
12	5/12/2006	June 2006 Land Sale*	22.5	0	MSHCP	MSHCP	NR	NR
13	12/13/2006	Winter 2006/2007 Land Sale*	30	0	MSHCP	MSHCP	NR	NR
14	10/28/06	North Las Vegas Park	41.48	0	2 lethal or non-lethal		NR	NR
15	4/2/2007	City of Henderson Park	160	0	6 lethal or non-lethal		NR	NR
16	6/26/2007	June 2007 Land Sale	16.25	0	MSHCP	MSHCP	NR	NR
17	2/25/2008	June 2008 Land Sale	28.75	0	MSHCP	MSHCP	NR	NR
18	3/27/2009	Mineral Materials Sale- Lone Mtn. Comm. Pit	1157	0	23 lethal or non-lethal		NR	NR
19	1/23/2009	Spring 2009 Land Sale*	115	0	MSHCP	MSHCP	NR	NR
TOTALS			6314.78	332.7				

MSHCP = Clark County Multiple Species Habitat Conservation Plan incidental take permit;
NR = None Reported
*Reflects actual number of acres sold

APPENDIX A

SECTION 7 FEE PAYMENT FORM
Entire form is to be completed by project proponent

Biological Opinion File Number: 84320-2009-F-0297

U.S. Fish and Wildlife Service Office that Issued the Opinion:
Nevada Fish and Wildlife Office, Reno, Nevada

Species: Desert tortoise (*Gopherus agassizii*)

Project: Right-of-Way for U.S. Army Reserve Training Facilities

Amount of Payment Received: $_____

Total Payment Required: $35,114

Date of Receipt: _____

Check or Money Order Number: _____

Number of Acres to be Disturbed: 46.57

Project Proponent: U.S. Army Reserve

Telephone Number: _____

Authorizing Agencies: BLM-Las Vegas

Make checks payable to: Clark County Treasurer

Deliver check to: Clark County Desert Conservation Program
c/o Dept. of Air Quality and Environmental Management
Clark County Government Center
500 S. Grand Central Parkway, first floor (front counter)
Las Vegas, Nevada 89106
(Contact: Ann Magliere at (702) 455-3536)

If you have questions, you may call the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230.

revised 4/30/09

Appendix B

Notice of 30-Day Period for Public Comment

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Proposed Land Acquisition and
Construction of a U.S. Army Reserve Center

The Secretary of the Army proposes to acquire approximately 45 acres of land near Sloan, Nevada for construction and operation of a U.S. Army Reserve Center (USARC) facility. The USARC facility would serve the Clark County area and would provide properly equipped and secured facilities for readiness training for approximately 800 U.S. Army Reserve soldiers.

In accordance with the National Environmental Policy Act, the U.S. Army Reserve has prepared an Environmental Assessment (EA) and draft Finding of No Significant Impact (FNSI) for the Proposed and Alternative Action. The EA and draft FNSI evaluate any potential environmental and human health effects associated with construction and operation of a new USARC at the proposed location.

The EA and draft FNSI have been submitted to federal, state, and local agencies for review and are available for public review at the Lydia Malcolm Library, located at 2960 Sunridge Heights Parkway 100, Henderson, Nevada, 89052, and on the Internet at ftp://ClarkCo:Nevada@ftp.ch2m.com/Sloan. Written comments will be received and considered up to 30 days from the publication of this notice, and should be directed to: 63rd Regional Support Command, ATTN: Ms. Laura Caballero, 153 Dailey Road, Building 152, Moffett Field, California, 94035 or via electronic mail to laura.cabellero@usar.army.mil .

Appendix C

Wetlands and Jurisdictional Waters of the U.S. Report

Final Wetlands and Jurisdictional Waters of the U.S. Report

U.S. Army Reserve – Proposed Military Construction Project
Sloan, Clark County, Nevada
April 2009

PROJECT DESCRIPTION

The U.S. Army Reserve (USAR) 63rd Regional Support Command proposes to construct and operate a USAR training center on approximately 45 acres of vacant land (Property), currently owned by the U.S. Department of the Interior, Bureau of Land Management (BLM), located near Sloan, Clark County, Nevada. The USAR has submitted an application to the BLM for a Site Type Right of Way (ROW), which will be authorized under section 501(a)(7) and 507 of Title 5 of the Federal Land Policy and Management Act. Instructional Memorandum (IM) 2001-030 and IM 2001-030 Change 1 authorize BLM to issue a ROW for the project.

CH2M HILL conducted this wetlands and Jurisdictional Waters of the U.S. determination for the USAR to assess the ephemeral drainages (dry washes) located on the Property and two potential access routes and determine if the dry washes are Jurisdictional Waters of the U.S.

WETLAND AND JURISDICITONAL WATERS ASSESSMENT

On February 16-17 and March 2, 2009, CH2M HILL conducted a determination of the potential Jurisdictional Waters of the U.S. on the Property and two potential access routes. The Proposed Action access route measures approximately 2,200 feet from the intersection of Sloan Road and Hinson Street, while the Alternative Action route measures approximately 3,800 feet. A 200-foot wide corridor centered on the potential access routes was assessed as part of the determination. The Property and potential access route locations are depicted on Figures 1 and 2.

The Property and potential access routes do not contain permanent surface water features such as streams, rivers, or lakes. The determination confirmed that no wetlands are present on or immediately adjacent to the Property or potential access routes. A desert riparian community (Bradley and Deacon, 1967) is present in and along the edges of the dry washes, however, the soils are non-hydric and the desert riparian community itself is composed of xerophytic (tolerant of extreme drought) shrubs.

The determination did identify eight potential jurisdictional washes (S-3, and S-5 through S-11) on the Property and potential access routes. The wash locations are shown on Figure 2. Following is a description of each wash identified on the Property and access routes.

Dry Wash S-3: During storm events, water in dry wash S-3 flows northeast across the southeastern corner of the Property until its confluence with dry wash S-7. Upstream, wash S-3 is truncated by a development south of the Property (location S-3-1 - Figure 2). Dry wash S-3 has a width between ordinary high water marks (OHWM) of 6 to 21 feet and an OHWM

height of 4 to 16 inches. The deposition of flood debris (fibrous and woody plant material, rabbit fecal pellets, and trash) was used as an indicator to identify the OHWM. The wash bed is composed of silt/clay in the narrower sections (location S-3-2 - Figure 2), gravel in the mid-width sections (location S-3-3 - Figure 2; Photograph 1), and fanglomerate (Stage 6 caliche) in a wide section at a confluence with a small relict wash (location S-3-4 - Figure 2).

Dry Wash S-5: During storm events, water in dry wash S-5 flows northeast across the western portion of the Property. The wash appears to have relatively high velocity flow, as evidenced by large woody flood debris trapped in shrubs rooted in the wash bed. Dry wash S-5 has an OHWM width of 7 to 9 feet and height of 7 inches. Shelving along the banks of wash S-5 was used as an indicator to identify the OHWM. The wash bed is composed mostly of gravel with a few areas of bedrock (Photograph 2). Dry wash S-5 is a tributary of dry wash S-7; the confluence is located offsite, to the northeast of the Property.

Dry Wash S-6: During storm events, water in dry wash S-6 flows east off the hillside west of the Property then across the northwestern corner of the Property, until its confluence with dry wash S-5 (location S-5-4 - Figure 2). Dry wash S-6 has an OHWM with a typical width of 9 feet and height of 6 inches. The deposition of flood debris (fibrous and woody plant material, rabbit fecal pellets, and trash) and sediment along the banks were used as indicators to identify the OHWM. The wash bed is composed primarily of gravel (Photograph 3).

Dry Wash S-7: During storm events, water in dry wash S-7 flows northeast through the southeast corner of the Property. This wash is identified by the Clark County Flood District as "Sloan Area 1" (Figure 2). Dry wash S-7 has an OHWM width of 24 feet and height of 1 to 2 feet as indicated by shelving along the banks. The wash bed is composed of gravel (location S-7-2 - Figure 2; Photograph 4).

Dry Wash S-8: During storm events, water in dry wash S-8 flows northeast across the Alternative Action access route at Paplinski Parkway, across open desert, a paved parking lot and into a developed area. Upgradient of the Paplinski Parkway crossing (location S-8-1-Figure 2; Photograph 5), dry wash S-8 has a braided channel with an OHWM width of 35 feet and height of 6 to 12 inches. The wash bed is composed primarily of silt/clay and gravel, with some areas with exposed fanglomerate. There is no existing water conveyance structure at Paplinski Parkway. During flood events, water flows directly over the asphalt. After crossing Paplinski Parkway (location S-8-1 - Figure 2), the channel gradually narrows to an OHWM width of 8 feet and height of 6 inches. The bed is composed of silt/clay and gravel. The wash crosses the Alternative Action access route a second time on Schuster Street (location S-8-3; Photograph 6), the OHWM width is 3 feet, height is 6 inches, and the bed is composed of silt/clay and gravel. The wash is truncated by a development east of Schuster Street. The water enters a landscaped depression along the south side of the development, where it apparently evaporates or percolates into the underlying alluvium. The OHWM in wash S-8 was identified by the presence of flood debris (fibrous and small woody plant material), silt deposits, changes in soil, and shelving.

Dry Wash S-9: Dry wash S-9 originates near Schuster Street and is likely the result of runoff during storm events from the paved lot located to the southeast of location S-9-2 (Figure 2; Photograph 7) where it crosses the Alternate Action access route. Downgradient, the wash is truncated by the development located northeast of location S-9-1. Water likely pools at the

development, where it evaporates or percolates into the alluvium. The OHWM is 6 feet wide and 4 inches high. The wash bed is composed of silt/clay and gravel. The OHWM was identified by the presence of flood debris (fibrous and small woody plant material), silt/clay deposits, changes in soil, and shelving.

Dry Wash S-10: During storm events, water in dry wash S-10 flows northeast across the Proposed Action access route at location S-10-3 (Figure 2), across open desert, then adjacent to the Alternative Action access route for approximately 300 feet from location S-10-2 to S-10-1 (Figure 2). Dry wash S-10 joins dry wash S-11 at location S-10-1, then crosses the Alternative Action access route near a culvert that channels runoff under the developed area located east of Schuster Street. At location S-10-3 (Figure 2; Photograph 8), S-10 has a OHWM width of 3 feet, height of approximately 3 inches, and the wash bed is composed of silt/clay and gravel. At location S-10-1 (Figure 2; Photograph 9), dry wash S-10 has an OHWM width of approximately 12 feet and height of 2 feet. The wash bed is composed of silt deposits near S-10-1 and gravel deposits upgradient. The OHWM was identified by the presence of flood debris (fibrous and small woody plant material and trash), silt/clay deposits, changes in soil, and shelving. The apparent thickness of the silt and substantial width of the OHWM at location S-10-1 appears to be due to the partial blockage of flow at the culvert, causing the suspended fine silts and clays to be deposited in the wash.

Dry Wash S-11: Dry wash S-11 originates as runoff from a developed area south of Ray Way, flows across the Proposed Action access route and utility corridor, then across open desert and the Alternative Action access route, before joining dry wash S-10. At location S-11-5 (Figure 2; Photograph 10), S-11 has a OHWM width of 18 feet, height of 12 inches, and the wash bed is composed of silt/clay and gravel. At location S-11-1 (Figure 2; Photograph 11), dry wash S-11 has an OHWM width of 15 feet and height of 2 feet. The wash bed is composed of silt deposits at S-11-1 and gravel deposits upgradient. The OHWM was identified by the presence of flood debris (fibrous, small, and large woody plant material, rabbit fecal pellets, and trash), silt/clay deposits, changes in soil, and shelving. At the confluence of S-10 and S-11 (location S-10-1 - Figure 2; Photograph 12), a U-shaped basin has been created, where water backs up from the confluence of the washes prior to flowing through the culvert.

SUMMARY/CONCLUSION

Washes S-3 and S-5 through S-11 have an OHWM of greater than 3 feet wide and evidence of recent flow. Washes S-3, S-5, S-6, S-10, and S-11 are tributaries of wash S-7 which is an indirect tributary of Duck Creek which is located approximately 7 miles northeast of the Property. Duck Creek flows northeast to the Las Vegas Wash. The Las Vegas Wash channels storm water, urban runoff, shallow groundwater, and treated wastewater into the Las Vegas Bay of Lake Mead which is the impoundment of the Colorado River behind Hoover Dam. Wash S-7 is the only wash depicted on the USGS Sloan, Nevada 1:24,000 Quad and the Mesquite Lake, NV, 1:100,000 Quad topographic maps. Washes S-8 and S-9 were formerly tributaries of wash S-7 but have been truncated by the development located east of Schuster Street.

Dry wash S-7 flows into a tributary of Duck Creek, and therefore is a 4th order tributary to the nearest traditionally navigable water Lake Mead and the Colorado River. Dry washes S-3, S-5, and S-11 are tributaries of dry wash S-7 and, therefore, 5th order tributaries to the

Colorado River. Dry wash S-6 is a tributary to dry wash S-5 and, therefore, a 6th order tributary to the Colorado River. Dry wash S-10 is a tributary of S-11 and therefore a 6th order tributary of the Colorado River. Dry washes S-8 and S-9 are isolated, because their flow has been truncated by the development east of Schuster Street.

Based on the determination of washes S-3 and S-5 through S-11, CH2M HILL concludes that washes S-3, S-5, S-6, S-7, S-10, and S-11 are jurisdictional Waters of the U.S. Dry washes S-8 and S-9 were determined to be non-jurisdictional because they are isolated by development.

References

Bradley, W. G., and Deacon, J. E., 1967. The biotic communities of southern Nevada. In *Pleistocene studies in southern Nevada*, H. M. Wormington and D. Ellis, Eds., pp. 129-200. Nevada State Museum Anthropological Papers 13.

Attachments:

Figure 1: Site Location Map
Figure 2: Potential Waters of the U.S.
Photo Log

Figures

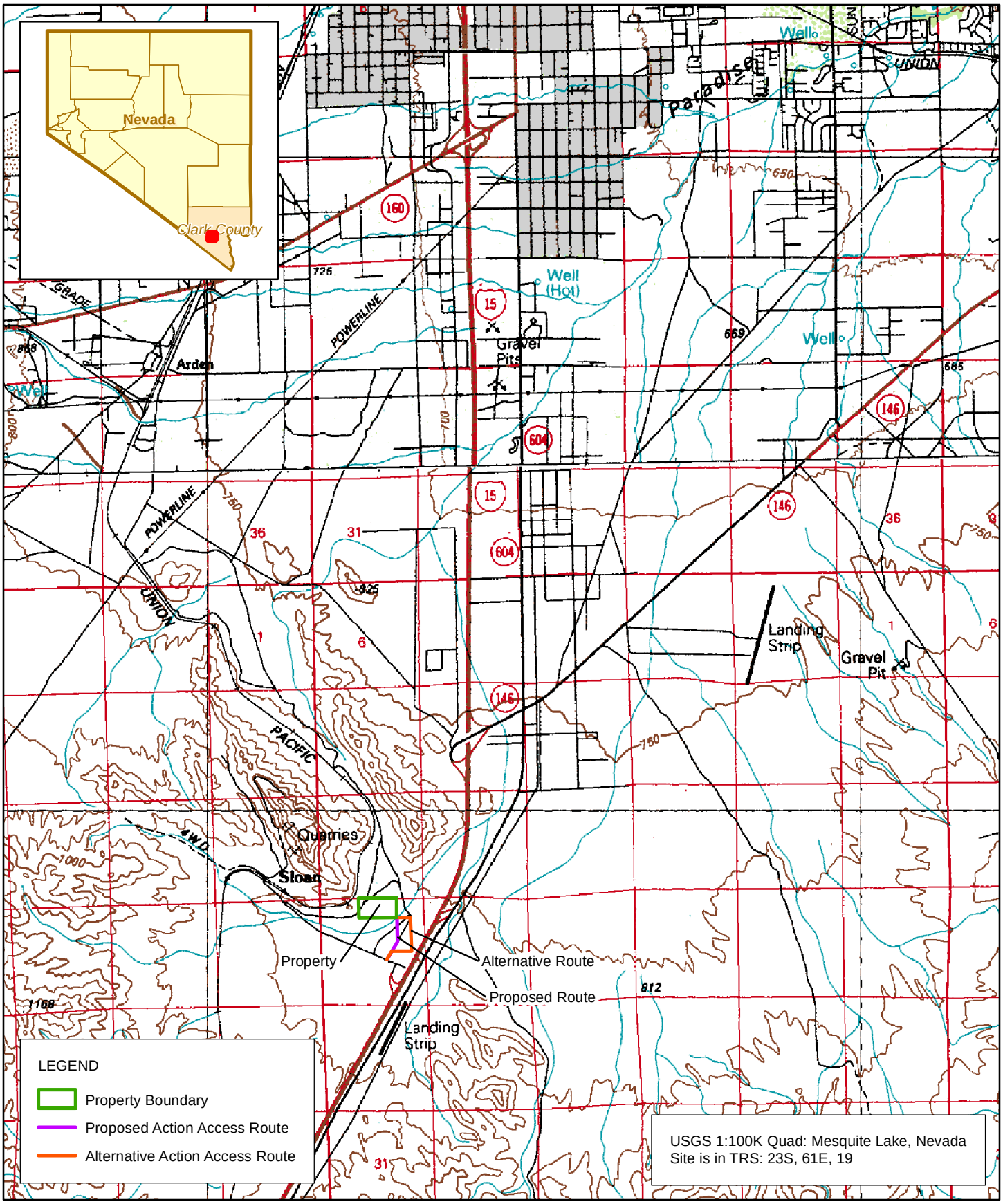
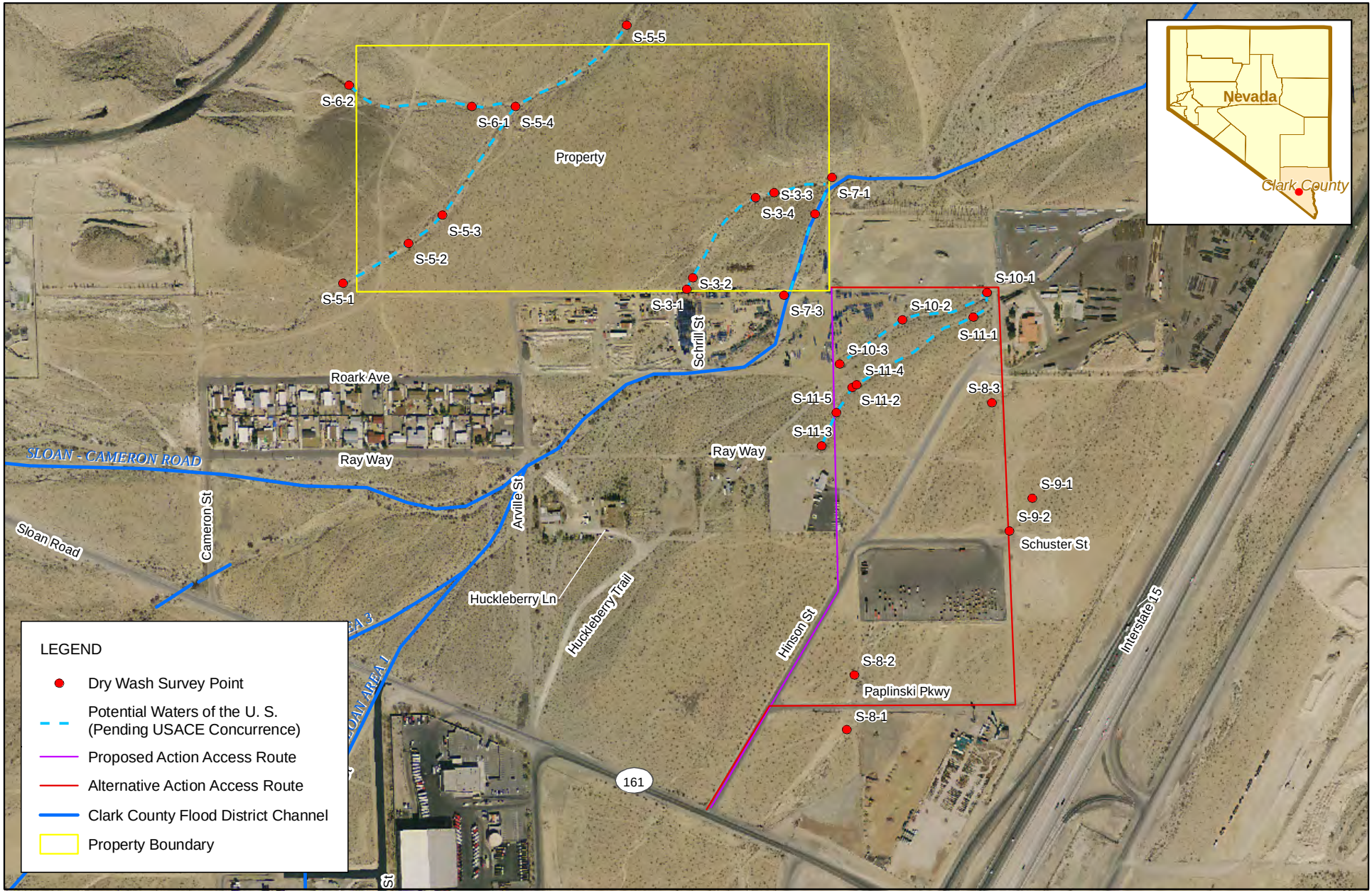


Figure 1
Site Location Map
Proposed U.S. Army Reserve Military Construction Site Location
Sloan, Nevada

CH2MHILL

LAS \\ELVIS\GIS\PROJECTS\377913USACE\MAPFILES\FIG1_SLOANNV_SITEMAP_USGS_030509.MXD KBROCK 3/5/2009 17:33:10



N

0 275 550
Feet

Figure 2
Potential Waters of the U.S.
Proposed U.S. Army Reserve Military Construction Project
Sloan, Nevada

CH2MHILL

LAS \\ELVIS\GIS\PROJECTS\377913USACE\MAPFILES\FIG2_SLOANNV_JWUS_030509.MXD KBROCK 3/5/2009 17:31:18

Photo Log

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Delineation of Jurisdictional Waters	Taken by: Cindy Newman – February 16, 2009

Photograph 1

Dry wash S-3. Photo taken from location S-3-3 (Figure 2) facing southwest (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – February 17, 2009

Photograph 2

Dry wash S-5. Woody flood debris trapped in shrubs. Photo taken from location S-5-3 (Figure 2) facing east (downgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – February 17, 2009

Photograph 3

Dry wash S-6. Photo taken from location S-6-1 (Figure 2) facing east (downgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – February 17, 2009

Photograph 4

Dry wash S-7. Photo taken from location S-7-2 (Figure 2) facing southwest (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 5

Dry wash S-8. Photo taken from location S-8-1 (Figure 2) facing northeast (downgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 6

Dry wash S-8. Photo taken from location S-8-3 (Figure 2) facing southwest (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 7

Dry wash S-9. Photo taken from location S-9-2 (Figure 2) facing northeast (downgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 8

Dry wash S-10. Photo taken from location S-10-3 (Figure 2) facing southwest (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 9

Dry wash S-10. Photo taken from location S-10-1 (Figure 2) facing southwest (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 10

Dry wash S-11. Photo taken from location S-11-5 (Figure 2) facing north (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 11

Dry wash S-11. Photo taken from location S-11-1 (Figure 2) facing southwest (upgradient).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada	
Task: Determination of Jurisdictional Waters	Taken by: Cindy Newman – March 2, 2009

Photograph 12

The confluence of dry washes S-11 and S-10. Photo taken from location S-10-1 (Figure 2) facing northeast (downgradient).

Appendix D
Air Quality Calculations

Appendix D- Summary Tables
Air Quality Emission Estimates

Operational Sources	Criteria Pollutant Emissions (tpy)						
	SO_2	NOx	CO	PM_{10}	$PM_{2.5}$	VOC	HAPs
Stationary Sources							
Heating Units	0.006	0.97	0.71	0.075	0.075	0.05	0.019
Mobile Sources							
On-road Vehicles	4.67E-04	0.081	1.08	0.002	0.002	0.054	0.001
Total	**0.006**	**1.05**	**1.79**	**0.077**	**0.076**	**0.11**	**0.020**
PSD Thresholds	100	N/A	N/A	N/A	100	N/A	10/25
NSR Thresholds	N/A	50	70	70	N/A	50	N/A
General Conformity *de minimis* Thresholds	N/A	100	100	70	N/A	100	N/A

Construction Sources	Criteria Pollutant Emissions (tpy)						
	SO_2	NOx	CO	PM_{10}	$PM_{2.5}$	VOC	HAPs
Construction Worker Commute	0.003	0.39	8.92	0.008	0.004	0.31	0.019
Asphalt	-	-	-	-	-	0.009	-
Equipment	0.048	1.34	0.73	0.11	0.11	0.13	0.032
Material Hauling	1.81E-03	1.20E+00	1.94E-01	3.31E-02	2.72E-02	4.04E-02	2.90E-06
Site Grading Fugitive Dust Emissions	-	-	-	3.52	-	-	-
Demolition Emissions	-	-	-	0	-	-	-
Construction Totals	**0.053**	**2.92**	**9.84**	**3.68**	**0.14**	**0.49**	**0.051**
General Conformity *de minimis* Thresholds	N/A	100	100	70	N/A	100	N/A

Notes:

1-Lead is not a significant pollutant generated from this type of action. Any lead emissions generated from the proposed action have been included as part of the HAP emissions.

2-For General Conformity applicability determination, project emissions should be compared based on the worst-case year, which for all pollutants is a full year of construction activities.

3-In lieu of site-specific information, the emission calculations have been based on scope of similar proposed air sources at other USARCs.

Appendix D-Table 1
Air Quality Emission Estimates-Heating Units

NG Fired Units (MMBtu/hr)[1]	1.75
NG Fired Units (MMBtu/hr)[2]	0.60
Fuel Type	Natural Gas
Maximum Operation Limit (hrs/yr)	8,760
Heat Value of Fuel (Btu/scf)[1]	1,050

[1]- Heat input assumes 1- 1 MMBtu/hr boiler (Training Center) and 1-750,000 Btu/hr boiler (Vehicle Main. Shop).

[2]- Heat input assumes 2-300,000 Btu/hr water heaters (one heater each in the training center and Vehicle Main. Shop)

		Uncontrolled Potential to Emit								
		Heating Units				Water Heaters				Total
Criteria Pollutant[2]		Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)	Criteria Pollutant Emissions (ton/yr)
Total Particulate Matter (PM)[3]		7.6	0.013	111	0.055	7.6	0.004	38.0	0.019	0.075
Nitrogen Oxides (NOx)		100.0	0.167	1,460	0.73	94.0	0.054	471	0.24	0.97
Sulfur Oxides (SOx)		0.6	0.001	8.76	0.004	0.6	3.43E-04	3.0	0.002	0.006
Carbon Monoxide (CO)		84.0	0.140	1,226	0.61	40.0	0.023	200	0.10	0.71
VOC		5.5	0.009	80.3	0.040	5.5	0.003	27.5	0.014	0.054

			Uncontrolled Potential to Emit		
Toxic Air Pollutants[4] (Organic HAPs)[6]	CAS No.	Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
3-Methylchloranthrene	56-49-5	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Benzene	71-43-2	2.10E-03	4.70E-06	0.041	2.06E-05
Benzo(a)pyrene	50-32-8	1.20E-06	2.69E-09	2.35E-05	1.18E-08
Formaldehyde	50-00-0	7.50E-02	1.68E-04	1.47	7.35E-04
Hexane	110-54-3	1.80E+00	0.004	35.3	0.018
Naphthalene	91-20-3	6.10E-04	1.37E-06	0.012	5.98E-06
Toluene	108-88-3	3.40E-03	7.61E-06	0.067	3.33E-05
2-Methylnaphthalene	91-57-6	2.40E-05	5.37E-08	4.71E-04	2.35E-07
7,12-Dimethylbenz(a)anthracene		1.60E-05	3.58E-08	3.14E-04	1.57E-07
Acenaphthene	83-32-9	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Acenaphthylene	203-96-8	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Anthracene	120-12-7	2.40E-06	5.37E-09	4.71E-05	2.35E-08
Benzo(a)anthracene	56-55-3	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Benzo(b)fluoranthene	205-82-3	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Benzo(g,h,i)perylene	191-24-2	1.20E-06	2.69E-09	2.35E-05	1.18E-08
Benzo(k)fluoranthene	205-82-3	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Chrysene	218-01-9	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Dibenzo(a,h)anthracene	53-70-3	1.20E-06	2.69E-09	2.35E-05	1.18E-08
Dichlorobenzene	25321-22-6	1.20E-03	2.69E-06	0.024	1.18E-05
Fluoranthene	206-44-0	3.00E-06	6.71E-09	5.88E-05	2.94E-08
Flourene	86-73-7	2.80E-06	6.27E-09	5.49E-05	2.74E-08
Indeno(1,2,3-cd)pyrene	193-39-5	1.80E-06	4.03E-09	3.53E-05	1.76E-08
Phenanathrene	85-01-8	1.70E-05	3.80E-08	3.33E-04	1.67E-07
Pyrene	129-00-0	5.00E-06	1.12E-08	9.80E-05	4.90E-08
Organic HAPs Total				**36.9**	**0.018**

			Uncontrolled Potential to Emit		
Toxic Air Pollutants-Metals[5] (Inorganic HAPs)[6]	CAS Number	Emission Factor ($lb/10^6$ scf)	Emission Rate (lb/hr)	Emission Rate (lb/yr)	Emission Rate (ton/yr)
Arsenic	7440-38-2	2.00E-04	4.48E-07	0.004	1.96E-06
Barium	7440-39-3	4.40E-03	9.85E-06	0.086	4.31E-05
Beryllium	7440-41-7	1.20E-05	2.69E-08	2.35E-04	1.18E-07
Cadmium	7440-43-9	1.10E-03	2.46E-06	0.022	1.08E-05
Chromium	7440-47-3	1.40E-03	3.13E-06	0.027	1.37E-05
Cobalt	7440-48-4	8.40E-05	1.88E-07	0.002	8.23E-07
Copper	7440-50-8	8.50E-04	1.90E-06	0.017	8.33E-06
Lead		5.00E-04	1.12E-06	0.010	4.90E-06
Manganese	7439-96-5	3.80E-04	8.50E-07	0.007	3.73E-06
Mercury	7439-97-6	2.60E-04	5.82E-07	0.005	2.55E-06
Molybdenum	7439-98-7	1.10E-03	2.46E-06	0.022	1.08E-05
Nickel	7440-02-0	2.10E-03	4.70E-06	0.041	2.06E-05
Selenium	7782-49-2	2.40E-05	5.37E-08	4.71E-04	2.35E-07
Vanadium	1314-62-1	2.30E-03	5.15E-06	0.045	2.25E-05
Zinc	7440-66-6	2.90E-02	6.49E-05	0.57	2.84E-04
Inorganic HAPs Total				**0.86**	**4.28E-04**
HAPs Total				**37.8**	**0.019**

Notes:

[1] Natural Gas heating value (EPA AP-42, Appendix A, Miscellaneous Data & Conversion Factors)

[2] Criteria Pollutants, small uncontrolled boilers (EPA AP-42, Section 1.4 Natural Gas Combustion, Tables 1.4-1 and 1.4-2).

[3] PM emission factor is assumed to equal PM_{10}.

[4] Toxic Air Pollutants (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-3).

[5] Metals from Natural Gas Combustion (EPA AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-4; Lead from Table 1.4-2).

Appendix D-Table 2
Air Quality Emission Estimates-Government and Personal Onroad Vehicles

1.0 Data Required to Estimate Emissions from Government Owned Vehicles (GOVs) and Privately Owned Vehicles (POVs)

(a) All vehicles must be classified and included under one of the following vehicle categories:

National Average Distribution from EPA Mobile 6 Model	
%	Vehicle Type
36.65	LDGV - Light-Duty Gasoline Vehicles (Passenger Cars)
37.63	LDGT12 - Light-Duty Gasoline Trucks (0 - 6,000 lbs GVWR)
12.83	LDGT34 - Light-Duty Gasoline Trucks (6,001 - 8,500 lbs GVWR)
3.57	HDGV - heavy duty gasoline-fueled vehicles with a GVWR exceeding 8500 pounds.
0.03	LDDV - Light-Duty Diesel Vehicles (Passenger Cars)
0.19	LDDT - Light-Duty Diesel Trucks (0 - 8,500 lbs GVWR)
8.55	HDDV - Heavy-Duty Diesel Vehicles (> 8,500 lbs GVWR)
0.54	MC - Motorcycles
0	HDGB - Gasoline Buses (School, Transit, and Urban)
0	HDDBT - Diesel Transit and Urban Buses
0	HDDBS - Diesel School Buses

(b) Emission Factors can be obtained from the following
Emission factors for NOx, CO, VOC, SO_2, PM-10, PM-2.5, Acrolein, Acetaldehyde, 1,3-Butadiene, Benzene, Formaldehyde, and MTBE were obtained by running EPA's MOBILE 6.2 model.

1.1 Calculation of On-Site Mileage for Government Vehicles

Vehicle Type	# of vehicle	Total Mileage/ Year	On-Site Mileage
All Vehicles	314	100	31,400

Note: Assumes each government vehicle driving 100 mi/yr on-site.

1.2 Calculation of On-Site Mileage for Privately Owned Vehicles (POVs)

Personnel Category	Estimated Vehicles Entering USARC/Year					Miles/Vehicle/ Day (3)	Total POVs per Year	Total Miles per Year
	Daily	Weekend	Annual (1)	% of Employees that drive to USARC	Adjusted Vehicles per year (2)			
Daily Employees	47	0	12,220	95%	11,609	1.00	45	11,609
Weekend Reservist	0	348	4,176	100%	4,176	1.00	348	4,176
TOTAL (POVs)								**15,785**

(1) Estimate the annual number of vehicles entering the USARC per year: e.g. Employee Vehicles/Day x 5 (day/wk) x 52 (wks/yr)
(2) Estimate the adjusted vehicles per year for daily employees:
e.g. If only 90% of the employees drive onto the USARC then: Annual employee vehicles x 0.90 = Adjusted vehicles /year
(3) This is the average on-site distance traveled by employees in their personal vehicles.

2.0 Calculation of Criteria Pollutant Emission Rates

Vehicle Category	Modeled Year	Number of Vehicles	Annual On-Site Mileage	Fleet Vehicle Criteria Emission Factors (gm/mile)						Fleet Vehicle HAP Emission Factors (mg/mile)					
				CO	VOC	NO_X	SO_2	PM-10	PM-2.5	Acrolein	Acetaldehyde	1,3-Butadiene	Benzene	Formaldehyde	MTBE
Government Owned Vehicles (GOVs)															
All Vehicles*	2009	314	31,400	20.72	1.05	1.569	0.009	0.046	0.029	0.700	4.527	4.234	34.424	11.780	0.069
Privately Owned Vehicles (POVs) - Daily Employees				**2009 Year Emission Factors**											
All Vehicles*	2009	47	11,609	20.72	1.05	1.569	0.009	0.046	0.029	0.700	4.527	4.234	34.424	11.780	0.069
Privately Owned Vehicles (POVs) - UTA (Weekend) Employees				**2009 Year Emission Factors**											
All Vehicles*	2009	348	4,176	20.72	1.05	1.569	0.009	0.046	0.029	0.700	4.527	4.234	34.424	11.780	0.069

*National Average Vehicle mix from EPA. Emissions factors run in Mobile 6.2 for 2009. Assumptions documented here:
Winter Assumptions:Speed: 25 MPH/ Max Min Temp:14.3 29.6 /FUEL RVP: 14.3/ DIESEL SULFUR: 15.
Summer Assumptions:Speed: 25 MPH/ Max Min Temp:73.5 93.6 /FUEL RVP: 8.7/ DIESEL SULFUR: 15.
Used winter scenario emissions factors as worst case, with the exception of LDGV VOC where the summer emissions factor was worst case.

Vehicle Category	Modeled Year	Number of Vehicles	Annual On-Site Mileage	Actual Criteria Pollutant Emissions						Actual HAP Emissions					
				CO	VOC	NO_X	SO_2	PM-10	PM-2.5	Acrolein	Acetaldehyde	1,3-Butadiene	Benzene	Formaldehyde	MTBE
Government Owned Vehicles (GOVs)															
All Vehicles*	2009	314	31,400	1,431	72.5	108.4	0.62	3.2	2.02	0.048	0.31	0.29	2.38	0.81	0.005
Privately Owned Vehicles (POVs) - Daily Employees															
All Vehicles*	2009	47	11,609	529	26.82	40.1	0.23	1.16	0.75	0.018	0.116	0.108	0.88	0.30	0.002
Privately Owned Vehicles (POVs) - UTA (Weekend) Employees															
All Vehicles*	2009	348	4,176	190	9.6	14.4	0.08	0.42	0.27	0.006	0.042	0.039	0.32	0.11	0.001
TOTAL EMISSIONS (lb/yr)				**2,151**	**109.0**	**163**	**0.93**	**4.73**	**3.04**	**0.073**	**0.16**	**0.15**	**1.20**	**0.41**	**0.002**
TOTAL EMISSIONS (tpy)				**1.08**	**0.054**	**0.081**	**4.67E-04**	**0.002**	**0.002**	**3.63E-05**	**7.86E-05**	**7.35E-05**	**5.98E-04**	**2.05E-04**	**1.20E-06**

2.1 Calculation of Annual Actual Emissions

Emission Factor (gm/mile) x Annual On-Site Mileage x 0.0000022 (lb/gm) = Actual Emissions (lb/yr)

Appendix D-Table 3
Air Quality Emission Estimates- Construction

Emissions from Construction Worker Commuting

					Pollutant Emission Factors[1] (g/VMT)[4]						HAP Emission Factors (mg/mile)					
Estimated Daily Commute Distance	**Number of workers**	**Daily Commute Miles[3]**	**Months of Construction**	**Total Miles per Project**	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**Acrolein**	**Acetaldehyde**	**1,3-Butadiene**	**Benzene**	**Formaldehyde**	**MTBE**
Construction Worker[2]	10	50	24	300,000	27.0	1.17	0.94	0.025	0.012	0.009	0.60	3.90	4.62	39.4	9.34	0.35
Total					**Pollutant Emissions (Annual tons)**						**HAP Emissions (Pounds)**					
					CO	**NOx**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**Acrolein**	**Acetaldehyde**	**1,3-Butadiene**	**Benzene**	**Formaldehyde**	**MTBE**
					8.92	0.386	0.311	0.008	3.87E-03	3.13E-03	0.40	2.58	3.06	26.0	6.18	0.23
				Total	**8.92**	**0.386**	**0.311**	**0.008**	**3.87E-03**	**3.13E-03**	**0.40**	**2.58**	**3.06**	**26.0**	**6.18**	**0.23**

Notes:

1 – Emission factors from Mobile 6: http://www.epa.gov/otaq/ap42.htm Appendix H: Light Duty Vehicles and Light Duty Trucks, Model Year 2009. Average of 75% vehicles(LDGT12) and 25% trucks(LDGT34). Winter Assumptions:Speed: 50 MPH/ Max Min Temp:14.3 29.6 /FUEL RVP: 14.3/ DIESEL SULFUR: 15.

2- Construction worker total miles calculated by: multiplying daily commute hours x months of construction x 25 (days per month).; have assumed a 24 month construction period.

3- Daily commute number includes both directions of commute

Asphalt Emissions

Acres to be paved	7.0	
Emissions Factor *	2.62	lbs ROG (VOC) /acre
Emissions from asphalt paving	**18.34**	**lbs VOC**
	0.009	**Tons VOC**

Note:

Using equation in AP-42, Section 4.5, emissions factor From URBEMIS

Material Hauling

					Pollutant Emission Factors (g/VMT)						HAP Emission Factors (mg/mile)					
Material Hauling	**Tons of Material**	# of Trips	Miles per Trip	Avg. Speed *	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**Acrolein**	**Acetaldehyde**	**1,3-Butadiene**	**Benzene**	**Formaldehyde**	**MTBE**
To Site	10	2080	30	50	1.41	8.712	0.294	0.2407	0.198	0.0132	1.05	3.55	2.73	21.21	13.63	0.06
From Site	10	2080	30	50	1.41	8.712	0.294	0.2407	0.198	0.0132	1.05	3.55	2.73	21.21	13.63	0.06
					Pollutant Emissions (Annual tons)						**HAP Emissions (Pounds)**					
					CO	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**Acrolein**	**Acetaldehyde**	**1,3-Butadiene**	**Benzene**	**Formaldehyde**	**MTBE**
				To Site	9.69E-02	5.99E-01	2.02E-02	1.65E-02	1.36E-02	9.07E-04	1.44E-01	4.88E-01	3.76E-01	2.918	1.875	8.25E-03
				From Site	9.69E-02	5.99E-01	2.02E-02	1.65E-02	1.36E-02	9.07E-04	1.44E-01	4.88E-01	3.76E-01	2.918	1.875	8.25E-03
				Total	1.94E-01	1.20E+00	4.04E-02	3.31E-02	2.72E-02	1.81E-03	2.89E-01	9.77E-01	7.51E-01	5.836	3.750	1.65E-02

Notes:

*HDDV- Emissions factors run in Mobile 6 for CY2009. Assumptions documented here: Winter Assumptions:Speed: 50 MPH/ Max Min Temp:14.3 29.6 /FUEL RVP: 14.3/ DIESEL SULFUR: 15.

Site Grading Fugitive Dust Emissions

	PM Tons/ Acre-month	Acres worked	Months	Ton Emissions (PM)
Average Conditions	0.22	2.0	8	3.52

Note:

1-URBEMIS2007 for Windows Users' Guide Appendix A – Construction Emissions, Page A–6, average case emissions factor, 0.42 ton/acre-month

Algorithm:Acres of Area Graded * Months of Grading * EF = Emissions from Grading

2-Assumes 2 acres worked at a time.

Demolition Emissions

	PM10 Pounds/ ft^3	Building Width (ft)	Building Length (ft)	Building Ht (ft)	PM10 Emissions (lbs)	PM10 Emissions (Ton)
Average Conditions	0.00042	0	0	0	0.0	0.0

Note:

1-URBEMIS2007 for Windows Users' Guide Appendix A – Construction Emissions, Page A–3

2-PM10 emissions assumed to equal to PM2.5 emissions.

3-Building width and length are assumed based on square footage provided in the project scope (1391).

4- PM10 (pounds/day) = (0.00042 pounds of PM10 / ft^3) * (N * O * P) Where: N = building width (feet), O = building length (feet), P = building height (feet)

5-Assume building height of: **One-Story:** 18 feet, **Two-Story**: 27 feet

Construction Summary Table

	CO	NOx	VOC	PM_{10}	$PM_{2.5}$	SO_2	HAPs
	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Construction Worker Commute	8.92	0.386	0.311	0.008	3.87E-03	3.13E-03	0.019
Asphalt	-	-	0.009	-	-	-	-
Equipment	0.73	1.34	0.133	0.114	0.111	0.048	0.032
Material Hauling	1.94E-01	1.20E+00	4.04E-02	3.31E-02	2.72E-02	1.81E-03	0.006
Site Grading Fugitive Dust Emissions	-	-	-	3.52	-	-	-
Demolition Emissions	-	-	-	0	-	-	-
Construction Totals	**9.84**	**2.92**	**0.49**	**3.68**	**0.14**	**0.053**	**0.057**

Note:

Equipment emissions obtained from Table 4.

Appendix D-Table 4
Air Quality Emission Estimates- Diesel Off-road Construction Vehicles

Calculation of Criteria Pollutant Emission Rates

Emissions Estimate Based on Engine Rating and Operating Time (All Diesel-fired Equipment)

Equipment Data										*Emission Parameters*		*Emissions Factors [4]*						*Annual Actual Emissions*					
Vehicle/Equipment Type	**Equipment Category**	**Engine Type**	**Number of Units**	**Engine Rating (Per Unit) (hp)**	**Model Year**	**Model Year Site (S)/ Default (D)**	**Operating Time (Per unit) (hr/yr)**	**Total Operating Time (hr/yr)**	**Source for Operating Time Site (S)/ Default (D) [1]**	**Load Factor [2] (Percent of Max. Power)**	**SCC**	**VOC Emission Factor (g/hp-hr)**	**CO Emission Factor (g/hp-hr)**	**NOx Emission Factor (g/hp-hr)**	**PM-10 Emission Factor (g/hp-hr)**	**PM-2.5 Emission Factor (g/hp-hr)**	**SO_2 Emission Factor (g/hp-hr)**	**VOC Emissions (lb/yr)**	**CO Emissions (lb/yr)**	**NOx Emissions (lb/yr)**	**PM-10 Emissions (lb/yr)**	**PM-2.5 Emissions (lb/yr)**	**SO_2 Emissions (lb/yr)**
Backhoe	Construction	Reciprocating Diesel	1	95	2009	D	450	450	D	55%	2270002066	1.35	6.21	6.52	0.98	0.95	0.20	70.1	322	338	51.0	49.5	10.51
Concrete Truck	Construction	Reciprocating	1	250	2009	D	450	450	D	57%	2270002051	0.25	1.52	4.51	0.22	0.22	0.16	34.8	216	638	31.5	30.5	23.2
Skid Steer Loader	Construction	Reciprocating	1	46	2009	D	450	450	D	55%	2270002072	1.87	8.12	6.77	1.27	1.23	0.21	47.1	203.7	170.0	31.8	30.8	5.30
Paver/Roller	Construction	Reciprocating	1	100	2009	D	450	450	D	53%	2270002003	0.35	1.99	4.32	0.35	0.34	0.17	18.4	104.6	227.0	18.36	17.8	8.86
Clearing Equipment (Roller)	Construction	Reciprocating	1	100	2009	D	450	450	D	71%	2270002015	0.38	2.39	4.52	0.40	0.39	0.17	27	168.5	319	28.1	27.2	12.1
Delivery Trucks	Construction	Reciprocating	1	250	2009	D	450	450	D	57%	2270002051	0.25	1.52	4.51	0.22	0.22	0.16	34.8	215.5	638	31.5	30.5	23.2
Excavators	Construction	Reciprocating	1	94	2009	D	450	450	D	75%	2270002030	0.49	3.23	4.97	0.51	0.50	0.18	34	226	348	35.8	34.8	12.4
TOTAL EMISSIONS (Pounds)																		**266**	**1,456**	**2,677**	**228**	**221**	**95.5**
TOTAL EMISSIONS (TONs)																		**0.13**	**0.73**	**1.34**	**0.11**	**0.11**	**0.048**

Calculation of Annual Actual Criteria Pollutant Emissions

Annual Actual Emissions (lb/yr) = Engine Rating (hp) x Loading Factor (%) x Operating Time per Unit (hr/yr) x Number of Units x Emission Factor (g/hp-hr) x Conversion Factor (0.002205 lb/g)

[1] Operating times and engine ratings are based on similar construction projects.

[2] Load factor is the fraction of available power at which the engine normally operates. Source: U.S. Environmental Protection Agency, Office of Mobile Sources, Exhaust Emission Factors for Nonroad Engine

[3] SCC obtained EPA Nonroad Model

[4] Emission factors are obtained from U.S. Environmental Protection Agency, NonRoad Model. Run January 15, 2009 for the year 2009 for the entire nation. Assumptions: Fuel RVP: 8.0, O wt.%: 0.0, Gas Sulfur %: 0.0339, Diesel Sulfur %: 0.05, Marine Diesel Sulfur %: 0.2637, CNG/LPG Sulfur % 0.003, Min Temp 60, Max Temp 84, Ave Temp 75, Stage II Control %: 0.0

2.0 HAP Emissions From Diesel

HAP constituent emission factors obtained from U.S. Environmental Protection Agency, SPECIATE Version 4.0 , Speciation for Medium Duty Trucks (Profile # 4674), Speciation based on tests preformed in 1996

Speciation for construction equipment was not available so the medium duty truck speciation has been used here to estimate HAP emissions. http://www.epa.gov/ttn/chief/software/speciate/index.html

Constituent CAS	Constituent Name	Factor	Actual
		(Weight% VOC)	(lb/yr)
106-99-0	1,3-butadiene	0.12	**0.32**
540-84-1	2,2,4-trimethylpentane	0.47	**1.26**
75-07-0	Acetaldehyde	15.94	**42.5**
107-02-8	Acrolein (2-propenal)	1.30	**3.45**
71-43-2	Benzene	1.05	**2.78**
100-41-4	Ethylbenzene	0.18	**0.48**
50-00-0	Formaldehyde	8.51	**22.7**
108-38-3; 106-42-3	M & p-xylene	0.89	**2.37**
78-93-3	Methyl ethyl ketone (2-butanone)	2.86	**7.62**
91-20-3	Naphthalene	0.24	**0.63**
95-47-6	O-xylene	0.32	**0.84**
123-38-6	Propionaldehyde	5.34	**14.23**
108-88-3	Toluene	1.52	**4.04**
132-64-9	Dibenzofuran , also noted as "DBZFUR"	0.011	**0.029**
98-86-2	Acetophenone	1.95	**5.18**
Total:			**64.3**

3.1 Calculation of Actual Annual Emissions:

Emission Factor (Weight% VOC) x VOC Emissions from Diesel Off-Road Equipment / 100 = Actual HAP Emission (lb/yr)

Appendix E
Record of Non-Applicability

Record of Non-Applicability (RONA)
Concerning the General Conformity Rule (40 CFR Part 51)

Name of Project: U.S. ARMY RESERVE CENTER

Location: CLARK COUNTY, NEVADA

Army guidance dictates that a Record of Non-Applicability (RONA) be prepared for Federal Actions where proposed emissions are clearly *de minimis* in order to comply with the General Conformity Rule (40 CFR 51, Subpart W) and the National Environmental Policy Act (NEPA 42 USC 4231 et seq.).

Conformity under the Clean Air Act, Section 176, has been evaluated for the proposed action in accordance with 40 CFR Part 51. The requirements of this rule are not applicable to this project because the total direct and indirect emissions of nonattainment pollutants, CO, PM_{10}, and ozone (precursors VOC and NOx) associated with the Proposed and Alternative Action would be below the *de minimis* thresholds.

Estimated direct and indirect emissions would be 11.63 tons per year (tpy) of CO, 3.76 tpy of PM_{10}, 0.6 tpy of VOCs, and 3.97 tpy of NOx. All emissions would fall below the *de minimis* thresholds established at 40 CFR 51 of 100 tpy of CO, and 70 tpy of PM_{10}, and 100 tpy each of VOC and NOx. Emissions are based on the worst-case year, which would occur during construction of the 2013 U.S. Army Reserve Center expansion when the facility constructed in 2009/2010 is in operation.

_____

BRUCE A. CASELLA
Major General, Commanding
United States Army Reserve

_____

Date

Appendix F
Biological Evaluation

Final Biological Evaluation

U.S. Army Reserve—Proposed Military Construction Project
Sloan, Clark County, Nevada

Project Description

The U.S. Army Reserve (USAR) 63rd Regional Support Command proposes to construct and operate a USAR training center on approximately 45 acres of vacant land (Property), owned by the Bureau of Land Management (BLM), located near of Sloan, Clark County, Nevada. The USAR has submitted an application to the BLM for a site-type Right of Way (ROW), which will be authorized under section 501(a)(7) and 507 of Title 5 of the Federal Land Policy and Management Act. Instructional Memorandum (IM) 2001-030 and IM 2001-030 Change 1 authorize BLM to issue a ROW for the purpose of this type of project.

The proposed project would provide a new 800-member training facility with administrative, educational, assembly, library, learning center, vault, weapons simulator, and physical fitness areas. The proposed project would also include an organizational maintenance shop with work bays and maintenance administrative support offices, an unheated storage facility, and organizational parking for all military and privately-owned vehicles.

Buildings would be permanent, single-story, with reinforced concrete foundations, concrete floor slabs; structural steel frames; masonry veneer walls; standing seam metal roof; heating, ventilation, and air conditioning; plumbing; mechanical; security; and electrical systems. Required actions would include land clearing, paving, fencing, general site improvements, and utility extensions. Physical security measures would be incorporated into the design, including maximum standoff distance from roads, parking areas, and vehicle unloading areas. Berms, heavy landscaping, and bollards would be used to prevent access where standoff distances cannot be maintained.

Purpose of the Biological Evaluation

The purpose of this Biological Evaluation (BE) is to provide the U.S. Fish and Wildlife Service (USFWS) with site specific information regarding the potential impacts of the project on federally-listed threatened or endangered species in compliance with Section 7 (a)(2) of the Endangered Species Act. This BE was prepared according to the USFWS requirements as outlined in *Biological Assessment/Evaluation Development Guidelines* (USFWS, 2007).

Project Area

Field work for this BE was conducted on the Property and two potential routes combining access and utility corridors, hereafter referred to as "access routes". The Property encompasses approximately 45 vacant acres on BLM land located less than 0.5 miles west of Interstate 15, approximately 15 miles south of downtown Las Vegas in Clark County, Nevada, (Sections 18 and 19, T23S/R61E). The legal description of the parcels that comprise the Property are T 23S, R 61E, Section 19, N ½ of the NW ¼ of the NE ¼ (20 acres), N ½ of

the S ½ of the NW ¼ of the NE ¼ (10 acres), N ½ of the SE ¼ of the NE ¼ of the NW ¼ (5 acres), and NE ¼ of the NE ¼ of the NW ¼ (10 acres).

Two access routes are being evaluated for this project: the Proposed Action and Alternative Action routes. The Proposed Action route measures approximately 2,200 feet from the intersection of Sloan Road and Hinson Street, while the Alternative Action route measures approximately 3,800 feet. Both potential routes cross BLM-managed as well as privately-owned land. Surveys were conducted within a 200 foot-wide corridor centered on their potential centerlines. The Property location and two potential access routes are depicted on Figure 1. The Property is approximately centered on the following coordinates: Lon. 35º 56′ 01″ N, Lat. 115º 11′ 54″W, in unincorporated Clark County, Nevada. Photographs of the Property are included in Appendix A.

The Property is zoned Industrial, while the zoning of the Proposed and Alternative Action routes are a combination of Industrial, Business, and Design Research Park. Surrounding land use includes open land to the north, light industrial to the south/southeast and residential rural to the south/southwest. Single-family dwellings, and equipment and material storage yards are located in the vicinity (Figure 1). Union Pacific Railroad tracks are located less than 0.1 miles west of the Property. The Sloan Quarry, a large limestone quarrying operation, is located approximately 0.3 miles west of the Property.

Miscellaneous debris and trash is scattered throughout the property. Off-road vehicle traffic has disturbed the soil in various areas. Several dirt trails are located on the western portion of the Property. A debris pile, approximately 1,000 square feet in size, consisting primarily of pine-tree clippings, is located near the southeastern corner of the property.

Soils

The Property and potential access routes are located on calcareous colluvial and alluvial soils derived primarily from the Mississippian Monte Cristo Limestone. Most of the soil is friable; however, there are portions of the Property covered with desert pavement (thin surface layer of closely packed pebbles). Soils underlying the Property are classified as Cave gravelly fine sandy loam with 0 to 4 percent slopes and Jean-Goodsprings complex with 2 to 4 percent slopes (NRCS, 2009a).

The Cave soil series consists of very shallow to shallow, well-drained soils. Cave soils occur on fan terraces, fan piedmonts, and stream terraces which formed in mixed alluvium from limestone, granite, diorite, andesite, schist, quartzite, tuff, rhyolite and basalt (NRCS, 2009b). Cave soils have medium to very high runoff and moderate or moderately rapid permeability. The Jean series consists of very deep, excessively drained soils that formed in sandy alluvial or aeolian materials over unconforming sandy-skeletal sediments from mixed rock sources. The Jean soils occur on erosional fan remnants, inset fans, and channels in the Mojave Desert of southern Nevada (NRCS, 2009c). Jean soils have very low runoff and rapid permeability. The Goodsprings series consists of shallow, well-drained soils overlying a lime-cemented hardpan which formed in mixed alluvium primarily from limestone and sandstone on erosional fan remnants and alluvial flats. Goodsprings soils occur on alluvial fans and valley fill plains in southern Nevada (NRCS, 2009d). Goodsprings soils have slow or medium runoff with moderate permeability. Cave, Jean, and Goodsprings soils are

typically suitable for structural development because they are well drained, and the depth to groundwater (greater than 80 inches) would not affect subsurface structures.

Ecological Communities

On February 16-17 and March 2, 2009, CH2M HILL conducted a pedestrian survey to assess the ecological communities of the Property and potential access routes. The vegetation on the Property and potential access routes is Mojave Desert scrub predominantly composed of a creosote bush-white bursage (*Larrea tridentata – Ambrosia dumosa*) community. A sparse desert riparian community, composed of shrubs adapted to the disturbed soils along drainages, is present along and in the recently active washes. Succulent plant species present on the property include Mojave yucca (*Yucca schidigera*), diamond cholla (*Opuntia ramosissima*) and Mojave silver cholla (*O. echinocarpa*). A limestone outcrop in the eastern edge of the property supports cotton-top barrel cacti (*Echinocactus polycephalus*) and hedgehog cacti (*Echinocereus engelmannii*). A cryptogamic crust including mosses of the genera *Tortula* occupies several infrequently active washes. A list of plant species observed on the Property and potential access routes is presented in Table 1.

TABLE 1
Plant Species Observed on the Property and Potential Access Routes

Scientific Name	Common Name	Notes
SHRUBS, SUBSHRUBS, FERNS		
Acacia greggii	Catclaw acacia	Desert riparian species
Ambrosia dumosa	White bursage	Codominant perennial
Cheilanthes feei	Fern	On bedrock outcrop only
Dyssodia pentachaeta	Pricklyleaf	On bedrock outcrop only
Ephedra nevadensis	Nevada ephedra	Rare
E. torreyana	Torrey ephedra	Common
Eriogonum fasciculatum	California buckwheat	
Hilaria rigida	Tobosa grass	Limited to swales and drainages
Hymenoclea salsola	Cheese-bush	Desert riparian species
Krameria erecta	Ratany	
Larrea tridentate	Creosote bush	Codominant perennial
Lycium californicum	Wolf-berry	Desert riparian species
Menodora spinescens	Ground-thorn	
Mortonia utahensis	Tick-weed	Normally restricted to bedrock slopes
Nicotiana trigonophylla	Indian tobacco	On bedrock outcrop only
Phoradendron californicum	Leafless mistletoe	On catclaw acacia
Salazaria Mexicana	Bladder-sage	Desert riparian species

TABLE 1
Plant Species Observed on the Property and Potential Access Routes

Salvia dorrii	Paddle-leaf sage	Desert riparian species
Sphaeralcea ambigua	Globe mallow, sore-eye poppy	
Stipa spp.	Needle-and-thread grass	Two species observed
Xanthocephalum sarothrae	Snakeweed	
X. microcephala	Little-head snakeweed; matchweed	On bedrock outcrop only
SUCCULENT PLANTS		
Coryphantha sp.	Pin-cushion cactus	Either *Coryphantha vivipara* or *C. chlorantha*- two specimens
Echinocactus polycephalus	Cotton-top barrel cactus	No California barrel cacti observed in the vicinity; On bedrock outcrop only
Echinocereus engelmanii	Hedgehog cactus	On bedrock outcrop only
Neolloydia johnsoni	Pineapple acatus	Rare; On bedrock outcrop only
Opuntia basilaris	Beavertail prickly-pear	Population with heart-shaped (distinctly apically cleft) terminal pads
O. echinocarpa	Mojave silver cholla	
O. ramosissima	Diamond cholla	
Yucca schidigera	Mojave yucca	Uncommon
ANNUAL & BIENNIAL PLANTS		
Bromus rubens	Red brome	Undesirable exotic species
Chorizanthe rigida	Spine flower	
Eriogonum inflatum	Desert trumpet	
Euphorbia sp.	Spurge	Common on silty floors of channels
Salsola cf. *tragus*	Barbwire plant	Undesirable exotic species
Schismus sp.	Mediterranean grass	Exotic species

The Property and potential access routes support a variety of desert wildlife. The presence of mounds and burrows on the Property and along potential access routes, suggests the presence of small mammals/reptiles, such as the kangaroo rat (*Dipodomys* sp.). A desert tortoise (*Gopherus agassizii*) burrow was observed on a portion of the Property with friable soils, and two shelter sites were observed in the limestone outcrop in the eastern portion of the Property as shown on Figure 2. Several other burrows were found in the friable soil or in the banks of dry washes that may have been excavated by desert tortoise, but have since been abandoned and are eroded. These burrows are now likely used by other burrowing animals (Figure 2). Several packrat (*Neotoma* sp.) middens were also observed in the

limestone outcrop. Signs of intensive digging in several small mammal/reptile mounds suggest the presence of carnivores such as the North American badger (*Taxidea taxus*). Common raven (*Corvus corax*) and desert cottontail (*Sylvilagus audubonii*) were observed during field work. Black-tailed jack rabbits (*Lepus californicus*) likely inhabit the Property (a skull was found on the limestone outcrop). Other common desert wildlife species, such as coyotes (*Canis latrans*), migrating birds, and others are expected to utilize the Property, although they were not observed during the site visit.

Wetlands, Watersheds, and Surface Waters

The U.S. Army Corps of Engineers and U.S. Environmental Protection Agency jointly define wetlands as, "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory, 1987). CH2M HILL completed a delineation of Waters of the United States on February 16-17 and March 2, 2009 and found no wetlands on the Property or in the vicinity of the potential access routes. The lack of wetlands on the Property is consistent with the lack of wetlands shown on the USFWS National Wetland Inventory maps (USFWS, 2009a) and other site-related information (topography, soil types, and aerial photographs).

CH2M HILL identified desert riparian communities (Bradley and Deacon, 1967) in and along the edges of the ephemeral drainages (washes); however, the soils are non-hydric and the desert riparian community itself is composed chiefly of xerophytic (tolerant of extreme drought) shrubs (see Table 1).

The Property and potential access routes do not contain permanent surface water features such as streams, rivers, or lakes; however, several dry washes are present (Figure 3). When present, water in the washes flows northeast to Duck Creek, approximately 7 miles northeast of the Property. Duck Creek continues to flow northeast to the Las Vegas Wash. The Las Vegas Wash is a tributary that channels stormwater, urban runoff, shallow groundwater, and highly-treated wastewater into the Las Vegas Bay of Lake Mead. Lake Mead is the impoundment of the Colorado River behind Hoover Dam.

Eight potentially jurisdictional washes were identified and evaluated within the Property or potential access route corridors. CH2M HILL concluded that six of these washes (S-3, S-5, S-6, S-7, S-10, and S-11) are jurisdictional Waters of the United States. The washes are 4th to 6th order tributaries to the Colorado River, which is the nearest traditionally navigable water. In addition, dry wash S-7 is a Clark County Flood District channel known as "Sloan Area 1" and is the only wash large enough to be represented on USGS topographic maps. Dry wash S-7 appears on the USGS Sloan, Nevada 1:24,000 Quad and the Mesquite Lake, NV, 1:100,000 Quad topographic maps.

The dry washes identified on Figure 3 have an ordinary high water mark (OHWM) of greater than 3 ft wide and evidence of recent flow. Indicators used to identify the OHWM included the deposition of flood debris (fibrous and woody plant material, rabbit fecal pellets, and trash), sediment deposits, shelving, and changes in soil. A more detailed description of the washes is included in a jurisdictional determination report that assesses

the dry washes. The jurisdictional determination will be submitted to the USACE, St. George Regulatory Office, for concurrence on the jurisdictional determination.

According to the Las Vegas Valley Water District (LVVWD, 2009), groundwater in the vicinity of the Property lies in three major aquifer zones generally encountered from 300 to 1,500 feet below the land surface.

Federally-Listed Species and Potential Adverse Effects

Listed and Candidate Species

Review of the USFWS website (USFWS, 2009a) and the Nevada Department of Conservation and Natural Resource Natural Heritage Program database (NVNHP, 2009a, 2009b, 2009c) revealed that 15 federally threatened, endangered, or candidate species are known to occur in Clark County, Nevada (Table 2).

TABLE 2
Federally Listed Threatened, Endangered, and Candidate Species Listed as Occurring in Clark County, Nevada

Scientific Name	Common Name	Federal Status
Birds		
Coccyzus americanus	Yellow-billed cuckoo	Candidate
Empidonax traillii extimus	Southwestern willow flycatcher	Endangered
Rallus longirostris yumanensis	Yuma clapper rail	Endangered
Reptile		
Gopherus agassizii	Desert Tortoise (Mojave population)	Threatened
Amphibian		
Rana onca	Relict leopard frog	Candidate
Fishes		
Empetrichthys latos	Pahrump poolfish	Endangered
Gila cypha	Humpback chub	Endangered
Gila elagans	Bonytail chub	Endangered
Gila seminuda	Virgin River chub	Endangered
Moapa coriacea	Moapa dace	Endangered
Oncorhynchus clarkia henshawi	Lahonton cutthroat trout	Threatened
Plagopterus argentissimus	Woundfin	Endangered
Ptychocheilus lucius	Colorado pikeminnow	Endangered
Xyrauchen texanus	Razorback sucker	Endangered
Plant		
Eriogonum corymbosum var. *nilesil*	Las Vegas Buckwheat	Candidate

Source: USFWS, 2009b; NVNHP, 2009a, 2009b, 2009c

There are no permanent or seasonal water resources on the Property; therefore, there is no available habitat to support the federally-listed fish or amphibian species listed as potentially-occurring in Clark County.

The **yellow-billed cuckoo** was historically found nesting in Nevada along the lower Truckee and Carson Rivers and in southern Nevada along the Colorado and Virgin Rivers, however, in the most recent surveys completed in 2006, only eight birds were observed along the Lower Colorado River. Yellow-billed cuckoos occurring in the western United States breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). Dense understory foliage appears to be an important factor in nest site selection, while cottonwood trees are an important foraging habitat in areas where the species has been studied in California (USFWS, 2008b). No riparian forests occur in the vicinity, and therefore no potentially suitable habitat for this species occurs on the Property or along potential access routes.

The **southwestern willow flycatcher** breeds and nests in widely scattered riparian habitats composed of cottonwood (*Populus fremontii*) and willow (*Salix* spp.) trees, as well as tamarisk (*Tamarix ramosissima*) thickets in the desert Southwest. The flycatcher feeds on insects within the multilayered riparian zones. In Nevada, this species can be found along the Virgin River, lower Muddy River, Colorado River, and water resources within the Pahranagat Valley (USFWS, 2004). No potentially suitable breeding, foraging, or nesting habitat for this species is located on the Property or along potential access routes because there are no riparian thickets with cottonwood and/or willow trees.

The **Yuma clapper rail** (*Rallus longirostris yumanensis*) occurs in Nevada along the Colorado River from Lake Mead to Mexico. The Yuma clapper rail inhabits freshwater or brackish stream-sides and marshlands under 4,500 ft elevation with dense riparian and marsh vegetation. It requires a wet substrate, such as a mudflat, sandbar, or slough bottom that supports cattail and bulrush stands of moderate to high density adjacent to shorelines (USFWS, 2009c). Yuma clapper rail movement patterns, including migration and dispersal, between the United States populations is not well understood, therefore, the location of the winter range for migrants from the United States is unknown, but presumed to be in Mexico (USFWS, 2006). No potentially suitable habitat for this species occurs on the Property or along potential access routes because there are no wetlands or dense riparian areas.

The **Mojave population of the desert tortoise** occurs in the Mojave Desert, north and west of the Colorado River in southwestern Utah, southern Nevada, southeastern California, and northwestern Arizona (USFWS, 2008d). The desert tortoise spends up to 95 percent of its life underground and occurs in a variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes, and canyons where friable soils, suitable for burrow construction is found. The desert tortoise is found from near sea level to approximately 3,500 feet in elevation in primarily creosote bush and mixed desert scrub. Desert tortoises may live 50 or more years in the wild, consuming primarily wildflowers, grasses, and cacti from which they receive almost their entire water intake (USFWS, 2008c). Nesting occurs underground in burrows, caliche caves, or other shelter sites during late spring or early summer. They hibernate for up to nine months each year, becoming most active from March to June and from September to October. Suitable desert tortoise habitat occurs throughout the Property. The potential access routes provide less suitable habitat due to the ongoing

disturbance, presence of existing roads, or close proximity to commercial and residential development. A total of three tortoise shelter sites (one burrow and two caves in the limestone outcrop) were identified during the pedestrian survey (Figure 2). Tortoise scat was found at the entrance of the two limestone caves. Several other burrows were found on the Property and one near the Alternative Action access route that may have been formed by desert tortoise, but have been abandoned and are now likely used by other burrowing mammals or reptiles.

Las Vegas buckwheat is a genetically unique subspecies of buckwheat located in Clark and Lincoln Counties, Nevada. Las Vegas buckwheat is woody perennial shrub up to 4 feet high with very conspicuous small yellow flowers in late September and early October. Las Vegas buckwheat prefers gypsum soils. Typically, the gypsum soil outcroppings occupied by Las Vegas buckwheat are sparsely vegetated with bare, exposed soils covered with a cryptogammic soil crust (Mrowka, 2008). Although a specific vegetation classification for Las Vegas buckwheat habitat does not exist, buckwheat habitat can generally be differentiated from typical Mojave creosote-bursage scrub and saltbush scrub by the presence of gypsophiles (gypsum obligate species) and other gypsoclines that occasionally share habitat. These species, include the Las Vegas bearpoppy, Parry sandpaper plant (*Petalonyx parryi*), Palmer's phacelia (*Phacelia palmeri*), wingseed blazing star (*Mentzelia pterosperma*) and froststem suncup (*Camissonia multijuga*) (Mrowka, 2008). No potentially suitable habitat exists for this species on the Property or along potential access routes because gypsum soils are not present.

Designated Critical Habitat

The USFWS has designated areas in southern Nevada as critical habitat for the southwestern willow flycatcher and the desert tortoise.

Approximately 18.6 miles of the Virgin River from the Arizona border to the Overton Wildlife Management Area (WMA) in Nevada was designated as critical habitat for the southwestern willow flycatcher (50 CFR Part17). The Overton WMA is located approximately 80 miles northeast of the Property and supports desert riparian habitat, associated with the floodplain of the Muddy and Virgin Rivers, dense shrubbery of desert wash habitat, wet meadows, ponds and portions of Lake Mead.

The USFWS designated 14 desert wildlife management areas (DWMAs) as critical habitat for the desert tortoise (59 CFR 5820-5846). The DWMAs encompass over 6 million acres in portions of the Mojave and Colorado deserts. The closest designated DWMA to the Project area is located northeast of Las Vegas along the west side of Interstate 15, approximately 30 miles northeast of the Property (USFWS, 2008d).

General and Species Specific Protection Measures

General Protection Measures

The following are general environmental measures and best management practices (BMPs) that are common practice to USAR construction sites.

- Prior to construction activity, onsite construction personnel will be briefed regarding BMPs.

- The construction contractor will demarcate the project boundaries and keep these boundaries to the smallest area possible.
- Garbage/construction debris is to be managed so that it will not attract nuisance wildlife, and refuse will be removed from the Property or stored in appropriate containers until it is removed.
- Soil erosion and sediment control devices will be used and maintained throughout construction.

Species-Specific Protection Measures

Due to the presence of desert tortoise habitat on the Property, the USAR will implement tortoise-species protection measures provided in the Clark County Multiple Species Habitat Conservation Plan (MSHCP), which is administered by the Clark County Desert Conservation Program. The MSHCP covers 78 species including the desert tortoise. The MSHCP is the Habitat Conservation Plan component of a Section 10(a)(1)(B) Incidental Take Permit (ITP: #TE034927-0) issued by the USFWS (Clark County, 2008). The USFWS issued this permit for land development in the Las Vegas Valley in exchange for implementation of conservation actions described in the MSHCP (Clark County, 2009). Conservation actions include fencing along roadways, invasive plant and animal control, restoration of native plants, collection of displaced tortoises and other species, and translocation of those species back into the wild. Species-specific protection measures for desert tortoise habitat were formulated to meet the measurable biological goal of maintaining stable or increasing population numbers of the desert tortoise (Clark County, 2008).

The USAR will implement the following protection measures to minimize adverse effects to the desert tortoise:

- Payment of the per-acre tortoise fee to Clark County
- Completion of desert tortoise education program by all construction personnel
- Preconstruction desert tortoise clearance immediately prior to construction
- Translocation of adult tortoises to target areas, if appropriate
- Installation and maintenance of tortoise-barrier fencing around the areas to be disturbed during construction

Conclusions

Suitable habitat for the federally-threatened desert tortoise was identified on the Property. The Property and potential access routes do not contain suitable habitat for other federally-listed species known to occur in Clark County, NV. The USAR finds that the proposed project <u>may affect but is not likely to adversely affect</u> the desert tortoise because the USAR will implement protection measures required by the MSHCP or directed by USFWS. The proposed project would have <u>no effect</u> on other federally-listed threatened, endangered, or candidate species because the Property and potential access routes do not contain suitable habitat for those species.

References

Bradley, W. G., and Deacon, J. E. 1967. The biotic communities of southern Nevada. In *Pleistocene studies in southern Nevada*, H. M. Wormington and D. Ellis, Eds., pp. 129-200. Nevada State Museum Anthropological Papers 13.

Clark County Dept. of Air Quality and Environmental Management. 2008. Adaptive Management Report for the Clark County, Nevada, Multiple Species Habitat Conservation Plan (MSHCP). http://www.accessclarkcounty.com/depts/clark_county/Documents/Habitat%20Species%20Conservation%20Plan.pdf. Accessed on February 3, 2009.

Clark County Desert Conservation Program. 2009. www.access**clarkcounty**.com/depts/daqem/epd/dcp/Documents/DCP_AndMSHCP_101.doc Accessed on February 3, 2009.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Las Vegas Valley Water District (LVVWD). 2009. http://www.lvvwd.com/html/groundwater_index.html. Accessed on January 21, 2009.

Mrowka, Rob. 2008. Center for Biological Diversity – Public Lands Program. *A Petition to List the Las Vegas Buckwheat (Erigonun corymbosum var. nilesii) as Threatened or Endangered under the U.S. Endangered Species Act.*

NRCS. 2009a. Web Soil Survey: Clark County, Nevada. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed on January 21, 2009.

NRCS. 2009b. Cave Series. http://www2.ftw.nrcs.usda.gov/osd/dat/C/CAVE.html. Accessed on January 21, 2009.

NRCS. 2009c. Jean Series. http://www2.ftw.nrcs.usda.gov/osd/dat/J/JEAN.html. Accessed on January 21, 2009.

NRCS. 2009d. Goodsprings Series. http://www2.ftw.nrcs.usda.gov/osd/dat/G/GOODSPRINGS.html. Accessed on January 21, 2009.

NVNHP. 2009a. Federal Endangered Species in Nevada. http://heritage.nv.gov/endanged.htm. Accessed on February 4, 2009.

NVNHP. 2009b. Federal Threatened Species in Nevada. http://heritage.nv.gov/threatnd.htm. Accessed on February 4, 2009.

NVNHP. 2009c. Federal Candidate Species in Nevada. http://heritage.nv.gov/candidat.htm. Accessed on February 4, 2009.

USFWS. 2004. Southwestern Willow Flycatcher Fact Sheet. http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/SWWF/SWWFC.pdf. Accessed on January 22, 2009.

USFWS. 2006. Yuma Clapper Rail 5-Year Review. http://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/YumaClapperRail/5-Year%20Review%209-06.pdf. Accessed on January 22, 2009.

USFWS. 2008a. Species Assessment and Listing Priority Assignment Form Relict Leopard Frog. http://ecos.fws.gov/docs/candforms_pdf/r8/D00E_V01.pdf. Accessed on January 21, 2009.

USFWS. 2008b. Species Assessment and Listing Priority Assignment Form Yellow-billed Cuckoo. http://ecos.fws.gov/docs/candforms_pdf/r8/B06R_V01.pdf. Accessed on January 21, 2009.

USFWS. 2008c. Desert Tortoise http://www.fws.gov/nevada/desert_tortoise/dt_life.html. Accessed on January 22, 2009.

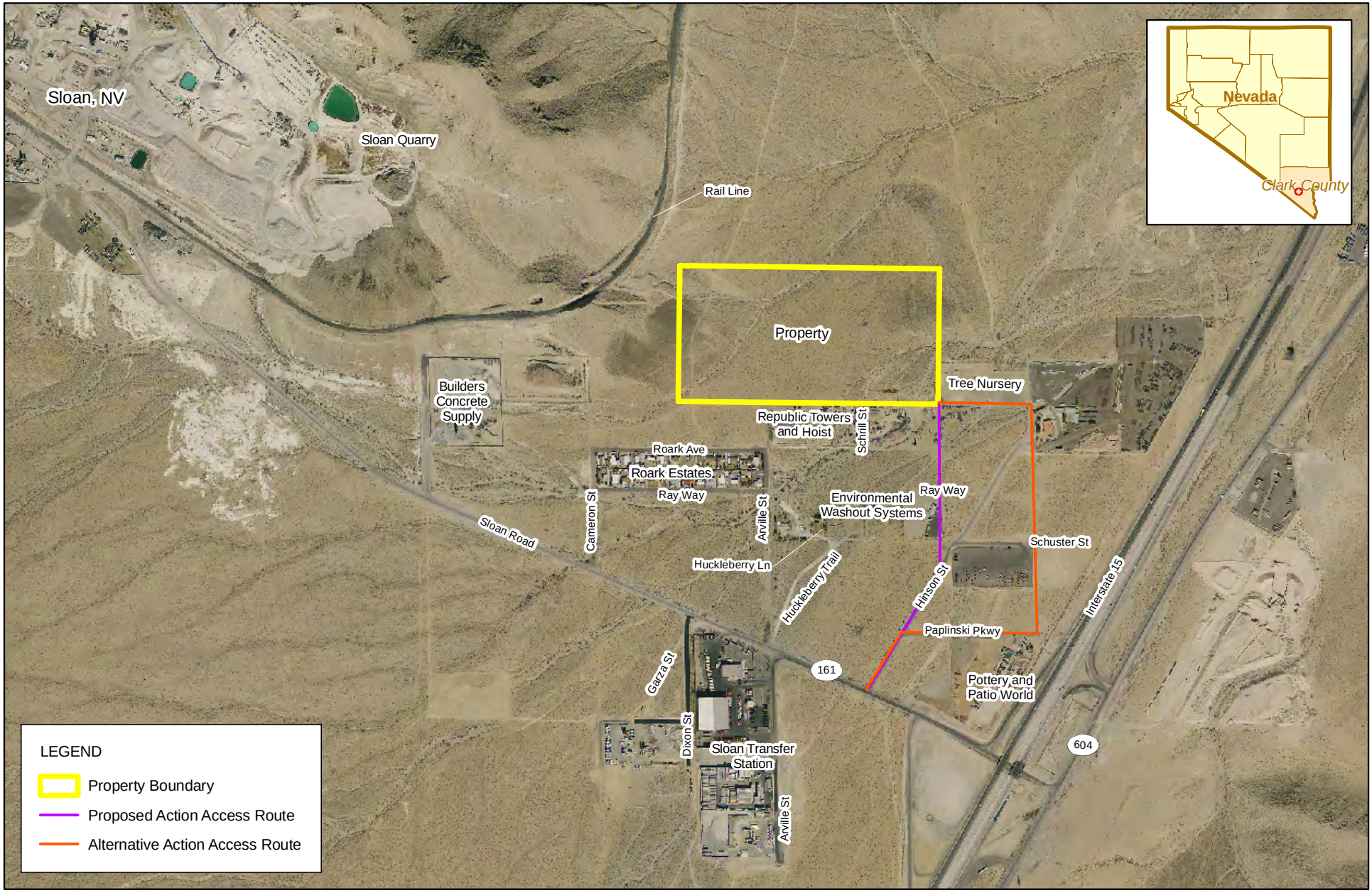
USFWS. 2008d. Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*). http://www.fws.gov/nevada/desert%5Ftortoise/documents/recovery_plan/DraftRevRP_Mojave_Desert_Tortoise.pdf. Accessed on January 22, 2009.

USFWS. 2009a. National Wetlands Inventory Wetland Data. Accessed on January 21, 2009.

USFWS. 2009b. Threatened and Endangered Species http://www.fws.gov/nevada/protected%5Fspecies/species_by_county.html. Accessed on January 21, 2009.

USFWS. 2009c. Yuma Clapper Rail http://www.fws.gov/southwest/es/arizona/Documents/Redbook/Yuma%20Clapper%20Rail%20RB.pdf. Accessed on January 22, 2009.

Figures



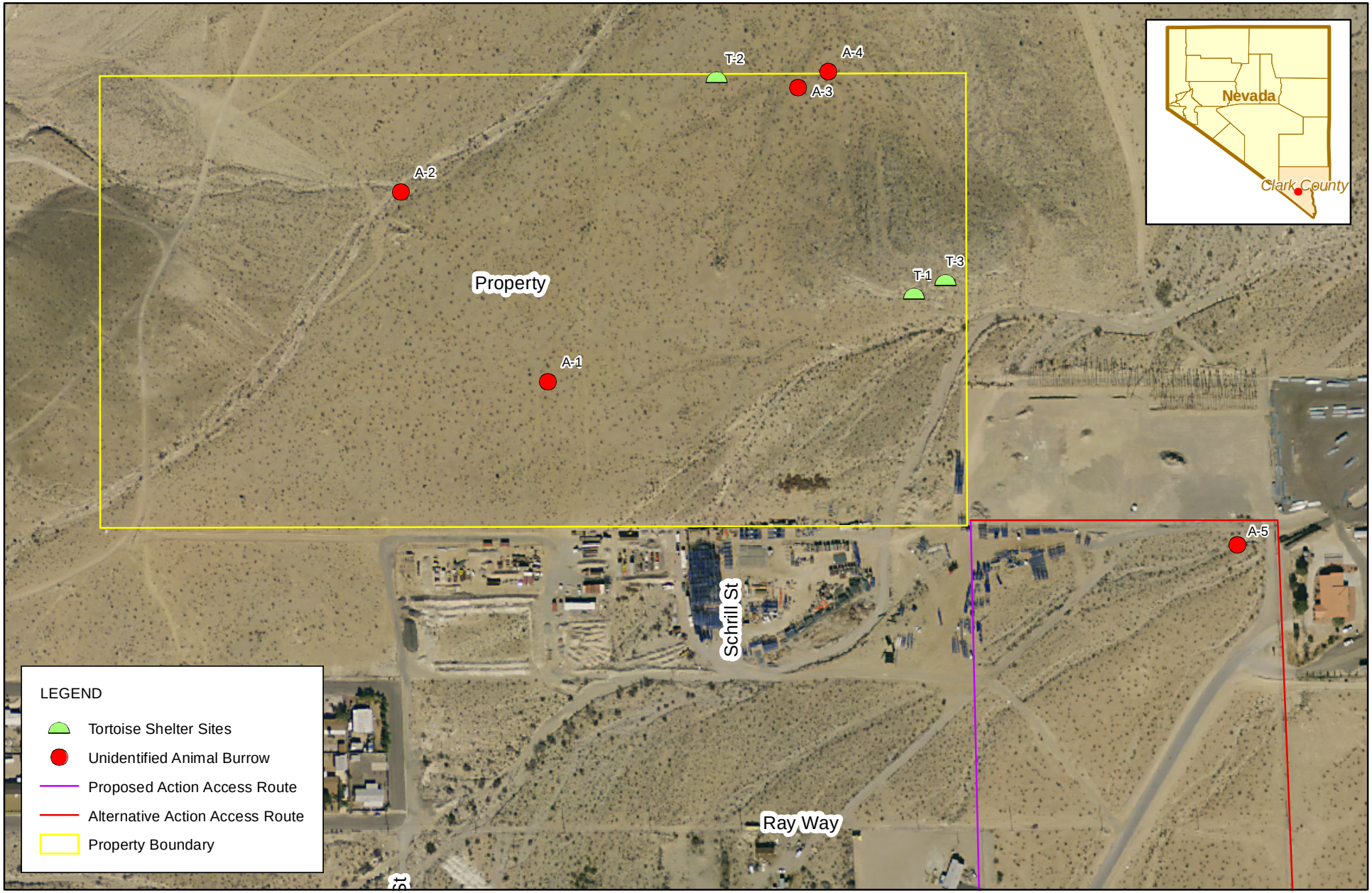
N

0 200 400
Feet

Figure 1
Property Location Map
Proposed U.S. Army Reserve Military Construction Site Location
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\Fig1_SloanNV_PropertyLayout85x11.mxd, Date: March 17, 2009 4:51:10 PM, User: KBUCKVOL



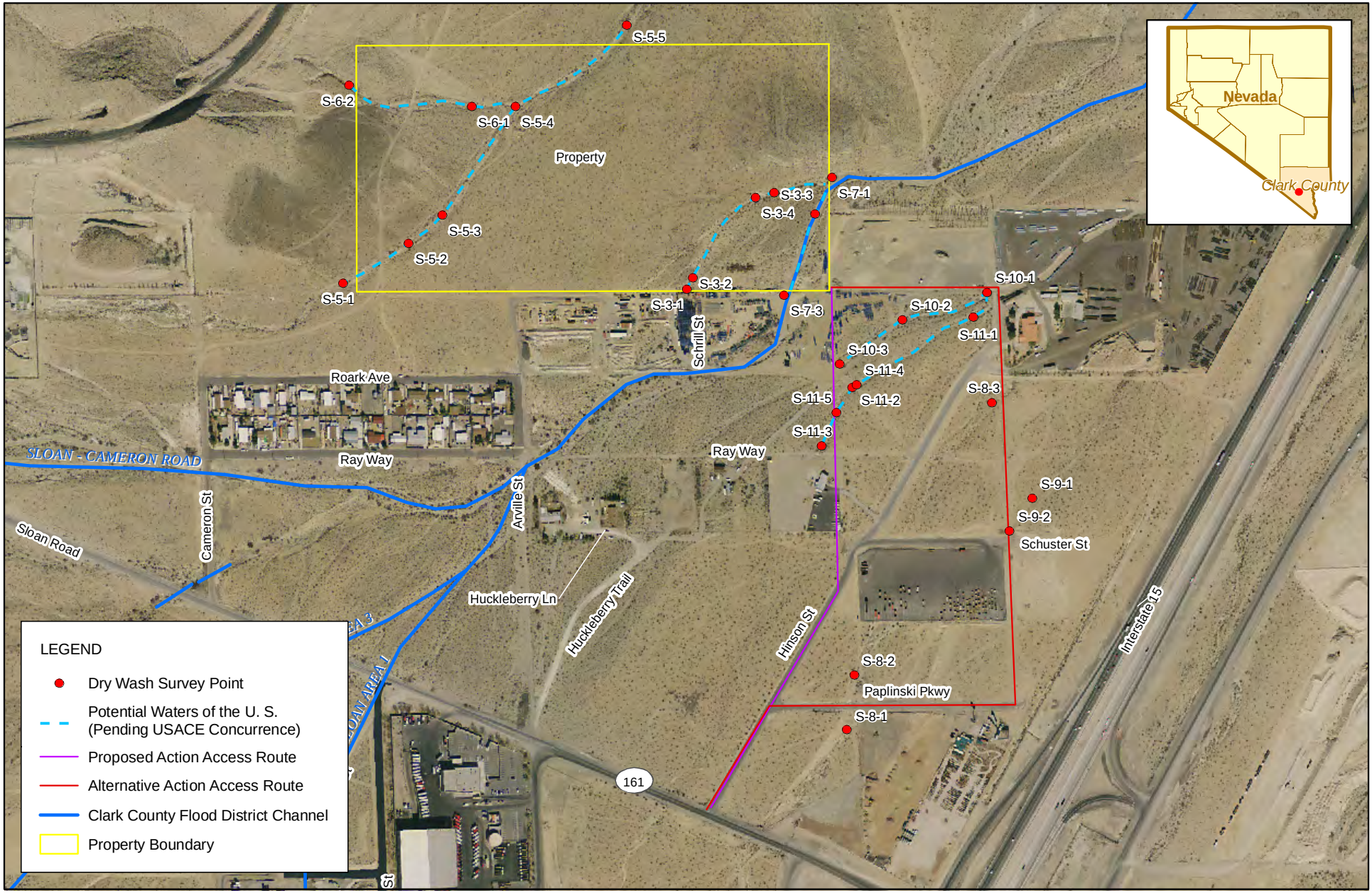
N

0 150 300
Feet

Figure 2
Desert Tortoise Sign
Proposed U.S. Army Reserve Military Construction Project
Sloan, Nevada

CH2MHILL

LAS \\ELVIS\GIS\PROJECTS\377913USACE\MAPFILES\FIG2_SLOANNV_TORTOISE_030609.MXD KBROCK 3/6/2009 10:39:33



N

0 275 550
Feet

Figure 3
Potential Waters of the U.S.
Proposed U.S. Army Reserve Military Construction Project
Sloan, Nevada

CH2MHILL

LAS \\ELVIS\GIS\PROJECTS\377913USACE\MAPFILES\FIG2_SLOANNV_JWUS_030509.MXD KBROCK 3/5/2009 17:31:18

Appendix A
Photo Log

CH2MHILL

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 1

View of southern portion of Property, facing southwest from limestone outcrop at eastern edge of Property. The dominant vegetation type includes Mojave desert scrub, composed primarily of creosote-white bursage community.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 2

Desert pavement occupies a minor portion of the Property.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 3

Cryptogamic crust (including mosses of the genera *Tortula*) occupies relict drainages and infrequently active drainages.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 4

Kangaroo rat (*Dipodomys* sp.) mounds at base of creosote bush (*Larrea tridentata*).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 5

Evidence of American badger (*Taxidea taxus*) digging in *Dipodomys* mounds at base of creosote bush (*Larrea tridentata*).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 17, 2009

Photograph 6

Desert tortoise (*Gopherus agassizii*) burrow observed on the Property.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 17, 2009

Photograph 7

Desert tortoise (*Gopherus agassizii*) scat observed on the Property.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 8

Packrat (*Neotoma* sp.) midden in limestone outcrop in eastern portion of Property. Evidence of recent use and preserved remains from the Late Pleistocene to early Holocene (greater than 8,000 years B.P.).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 17, 2009

Photograph 9

Animal den observed in limestone outcrop in eastern portion of the Property. Black-tailed jack rabbit (*Lepus californicus*) skull visible in foreground.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 16, 2009

Photograph 10

Dry wash (S-3) flows northeast across the southeastern corner of the site until its confluence with dry wash S-7. Photo taken facing southwest (upstream).

CH2MHILL

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 17, 2009

Photograph 11

Dry wash (S-5) flows northeast across the western half of the site. Woody flood debris trapped in shrubs provides evidence of high velocity flow. Photo taken facing east (downstream).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 17, 2009

Photograph 12

Dry wash (S-6) flows east across the northwestern corner of the site until its confluence with S-5. Photo taken facing east (downstream).

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Biological Evaluation	
Task: Biological Evaluation	Taken by: Cindy Newman – February 17, 2009

Photograph 13

Dry wash (S-7) flows northeast across the southeastern corner of the site. Photo taken facing southwest (upstream).

Appendix G

Environmental Condition of Property Report

Final

Environmental Condition of Property Report

U.S. Army Reserve Proposed Military Construction Project Sloan, Clark County, Nevada

Prepared for

Assistant Chief of Staff for Installation Management
Army Reserve Division
2511 Jefferson Davis Highway
Arlington, Virginia 22202-3926

the

63rd Regional Support Command
4235 Yorktown Ave.
Los Alamitos, California 90270

and

U.S. Army Corps of Engineers - Louisville District
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202-2232

Prepared by

CH2MHILL

May 2009

Contents

Abbreviations and Acronyms iv

1 Summary 1

2 Introduction 2

2.1 Purpose 2

2.2 Detailed Scope of Services 2

2.2.1 Site Reconnaissance 2

2.2.2 Interviews 3

2.2.3 Records Review 3

2.3 Significant Assumptions 4

2.4 Limitations and Exceptions 4

2.4.1 Limitations 4

2.4.2 Exceptions 4

2.4.3 Data Gaps 4

2.5 Special Terms and Conditions 4

2.6 User Reliance 5

3 Site Description 6

3.1 Location and Legal Description 6

3.2 Site and Vicinity General Characteristics 6

3.3 Current Use of the Property 7

3.4 Description of Structures, Roads, Improvements to the Site 7

3.4.1 Utilities 7

3.4.2 Building Description(s) 7

3.4.3 Other Facilities and Site Features 7

3.5 Current Uses of the Adjoining Properties 7

4 User Provided Information 8

4.1 Title Records 8

4.2 Environmental Liens or Activity and Use Limitations 8

4.3 Specialized Knowledge 9

4.4 Commonly Known or Reasonably Ascertainable Information 9

4.5 Valuation Reduction for Environmental Issues 10

4.6 Owner, Property Manager, and Occupant Information 10

4.7 Reason for Performing Phase I Environmental Site Assessment 10

4.8 Other 10

5 Records Review 11
5.1 Standard Environmental Record Sources 11
5.1.1 Federal Databases 12
5.1.2 State and Tribal Databases 14
5.2 Additional Environmental Record Sources 16
5.3 Physical Setting Source(s) 16
5.3.1 Topography 16
5.3.2 Surface Waters 16
5.3.3 Geology 17
5.3.4 Hydrogeology 17
5.3.5 Soils 17
5.4 Historical Use Information on the Property 17
5.4.1 Topographic Maps 18
5.4.2 Historical Maps 18
5.4.3 Aerial Photographs 18
5.4.4 City Directories 19
5.4.5 Chain of Title 19
5.4.6 Previous Reports 19
5.5 Historical Use Information on Adjoining Properties 19

6 Site Reconnaissance 20
6.1 Methodology and Limiting Conditions 20
6.2 General Site Setting 20
6.3 Exterior Observations 20
6.4 Interior Observations 21

7 Interviews 22
7.1 Interview with Owner 22
7.1.1 Interview Information 22
7.1.2 Helpful Documents 22
7.2 Interview with Site Manager 22
7.3 Interviews with Occupants 22
7.4 Interviews with Local Government Officials 23
7.4.1 Nevada Department of Environmental Protection 23
7.4.2 Southern Nevada Department of Environmental Health 23
7.5 Interview with Others 24
7.5.1 Past Owner 24
7.5.2 Adjacent Property Employee 24
7.5.3 Interview Information 24
7.5.4 Helpful Documents 24

8 Findings **25**

9 Opinion **26**

9.1 Additional Investigation 26

10 Conclusions **27**

11 Deviations **28**

12 Additional Services **29**

12.1 Asbestos-Containing Material 29

12.2 Radon 29

12.3 Lead-Based Paint 29

12.4 Mold 29

12.5 100-Year Flood Zone 30

12.6 Wetlands 30

12.7 Coastal Zone 30

12.8 Threatened and Endangered Species 30

12.9 Cultural Resources 30

13 References **31**

14 Signature(s) of Environmental Professional(s) **32**

15 Qualification(s) of Environmental Professional(s) **33**

LIST OF APPENDICES

A Site Location Map

B Site Plan

C Site Photographs

D Historical Research Documentation

E Regulatory Records Documentation

F Interview Documentation

G Supporting Documentation

H Qualifications of the Environmental Professional(s)

Abbreviations and Acronyms

°F	degrees Fahrenheit
AAI	All Appropriate Inquiry
ACSIM-ARD	Assistant Chief of Staff for Installation Management - Army Reserve Division
AMSD	approximate minimum search distance
amsl	above mean sea level
AR	Army Regulation
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AUL	activity and use limitation
bgs	below ground surface
BLM	Bureau of Land Management
CER	computerized environmental report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CORRACTS	Corrective Action Tracking System
ECP	Environmental Condition of Property
EDR	Environmental Data Resources
ERNS	Emergency Response Notification System
ESA	environmental site assessment
FINDS	Facility Index System
kg	kilogram

LLP	Landowner Liability Protection
LUST	leaking underground storage tank
NA	not applicable
NFRAP	No Further Remedial Action Planned
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
PCB	polychlorinated biphenyl
pCi/L	picoCuries per liter
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Act Information System
REC	recognized environmental condition
RSC	Regional Support Command
RST	registered storage tanks
RUST	registered underground storage tank
SQG	small quantity generator
SWF	solid waste facilities
TSD	treatment, storage, and disposal
USACE	United States Army Corps of Engineers
USAR	United States Army Reserve
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank

SECTION 1

Summary

CH2M HILL prepared this Environmental Condition of Property (ECP) report[1] for use by the United States Army Corps of Engineers (USACE), the Assistant Chief of Staff for Installation Management - Army Reserve Division (ACSIM-ARD), and the 63rd Regional Support Command (RSC) for the acquisition of a parcel of land, hereafter referred to as the "Property". The Property is located north of Roark Avenue in Sloan, Clark County, Nevada, approximately 15 miles south of Las Vegas. The Property includes approximately 45 acres of unimproved land. A site location map (Figure 1) and site plan (Figure 2) are included in Appendices A and B, respectively.

This report meets the United States Department of the Army's requirement to assess, determine, and document the environmental condition of transferable property in an ECP report. The ECP was performed to collect reliable information regarding the environmental condition of the Property to determine the Property's suitability for acquisition. In accordance with Army Regulation (AR) 200-1, Section 15-5 c(6) Environmental Protection and Enhancement, this ECP complies with the United States Environmental Protection Agency's (USEPA's) "All Appropriate Inquiry" (AAI) rules under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) prior to obtaining title to the Property so as to preserve defenses to CERCLA liability as an innocent land owner, bona fide prospective purchaser, or contiguous property owner, to reduce risk to the Army, and to ensure that the Army pays appropriate consideration for the property. This ECP report complies with USEPA's AAI rules and specifically with the American Society for Testing and Materials (ASTM) Designation: E1527-05, *Standard Practice for Environmental Site Assessments: Phase l Environmental Site Assessment Process.*

This ECP revealed no evidence of recognized environmental conditions (RECs) in connection with the Property.

[1] Environmental Condition of Property (ECP) report is the *report* defined in § 3.2.78 of ASTM E1527-05. Similarly, an "ECP" is an "ESA" as defined in § 3.2.30 of ASTM E1527-05. Use of these terms is mandated by § 15-5 of Army Regulation 200-1. The ECP and report are required to conform to ASTM E1527-05. Terminology used throughout this report is intended to comply with ASTM E1527-05 usage, except where specifically noted.

SECTION 2

Introduction

2.1 Purpose

CH2M HILL conducted this ECP for the USACE and the 63rd RSC. The purpose of this ECP is to identify RECs affecting the Property, using the methodology recommended by ASTM in order to satisfy the requirements for the Landowner Liability Protections (innocent landowner defense, contiguous property owner liability protection, and bona fide prospective purchaser liability protection) provided by CERCLA's AAI Rule (40 Code of Federal Regulations [CFR] Part 312), and to assess potential environmental conditions that could materially impact the purchase price and the intended operations on the Property. This ECP conforms with ASTM Designation: E1527-05, *Standard Practice for Environmental Site Assessments: Phase l Environmental Site Assessment Process.*

RECs are defined by ASTM E1527-05 as "...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with applicable laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

2.2 Detailed Scope of Services

The specific scope of work included a site reconnaissance, personal interviews, and a records review.

2.2.1 Site Reconnaissance

A site reconnaissance was conducted to obtain information indicating the likelihood of identifying RECs in connection with the Property. The site reconnaissance included visually assessing the Property for the presence of hazardous substances and petroleum products, drainages, paths, and potential sources of pollutant releases (odors, pools of liquid, stains, septic systems, drums, polychlorinated biphenyls [PCBs], drains and sumps, lagoons, stressed vegetation, etc.). The Property also was observed from its periphery, and obvious past and present Property uses were noted. In addition, a reconnaissance of the surrounding roads and adjacent properties was conducted to assess the Property's location with respect to surrounding property uses and natural surface features and to identify obvious past and present uses, and potential environmental conditions on adjoining properties as well as the surrounding area. Photographs taken as part of the site reconnaissance are included in Appendix C.

Thomas M. Hutchinson of CH2M HILL conducted a site visit on January 28, 2009. A second site visit was conducted by Aaron Fergusson of CH2M HILL on February 25, 2009. A Property representative was not present at the time of the site visits. At the time of the site visits, it was sunny and the temperature was approximately 50 degrees Fahrenheit (°F) on January 28, 2009 and 60 degrees °F on February 25, 2009. The site reconnaissance was conducted in a systematic manner. The perimeter of the Property was traversed, then transects from east to west and north to south were traversed across the Property.

2.2.2 Interviews

Persons were interviewed to obtain information regarding RECs in connection with the Property and adjoining properties, to determine current and past site uses, and to identify other present and previous activities and events potentially resulting in the environmental degradation of the Property. The following table summarizes the individuals interviewed, contacted, and to whom requests for documentation were made as part of this ECP. Information obtained from these interviews is discussed in Section 7 and documented in Appendix F.

Name	Affiliation
Persons Interviewed	
Brenda Warner	Bureau of Land Management (Owner)
Todd Croft	Nevada Department of Environmental Protection
Lynn Cintron	Southern Nevada Department of Environmental Health
Charles Vanderpool	Republic Crane (Adjacent Property to South)

2.2.3 Records Review

The purpose of the records review was to obtain and review records to identify RECs in connection with the Property. Reasonably ascertainable documents from standard sources were obtained and reviewed.

Standard historical sources, such as topographic maps, aerial photographs, local street directories, fire insurance maps, property tax files, recorded land title records, building department records, zoning/land use records, as well as other historical sources, were obtained and reviewed to identify previous activities on and in the vicinity of the Property. Standard historical documents reviewed as part of this ECP are included in Appendix D.

Reasonably ascertainable standard environmental record sources maintained by federal, state, and local agencies within the approximate ASTM minimum search distances were obtained and reviewed as described in Section 5. The computerized environmental report (CER), provided by Environmental Data Resources (EDR), is included in Appendix E. Other supporting documentation reviewed as part of this ECP is included in Appendix G.

CH2M HILL reviewed information on the USEPA Map of Radon Zones Web site to determine whether the Property is located in an area with a propensity for elevated radon concentrations.

2.3 Significant Assumptions

The information obtained from individuals interviewed and supporting documentation and records was considered to be accurate unless reasonable inquiries indicated otherwise. This ECP report presents a summary of reasonably ascertainable information on the environmental conditions of, and concerns relative to, the land, facilities, and real property assets at the Property. Its findings are based on a record search of publicly available documents; a review of reasonably ascertainable documents; a visual reconnaissance of the Property conducted on January 28 and February 25, 2009; and interviews with personnel knowledgeable with the Property and its history. Reasonably ascertainable environmental investigations reports and historical documents associated with the Property were reviewed in support of this ECP. Information obtained from these additional sources is referenced within this report.

2.4 Limitations and Exceptions

2.4.1 Limitations

The perimeter of the Property and transects across the Property were traversed on foot. No test pits were installed to inspect subsurface soil conditions. No sampling or analysis of any media was conducted during this survey.

This report has been prepared in compliance with ASTM E1527-05. In preparing this report, CH2M HILL has relied on certain information provided by federal, state, and local officials and other parties referenced herein, and on information contained in the files of governmental agencies, that were reasonably ascertainable at the time of this assessment. Although there may have been some degree of overlap in the information provided by these various sources, an attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment was not conducted. Visual observations were made of the Property and surrounding properties as indicated in this report.

2.4.2 Exceptions

There are no exceptions.

2.4.3 Data Gaps

According to § 3.2.20 of ASTM E1527-05, a data gap is a lack of or inability to obtain information required by the ASTM standard despite good faith efforts to gather the data. Data gaps may result from incompleteness in any of the activities required by the ASTM standard. A data gap is considered significant only if it affects the ability to identify RECs. No significant data gaps are identified.

2.5 Special Terms and Conditions

CH2M HILL has prepared this report solely for the use of the USACE and the United States Army Reserve (USAR) in evaluating the Property for acquisition. This report or any portions thereof should not be disseminated to or relied on by any other party except in accordance with §

2.6 of ASTM E1527-05. This ECP did not include an evaluation of the Property for suitability; structural, mechanical, building or site safety; financial; or any other aspects of the Property other than those aspects necessary to comply with the AAI Rule and as specifically noted herein.

2.6 User Reliance

This report has been produced under an agreement between CH2M HILL and the USACE. Any reliance upon this document, or upon CH2M HILL's performance of services in preparing this document, is conditioned upon the relying party's acceptance and acknowledgement of the limitations, qualifications, terms, conditions and indemnities set forth in the agreement between the parties, and property ownership/management disclosure limitations, if any. It is not to be relied upon by any party other than the United States Government, nor used for any purpose other than that specifically stated in Section 2.1 without advance and express written consent by CH2M HILL and the USACE.

SECTION 3

Site Description

3.1 Location and Legal Description

The Property is located near the town of Sloan in Clark County, Nevada, approximately 15 miles south of Las Vegas. The site location map is included in Appendix A. The following provides general asset information for the Property:

Facility Name and Address:	Sloan, Nevada Site
Property Owner:	Federal Government - Bureau of Land Management
Building(s) Owner:	No buildings on Property
Date of Ownership:	1848 - US Government acquired from Mexico
Current Occupant(s):	Unoccupied - no structures on Property
Zoning:	Industrial
USGS Quadrangle(s):	Sloan
Latitude/Longitude:	35°56’18.2” North, 115°11’52.8” West
Legal Description:	The Property is comprised of 4 parcels. The legal description of the parcels are T 23S, R 61E, Section 19, N ½ of the NW ¼ of the NE ¼ (20 acres), N ½ of the S ½ of the NW ¼ of the NE ¼ (10 acres), N ½ of the SE ¼ of the NE ¼ of the NW ¼ (5 acres), and NE ¼ of the NE ¼ of the NW ¼ (10 acres).
Property Size:	Approximately 45 acres

3.2 Site and Vicinity General Characteristics

The following observations were based on conditions of the Property at the time of the visual site reconnaissance. The Property includes approximately 45 acres of undeveloped, lightly vegetated land. Vegetation at the Property consists of desert-type vegetation including yucca plants, cacti, and sparse grasses. The topography of the Property is generally level with the exception of a large hill located on the northeastern portion of the Property. The Property slopes slightly from higher elevation on the southwest corner to the north and east. The elevation of the Property is approximately 2,680 feet above mean sea level (amsl).

The Property is located approximately 0.5 mile west of Interstate 15 and 0.5 mile north of State Highway 161. The southern edge of the Property is bounded by an unnamed gravel access road. Beyond the access road is a crane storage yard. The eastern edge of the Property is bounded by a wire fence separating the Property from a tree nursery. A small residential subdivision is located approximately 0.25 mile southwest of the Property. There are no physical features bounding the Property on the north and west. Land bordering the Property to the north and west is desert land with sparse vegetation.

3.3 Current Use of the Property

The Property is currently vacant land. No structures are present on the Property.

3.4 Description of Structures, Roads, Improvements to the Site

3.4.1 Utilities

The Property is served by the following utilities:

- Water: Currently no water service to Property (nearest water line operated by Las Vegas Valley Water district is located approximately 2 miles north of the Property)
- Sanitary sewer: Currently no sanitary sewer or septic
- Electric: Nevada Power (serves adjacent properties to the south)
- Natural gas: Currently no natural gas service (nearest natural gas line operated by Southwest Gas is located approximately 2 miles north of the Property)

3.4.2 Building Description(s)

There are no buildings or other manmade structures located on the Property. Based on personal interviews, historical aerial photographs, topographical maps, and other historical documentation, there were no buildings previously identified on the Property.

3.4.3 Other Facilities and Site Features

There are no other facilities or significant features on the Property.

3.5 Current Uses of the Adjoining Properties

The property is located in a predominantly rural setting with some commercial and residential development. The following table summarizes the surrounding property usage:

Direction	Adjacent Properties	Surrounding Properties
North	Undeveloped	Bureau of Land Management land
South	Light commercial (construction storage yard and Republic Crane Company Storage Yard)	Residential, undeveloped, and the Sloan Transfer (refuse) Station
East	Tree Nursery	Undeveloped
West	Concrete Plant	Undeveloped and quarry

The Sloan Transfer Station is listed in the regulatory database report as a State Hazardous Waste Site. A detailed discussion on regulatory database information is included in Section 5.0.

SECTION 4

User Provided Information

This section summarizes tasks performed prior to conducting the site reconnaissance by or on behalf of the USACE and the USAR (the User) that will help identify the possibility of RECs in connection with the Property. A User Questionnaire was sent to Wayne Alves, Supervisor Environmental Protection Specialist USAR, 63rd RSC. Mr. Alves completed the questionnaire based on his personal knowledge and information provided by ACSIM-ADR. The completed User Questionnaire is included in Appendix G.

4.1 Title Records

EDR attempted to obtain a chain of title for the Property. After conducting a title search, EDR indicated that a chain of title for the property could not be identified. Brenda Warner, Real Estate Specialist for the BLM indicated that there was no chain of title on the Property. The Property has been owned by the federal governments since it was obtained from Mexico in 1848. BLM geology resource specialist indicated that there has never been any mining claims made on the Property.

4.2 Environmental Liens or Activity and Use Limitations

Brenda Warner, Real Estate Specialist for the BLM indicated that there were no liens or use limitations on the Property. George Varhalmi, geology resource specialist for the BLM indicated no mining claims have ever been made on the Property.

The User provided the following response to Questions 1 and 2 of the User Questionnaire:

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25). Are you aware of any environmental cleanup liens against the Property that are filed or recorded under federal, tribal, state, or local law?

Mr. Alves indicated, “I am not aware of any current environmental cleanup liens against the site.”

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26). Are you aware of any activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the Property and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

Mr. Alves indicated, “I am not aware of any land use limitations filed or recorded on this site.”

4.3 Specialized Knowledge

The User provided the following response to Questions 3 and 6 of the User Questionnaire:

(3.) Specialized knowledge or experience of the person seeking to qualify for the Landowner Liability Protections (LLP) (40 CFR 312.28). As the user of this environmental site assessment (ESA), do you have any specialized knowledge or experience related to the Property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the Property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Mr. Alves indicated, “I do not have any specialized knowledge or experience relating to this Property or the nearby properties.”

(6.) The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31). As the user of this ESA, based on your knowledge and experience related to the Property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Mr. Alves indicated, “I have not observed any obvious presence of contamination on the Property.”

4.4 Commonly Known or Reasonably Ascertainable Information

The User provided the following responses to Question 5 of the User Questionnaire:

(5.) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30). Are you aware of commonly known or reasonably ascertainable information about the Property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

(a.) Do you know the past uses of the Property?

Mr. Alves indicated, “No.”

(b.) Do you know of specific chemicals that are present or once were present at the Property?

Mr. Alves indicated, “No.”

(c.) Do you know of spills or other chemical releases that have taken place at the Property?

Mr. Alves indicated, “No.”

(d.) Do you know of any environmental cleanups that have taken place at the Property?

Mr. Alves indicated, “No.”

4.5 Valuation Reduction for Environmental Issues

The User provided the following response to Question 4 of the User Questionnaire:

(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29). Does the purchase price being paid for this Property reasonably reflect the fair market value of the Property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the Property?

Mr. Alves indicated, “No,” and indicated the response was provided by ACSIM-ARD.

The USAR is obtaining a Right of Way (ROW) to use the Property instead of purchasing the Property from the BLM. Therefore, the ROW cost is lower than the fair market value for similar properties in the area.

4.6 Owner, Property Manager, and Occupant Information

The User provided CH2M HILL with owner, property manager, and occupant information.

4.7 Reason for Performing Phase I Environmental Site Assessment

The purpose of this ECP is to identify RECs affecting the Property, using the methodology recommended by ASTM to satisfy the requirements for the Landowner Liability Protections (innocent landowner defense, contiguous property owner liability protection, and bona fide prospective purchaser liability protection) provided by CERCLA’s AAI Rule (40 CFR Part 312), and to help understand potential environmental conditions that could materially impact the purchase price and the intended operations on the Property.

4.8 Other

The User of this report was unaware of any other obvious indicators that point to the presence or likely presence of contamination at the Property.

SECTION 5

Records Review

5.1 Standard Environmental Record Sources

A regulatory database CER was acquired from EDR. The CER is a listing of sites identified on select federal and state standard source environmental databases within the approximate minimum search distance specified by ASTM E1527-05. CH2M HILL reviewed each environmental database to determine if certain sites identified in the CER are suspected to represent a material negative environmental impact to the Property. The CER is included in Appendix E. The following table lists the number of sites by regulatory database within the prescribed minimum search distance appearing in the CER.

Databases Reviewed	Approximate Minimum Search Distance (AMSD)	Number of Sites Within AMSD
Federal National Priorities List (NPL) Site List	1 mile	0
Federal Delisted NPL Site List	0.5 mile	0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	0.5 mile	0
Federal CERCLIS No Further Remedial Action Planned (NFRAP) Sites	0.5 mile	0
Federal Resource Conservation and Recovery Act Information System (RCRIS) Treatment, Storage, and Disposal (TSD) List	0.5 mile	0
Federal RCRIS Generators List	Onsite and adjoining properties	0
Federal Corrective Action Tracking System (CORRACTS)	1 mile	0
Federal Emergency Response Notification System (ERNS) List	Onsite	0
Federal Institutional/Engineering Control Registries	Onsite	0
State and Tribal Lists of NPL Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	1 mile	1

Databases Reviewed	Approximate Minimum Search Distance (AMSD)	Number of Sites Within AMSD
State and Tribal Lists of CERCLIS Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	0.5 mile	NA
State and Tribal Landfills or Solid Waste Facilities List	0.5 mile	0
State and Tribal Petroleum Bulk Storage Tank Registered Underground Storage Tank (RUST) Facility List	Onsite and adjoining properties	0
State and Tribal Leaking Underground Storage Tank (LUST)/Spill List	0.5 mile	0
State and Tribal Institutional/Engineering Control Registries	Onsite	0
State and Tribal Voluntary Cleanup Sites	0.5 mile	NA
State and Tribal Brownfield Sites	0.5 mile	0
State Other	0.33	0

The CER noted 36 “orphan sites.” Orphan sites are those sites that could not be mapped or “geocoded” because of inadequate address information. Refer to the CER for the list of orphan sites. CH2M HILL located 34 of the 36 sites based on address information. The two sites that were not located include two Facility Index System (FINDS) sites. The ASTM AMSD for FINDS sites is the target property only. All of the orphan sites are outside the ASTM AMSD on the database on which they were identified. A description of the databases reviewed by CH2M HILL and an analysis of sites, including orphan sites, identified within the prescribed search area are presented below.

5.1.1 Federal Databases

National Priorities List

The NPL database is a listing of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under CERCLA (Superfund). A site must be on the NPL to receive money from the Trust Fund for Remedial Action.

Analysis/Comment: The CER did not identify any NPL sites within the AMSD.

Delisted National Priorities List Sites

USEPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. Under Section 300.425(e) of the National Contingency Plan (55 FR 8845, March 8, 1990), sites that have been deleted from the NPL remain eligible for

further Superfund-financed remedial action in the unlikely event that conditions in the future warrant such action. Partial deletions also can be conducted at NPL sites.

Analysis/Comment: The CER did not identify any delisted NPL sites within the AMSD.

Comprehensive Environmental Response, Compensation, and Liability Act Information System

CERCLIS is USEPA's system for tracking potential hazardous waste sites within the Superfund program. A site's presence on CERCLIS does not imply a level of federal activity or progress at a site, nor does it indicate that hazardous conditions necessarily exist at the location. Within 1 year of being entered into CERCLIS, USEPA performs a preliminary assessment of a site. Based upon the results of the preliminary assessment, the USEPA may conduct additional investigation, which could lead to a site being listed on the NPL.

Analysis/Comment: The CER did not identify any CERCLIS sites within the AMSD.

CERCLIS No Further Remedial Action Planned Sites

As of February 1995, CERCLIS sites designated NFRAP have been removed from the CERCLIS list. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to warrant federal Superfund action or NPL consideration.

Analysis/Comment: The CER did not identify any CERCLA NFRAP sites within the AMSD.

Resource Conservation and Recovery Act Information System Treatment, Storage, and Disposal List

The RCRIS TSD list contains information pertaining to those facilities that treat, store, or dispose of hazardous waste. While these facilities represent some form of hazardous waste activity, they are most significant if determined to be out of compliance or to have violations.

Analysis/Comment: The CER did not identify any RCRIS TSD facilities within the AMSD.

Resource Conservation and Recovery Act Information System Generators

The RCRIS generator database contains information pertaining to sites that generate hazardous waste regulated under RCRA. Under RCRA, hazardous waste generators are classified by the quantity of hazardous waste generated in a calendar month into the following categories: Large Quantity Generator, greater than 1,000 kilograms (kg); Small Quantity Generator, 100 to 1,000 kg; and Conditionally Exempt Small Quantity Generator, less than 100 kg. RCRA generators, while they represent some form of hazardous waste activity, are most significant if they are determined to have Class I violations or to be noncompliant.

Analysis/Comment: The CER did not identify any RCRIS TSD facilities within the AMSD:

Corrective Action Tracking System

CORRACTS is a list of facilities that are found to have had hazardous waste releases and require RCRA corrective action activity, which can range from site investigations to remediation.

Analysis/Comment: The CER did not identify CORRACTS sites within the AMSD.

Emergency Response Notification System

The ERNS is a database of notifications of oil discharges and hazardous substance releases made to the federal government. These notifications are used by "on-scene coordinators" to determine an emergency response and release prevention. When a call is made to the National Response Center or one of the 10 USEPA regions, a report is created containing all of the release information that the caller provided. This report is transferred to an appropriate agency to evaluate the need for a response, and the records are electronically transferred to the ERNS database. As such, if a reported release of oil or a hazardous substance is deemed to require a response, it also should be listed in the appropriate federal or state environmental database such as CERCLIS, state equivalent CERCLIS, or state LUST or spills lists.

Analysis/Comment: The CER did not identify the Property on the ERNS database.

Federal Institutional Control/Engineering Control Registries

The Federal Institutional/Engineering Control registries contain listings of sites that have engineering and/or institutional controls in place. Engineering controls include various physical control devices such as fences, caps, building slabs, paved areas, liners, and treatment methods to eliminate pathways for regulated substances to enter the environment or effect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post-remediation care requirements intended to prevent exposure to contaminants remaining onsite. Deed restrictions (AULs) are generally required as part of institutional controls.

Analysis/Comment: The CER did not identify the Property on the Federal Institutional or Engineering Control registries.

5.1.2 State and Tribal Databases

State and Tribal NPL Equivalent Hazardous Waste Sites

The State and/or Tribal hazardous waste sites database lists active, non-underground storage tank (UST) hazardous waste and regulated substance corrective action sites.

Analysis/Comment: The CER identified the following site within the AMSD of 1 mile:

Property Name/ Address	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Sloan Transfer Station	0.33 mile south	Unknown	Closed, 3/11/2005

A release of diesel and wash water was reported at the Sloan Transfer Station site on October 6, 2004. The incident received a “closed” status on March 11, 2005.

State and Tribal CERCLIS Equivalent Hazardous Waste Sites

The State and Tribal CERCLIS Equivalent Hazardous Waste Sites database lists sites undergoing corrective action in Nevada.

Analysis/Comment: The CER did not identify any State or Tribal CERCLIS sites within the prescribed 0.5-mile radius of the Property.

State and/or Tribal Solid Waste Facilities List

The solid waste facilities (SWF) list is an inventory of landfills, incinerators, transfer stations, and other sites that manage solid wastes.

Analysis/Comment: The CER did not identify any SWF sites within the prescribed 0.5-mile radius of the Property.

State and/or Tribal Registered Storage Tanks Facility List

The registered storage tanks (RST) facility list is an inventory of registered liquid bulk storage tanks. Inclusion of a site on the RST list does not necessarily constitute environmental contamination, but instead merely indicates the presence of registered bulk storage tanks.

Analysis/Comment: The CER did not identify any RST sites within the specified search radius.

State and/or Tribal Leaking Underground Storage Tanks List

The LUST list is an inventory of reported spills and leaks, both active and inactive. It includes stationary and non-stationary source spills reported to state, tribal and federal agencies, including remediated and contaminated LUST sites.

***Analysis/Comment*:** The CER did not identify any LUST sites within the specified search radius.

State and Tribal Engineering/Institutional Land Use Control Registries

There was no State or Tribal Engineering or Institutional Control Registry listed in the CER.

State and Tribal Voluntary Cleanup Program Sites

The State or Tribal Voluntary Cleanup Program database lists voluntary cleanup priority sites located on Native American land in Region 9.

Analysis/Comment: The CER did not identify any State or Tribal Voluntary Cleanup Program sites within a 0.5-mile radius of the Property.

State and Tribal Brownfield Sites

Brownfield sites are defined as “an abandoned, idled, or underused industrial or commercial facility, where expansion or redevelopment has been complicated by real or perceived

environmental contamination." The Brownfield Program allows a non-responsible party to acquire a contaminated property with state liability protection for existing contamination by agreeing to perform an environmental assessment and/or remediation. The amount of environmental work is site specific and dependent on the intended future use of the site.

Analysis/Comment: The CER did not identify any Brownfield sites within a 0.5-mile radius of the Property.

Groundwater Contamination Inventory Cases Database

There was no state or tribal groundwater contamination inventory cases database listed in the CER.

Tribal Lands

The Tribal Lands database is updated by the United States Department of the Interior.

Analysis/Comment: The CER did not identify any Tribal Land sites within a 1-mile radius of the Property.

State Abandon Mine Land Problem Area Sites

There was no state or tribal abandoned mine land problem database listed in the CER.

5.2 Additional Environmental Record Sources

Water well records were obtained from the State of Nevada, Department of Conservation and Water Resources. Well records in the vicinity of the Property indicate groundwater is encountered at approximately 500 feet below ground surface (bgs).

5.3 Physical Setting Source(s)

5.3.1 Topography

The topography of the Property is relatively flat (approximate elevation 2,680 feet amsl with the exception of the western portion of the site, which increases in elevation to approximately 2,700 feet amsl and a hill (approximately 50 feet higher in elevation) located on the northeastern portion of the site. The Property slopes slightly toward two dry wash systems located on the western and eastern part of the Property. Overall, the topography slopes from southwest (higher elevation) toward the northeast (lower elevation).

5.3.2 Surface Waters

The Property does not contain permanent surface water features such as streams, rivers, or lakes; however, several dry washes are present. During rain events, the washes flow northeast to Duck Creek, approximately 7 miles northeast of the Property. Duck Creek continues to flow northeast to the Las Vegas Wash. The Las Vegas Wash is a tributary that channels storm-water, urban

runoff, shallow groundwater, and treated wastewater into the Las Vegas Bay of Lake Mead. Lake Mead is the impoundment of the Colorado River behind Hoover Dam.

5.3.3 Geology

Bedrock outcroppings are present along the hill located on the northeastern portion of the Property. Based on local well records, cemented sand and gravel is encountered from surface up to 175 feet bgs underlain by volcanic rock and sandstone to a depth of up to 620 feet.

5.3.4 Hydrogeology

Under natural, undisturbed conditions, shallow groundwater flow generally follows the topography of the land; however, since groundwater is not encountered until approximately 500 feet bgs in the vicinity of the Property, groundwater flow direction cannot be assumed. No information regarding groundwater flow direction in the vicinity of the Property was identified. Regionally, groundwater flow likely flows in an easterly direction toward the Colorado River located approximately 30 miles to the east.

5.3.5 Soils

Soils underlying the Property are classified as Cave gravelly fine sandy loam with 0 to 4 percent slopes and Jean-Goodsprings complex with 2 to 4 percent slopes (Natural Resources Conservation Service [NRCS] 2009).

The Cave soil series consists of very shallow to shallow, well-drained soils. Cave soils occur on fan terraces, fan piedmonts, and stream terraces that formed in mixed alluvium from limestone, granite, diorite, andesite, schist, quartzite, tuff, rhyolite, and basalt. Cave soils have medium to very high runoff, and moderate or moderately rapid permeability. The Jean series consists of very deep, excessively drained soils that formed in sandy alluvial or aeolian materials over unconforming sandy-skeletal sediments from mixed rock sources. The Jean soils occur on erosional fan remnants, inset fans, and channels in the Mojave Desert of southern Nevada. Jean soils have very low runoff and rapid permeability. The Goodsprings series consists of shallow, well-drained soils overlying a lime-cemented hardpan which formed in mixed alluvium primarily from limestone and sandstone on erosional fan remnants and alluvial flats. Goodsprings soils occur on alluvial fans and valley fill plains in southern Nevada and have slow or medium runoff with moderate permeability.

5.4 Historical Use Information on the Property

Based on historical use information provided by BLM, the site has remained undeveloped and used for recreational purposes since it was acquired from Mexico in 1848. Based on the site reconnaissance and historical records, the property appears to never have been developed. Off-road vehicle trails are apparent on the Property; however, there are no constructed roadways or any other improvements. Historical research documentation including historical aerial photographs and topographical maps are included in Appendix D.

5.4.1 Topographic Maps

CH2M HILL reviewed historical United States Geological Survey (USGS) Sloan, Nevada, 7.5-minute series topographic maps of the Property provided by EDR. A summary of the findings are presented in the following table.

Year Revised	Property	Surrounding Properties
1985	No structures on Property.	Interstate 15 is present to the east of the Property. A quarry is depicted approximately 0.5 mile to the northwest.
1989	No structures on Property.	Interstate 15 is present to the east of the Property. A quarry is depicted approximately 0.5 mile to the northwest. Roark subdivision is apparent to the southwest.

No landfills or other predominant features were depicted on the topographical maps. The topographic maps depict the increase in elevation to the west and the hill located on the northeastern portion of the Property.

5.4.2 Historical Maps

Sanborn maps constitute a source of prior site uses of real property for many cities and towns in the United States. The maps originally were created to assist insurance underwriters in understanding the potential fire risk of structures requiring insurance; however, they also are useful in determining the previous uses of a property. Sanborn maps often contain information relating to uses of individual structures, location of certain petroleum and chemical storage tanks, and the storage of other potentially toxic substances. Sanborn maps begin their coverage in 1867 and continue through the 1990s.

Sandborn map coverage was not available for the Property.

5.4.3 Aerial Photographs

Aerial photographs provide visual documentation of site conditions at the time of the photographs. Activities such as dumping or industrial use of a site can often be discerned through the examination of historical aerial photographs. CH2M HILL reviewed historical aerial photographs provided by EDR. The aerial photographs are included in Appendix D. The following is a synopsis of the aerial photographs reviewed.

Year	Property	Adjacent and Surrounding Properties
1972	Vacant land - no structures present. The Property appears to be primarily unvegetated desert terrain.	Minimal development in the vicinity of the Property. Interstate 15, Sloan Road, and the railroad track to the west of the Property are apparent in the photograph. Surficial disturbances to the west (near what is currently a cement plant) and northeast (possible mining activities) are also apparent in the photograph.
1983	Vacant land - no structures present. The Property appears to be primarily unvegetated desert terrain.	Minimal changes are apparent between 1972 and 1983. Soil disturbance in the vicinity of what is now known as Roark Estates is apparent to the southwest of the Property.
1990	Vacant land - no structures present. The Property appears to be primarily unvegetated desert terrain.	Increased development is apparent in the vicinity of the Property.
2006	Vacant land - no structures present. The Property is vegetated.	Increased development in apparent in the vicinity of the Property. The Republic Crane storage yard is apparent adjacent to the south of the Property.

5.4.4 City Directories

City directories provide tenant listings, by address, for every year covered by the directory service. No city directories were available for the Property and surrounding area.

5.4.5 Chain of Title

There is no chain of title available for the Property. The federal government has owned the property since it was acquired from Mexico in 1848.

5.4.6 Previous Reports

No previous reports associated with the Property were identified.

5.5 Historical Use Information on Adjoining Properties

Historical use of adjoining properties as identified in available historical resources have been described previously in Sections 5.4.1 to 5.4.6. Based upon this review, there were no previous uses of adjoining properties that would be suspected of degrading the environmental quality of the Property.

SECTION 6

Site Reconnaissance

6.1 Methodology and Limiting Conditions

CH2M HILL conducted a site visit on January 28 and February 25, 2009. A Property representative was not present at the time of site reconnaissance. The purpose of the site visit was to identify RECs associated with the Property.

The visual reconnaissance included traversing transects of the Property on foot. Minimal vegetation due to dessert-like conditions made observation of the ground surface and surrounding area readily available.

6.2 General Site Setting

The Property is located in a sparsely developed area approximately 15 miles south of Las Vegas near Sloan, Nevada. The property is sparsely vegetated with native dessert vegetation. There are no structures or other site improvements present on the Property. The Property boundary to the south is an unimproved gravel road. The property boundaries on the north, east, and west are not discernable. The Property is currently zoned as industrial.

Adjoining Property Use

Adjacent properties to the west and north are undeveloped. A cement plant is located approximately 0.25 mile west of the Property. A tree nursery is located to the east of the Property. A crane equipment (Republic Crane) storage area and small construction company storage area are located adjacent south of the Property. A small residential subdivision is located approximately 0.25 mile southwest of the Property.

6.3 Exterior Observations

Miscellaneous debris including cans, paper, and wood was found at scattered locations throughout the Property, primarily in the wash areas. No significant debris piles were identified during the site reconnaissance. A brush pile was located in the southeastern portion of the Property. No visually stained soils were observed on the Property.

No USTs or aboveground storage tanks (ASTs), odors, pools of liquids, buried sumps, drums, hazardous substance or petroleum products containers, PCB-containing devices, pits, ponds, storm water, sewage treatment solid waste, wells, or septic systems were observed on the Property.

6.4 Interior Observations

No structures were present on the Property; therefore, this subsection is not applicable.

SECTION 7

Interviews

This section presents summaries of relevant information obtained from the interviews conducted by CH2M HILL between January 27 and February 26, 2009. A list of persons interviewed, as well as those from whom an interview was requested, is listed in Section 2.2.2. Interview documentation is presented in Appendix F.

7.1 Interview with Owner

Brenda Warner, Real Estate Specialist for BLM, was interviewed by telephone on February 3, 2009. Ms. Warner is the point of contact for the BLM on the project.

7.1.1 Interview Information

Ms. Warner indicated that the Property has been undeveloped since it was acquired from Mexico in 1848. Ms. Warner indicated that no mining claims have been recorded on the Property. As part of the ongoing Environmental Assessment process, the BLM uses various resource specialists to provide information associated with the property.

Ms. Warner indicated that the BLM resource specialists were unaware of any spills or releases of hazardous substances and was unaware of any RECs associated with the Property.

Ms. Warner was asked if: (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Mrs. Warner responded that there were no proceedings against the property.

7.1.2 Helpful Documents

Ms. Warner indicated she was unaware of any documents associated with the environmental condition of the Property.

7.2 Interview with Site Manager

This section is not applicable, as there is no Site Manager for the Property, separate from the BLM.

7.3 Interviews with Occupants

This section is not applicable, as there are no occupants on the Property.

7.4 Interviews with Local Government Officials

Interviews were conducted with government officials from the Nevada Department of Environmental Protection and the Southern Nevada Health Department.

7.4.1 Nevada Department of Environmental Protection

Todd Croft, Supervisor for the Bureau of Corrective Actions, Nevada Department of Environmental Protection, was interviewed by telephone on February 19, 2009. Mr. Croft was not familiar with the Property and was not aware of any RECs associated with the Property.

Mr. Croft conducted a database search for sites located in the Sloan area during the phone interview. Seven sites were identified in the Sloan area. Five sites were related to diesel or gasoline spills on Interstate 15. The remaining sites were identified as Chemstar Lime Company (located approximately 0.5 mile west of the Property) and the Sloan Transfer Station located approximately 0.5 mile to the south of the Property. The Chemstar Lime site incident was identified as a bunker oil and diesel spill. The site received closure for the incident on March 18, 1999. The Sloan Transfer Station incident was identified as a diesel/wash water spill. The site received closure for the incident on March 11, 2005.

Mr. Croft was asked whether he was aware of: (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. He responded that he was not aware of any proceedings against the property.

Helpful Documents

Mr. Croft indicated he was unaware of any documents associated with the environmental condition of the Property.

7.4.2 Southern Nevada Department of Environmental Health

Lynn Cintron, Southern Nevada Department of Environmental Health was interviewed by telephone on February 13, 2009. Ms. Cintron was not familiar with the Property and was not aware of any RECs associated with the Property.

Ms. Cintron conducted a database search for USTs in the Sloan Area. Chemstar Lime Quarry was the only site identified in the UST database. Information in the UST database indicated that four USTs were formerly located on the Chemstar Lime Company site. The database information also indicated the tanks were permanently taken out of use in 1986 and 1990. Ms. Cintron was unaware whether the tanks were removed or closed in place.

Ms. Cintron was asked whether she was aware of: (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or

petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Ms. Cintron responded that she were not aware of any proceedings against the property.

Helpful Documents

Ms. Cintron indicated she was unaware of any documents associated with the environmental condition of the Property.

7.5 Interview with Others

7.5.1 Past Owner

The federal government has owned the Property since 1848; therefore, no previous owner was interviewed.

7.5.2 Adjacent Property Employee

Charles Vanderpool, Site Supervisor, Republic Crane, was interviewed in person on January 28, 2009.

7.5.3 Interview Information

Mr. Vanderpool indicated that the Republic Crane site (located adjacent to the south of the Property) was used primarily to store crane towers. Some repair of towers, welding, grinding, and touch up painting occurs at the Republic Crane property. Mr. Vanderpool indicated the Republic Crane storage yard had been at this location for approximately 2 years. Prior to Republic Crane storing equipment at the site, it was a sanctuary for abandoned house cats.

Mr. Vanderpool indicated he had never seen any type of dumping activities on the Property. He indicated the only activities he had observed were people hiking or riding off-road vehicles on the Property.

Mr. Vanderpool was asked if he was aware of: (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. He responded that he was unaware of any proceedings against the property.

7.5.4 Helpful Documents

Mr. Vanderpool indicated he was unaware of any documents associated with the environmental condition of the Property.

SECTION 8

Findings

This ECP did not develop any information indicating the existence of a known or suspected *de minimis* conditions, historical RECs, or RECs identified at the Property.

SECTION 9

Opinion

In my opinion, as the Environmental Professional conducting the investigation and preparation of this ECP, no *de minimis* conditions, historical RECs, or RECs exist on the property.

9.1 Additional Investigation

It is the opinion of the Environmental Professional that the ECP findings indicate that no further investigation is currently recommended at the Property.

SECTION 10

Conclusions

CH2M HILL has performed a Phase I ESA in conformance with the scope and limitations of ASTM E1527-05 on the four parcels comprising the Property. The legal description of the parcels are T 23S, R 61E, Section 19, N ½ of the NW ¼ of the NE ¼ (20 acres), N ½ of the S ½ of the NW ¼ of the NE ¼ (10 acres), N ½ of the SE ¼ of the NE ¼ of the NW ¼ (5 acres), and NE ¼ of the NE ¼ of the NW ¼ (10 acres). Any exceptions to, or deletions from, this practice are described in Section 2.2. This assessment has revealed no evidence of RECs in connection with the Property.

SECTION 11

Deviations

This report was prepared in general accordance with ASTM E1527-05. There are no known deviations from the ASTM standard.

SECTION 12

Additional Services

This section outlines additional services contracted for between the User and CH2M HILL, including but not limited to, a broader scope of assessment, more detailed conclusions, liability/risk evaluations, recommendation for Phase II testing, remediation techniques, etc. Sections 12.8 and 12.9 are intended to provide only a cursory review of these items at the time of the site reconnaissance, and may not satisfy the requirements as set forth by the National Environmental Policy Act.

12.1 Asbestos-Containing Material

There are no structures located on the Property; therefore, this section is not applicable.

12.2 Radon

Radon is a naturally occurring colorless, odorless gas that is a byproduct of the decay of radioactive materials potentially present in bedrock and soil. Radon gas may enter the lowest level of a building through floor cracks, structural joints, or plumbing conduits. The concentration of radon gas in a building depends on subsurface soil conditions, the integrity of the building's foundation, and the building's ventilation system. The potential adverse health effects associated with radon gas depend on various factors, such as the concentration of the gas and duration of exposure. The USEPA guidance action level for annual residential exposure to radon is 4 picoCuries per liter (pCi/L) of air. The guidance action level is not a regulatory requirement for private owners of real property, but is commonly used for comparison purposes to suggest whether further action at a building may be prudent.

CH2M HILL reviewed information on the USEPA Map of Radon Zones Web site. Clark County, Nevada, was listed as a Zone 3 county with an average predicted indoor radon screening level of less than 2 pCi/L, which is below the 4 pCi/L action level established by USEPA.

12.3 Lead-Based Paint

There are no structures located on the Property; thus, this section is not applicable.

12.4 Mold

There are no structures located on the Property; thus, this section is not applicable.

12.5 100-Year Flood Zone

A review of the Federal Emergency Management Agency Flood Insurance Rate Map of Clark County, Nevada, indicates that the Property is not located within the 100-year flood zone.

12.6 Wetlands

USACE and USEPA jointly define wetlands as, "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Inspection of the Property did not note any apparent wetlands, surface water, low-lying areas, or hydrophytic vegetation. Based on a review of the National Wetlands Inventory Map, there are no wetlands identified on the Property; however, three of the washes located on the site have been determined to be jurisdictional waters of the United States (CH2M HILL. 2009a).

12.7 Coastal Zone

The Property is not located within a Coastal Zone Management Area.

12.8 Threatened and Endangered Species

A biological evaluation was conducted as part of an Environmental Assessment, which included a pedestrian survey of the Property on February 16, 17, and March 2, 2009. No federal or state-listed threatened or endangered species were observed on the Property during the site reconnaissance, but evidence of the state-listed kangaroo rat (mounds) and the state- and federally listed desert tortoise (burrows) were observed.

Suitable habitat for the federally-threatened desert tortoise was identified on the Property. The Property and potential access routes do not contain suitable habitat for other federally-listed species known to occur in Clark County, NV (CH2M HILL. 2009b).

12.9 Cultural Resources

A cultural resources study was conducted as part of an Environmental Assessment, which included a literature review and pedestrian survey. The literature review identified over 25 inventories and 11 previously recorded cultural resources within a one-mile radius, however, no previous work has been conducted, and no known sites are located on the Property. CH2M HILL archaeologist Aaron Fergusson conducted a Class III pedestrian inventory of the Property on January 27-28, 2009, and again on February 24, 2009. No cultural resources were identified on the Property during the inventory (CH2M HILL. 2009c).

SECTION 13

References

ASTM 2005. American Society for Testing and Materials Designation: E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

CH2M HILL. 2009a. Jurisdictional Waters of the US Determination

CH2M HILL. 2009b. Biological Evaluation.

CH2M HILL. 2009c. Cultural Resources Survey

EDR. 2009. *Radius Map Report*.

United States Department of Agriculture. 2008. *Soil Conservation Service Soil Survey of Lackawanna County Area Pennsylvania*.

USEPA. 2009. United States Environmental Protection Agency Map of Radon Zones Web site, http://www.epa.gove/iaq/radon/zonemap.

USGS. 1989 and 1983. Topographic Quadrangle, 7.5' Map, Sloan, Nevada.

Aerial photographs of the site, as provided by EDR, for the following years: 2006, 1990, 1983, 1972

Topographical maps of the site, as provided by EDR, for the following years, 1989, 1983

SECTION 14

Signature(s) of Environmental Professional(s)

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and 12.13.2. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Thomas M. Hutchinson, CHMM
Project Manager
CH2M HILL

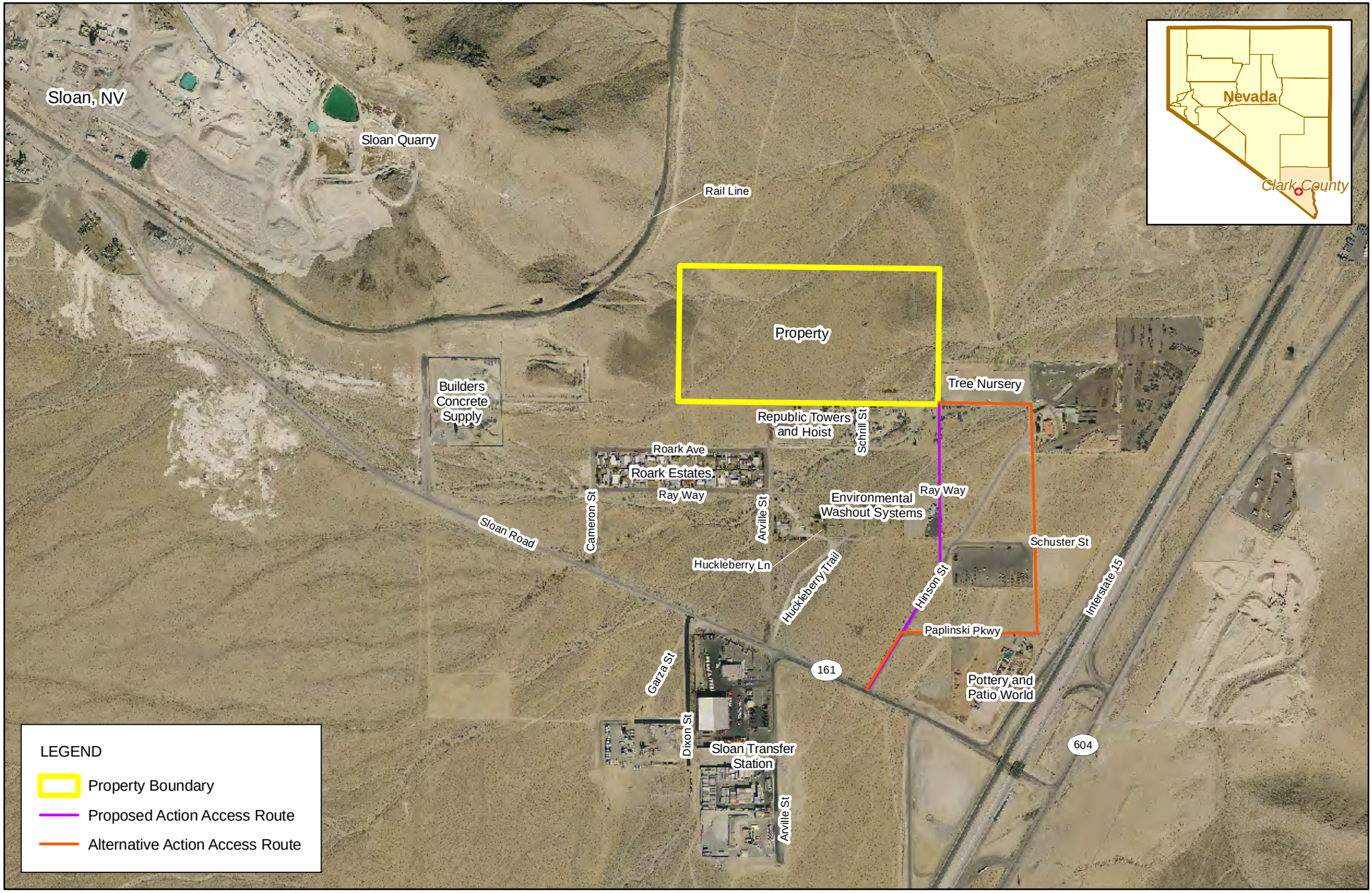
SECTION 15

Qualification(s) of Environmental Professional(s)

The résumé of the Environmental Professional, Thomas M. Hutchinson, responsible for preparing this report is included in Appendix H.

Appendix A

Site Location Map



N

0 200 400
Feet

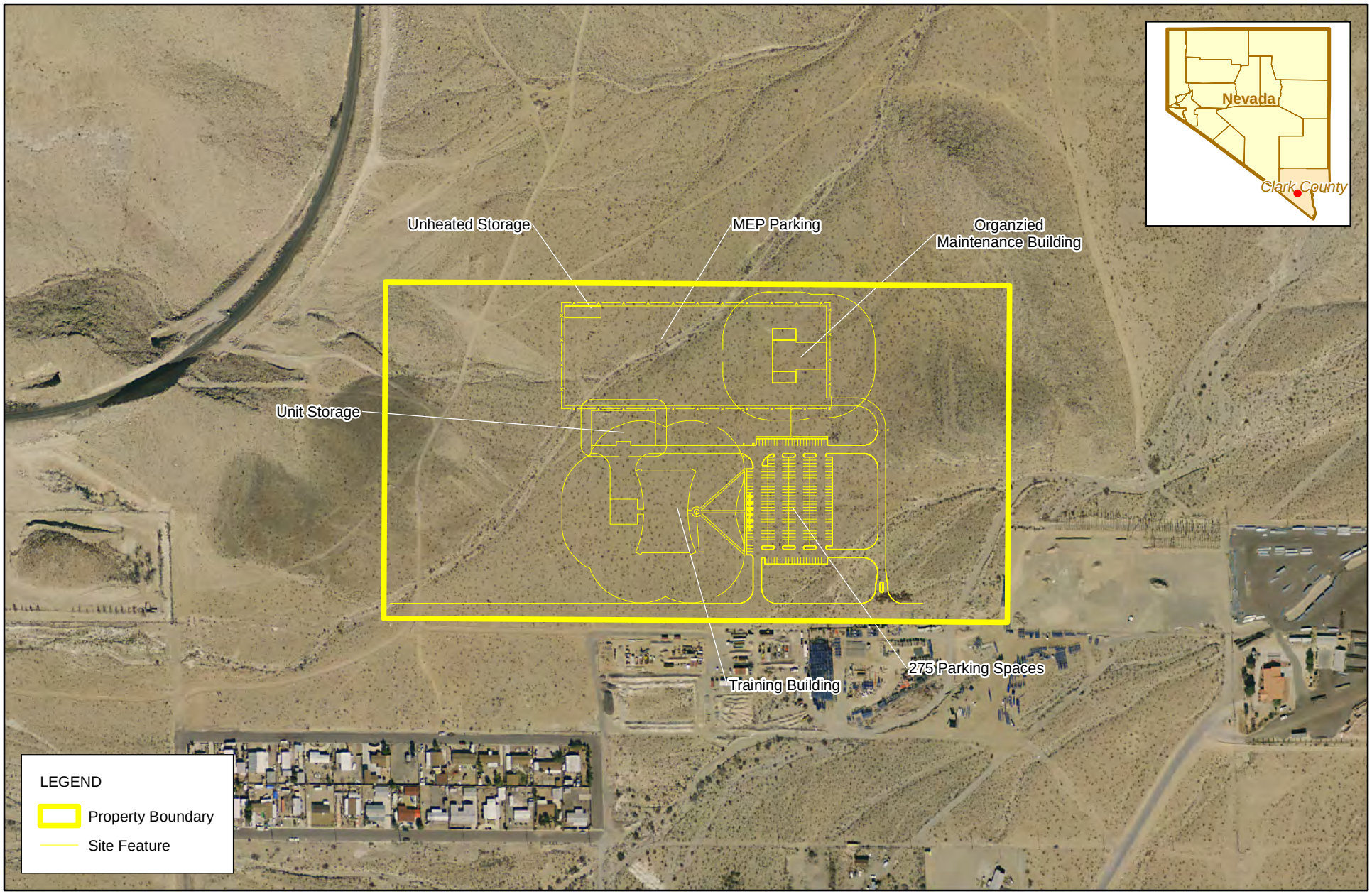
Figure 1
Property Location Map
Proposed U.S. Army Reserve Military Construction Site Location
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\Fig1_SloanNV_PropertyLayout85x11.mxd, Date: March 17, 2009 4:51:10 PM, User: KBUCKVOL

Appendix B

Site Plan



N

0 200 400
Feet

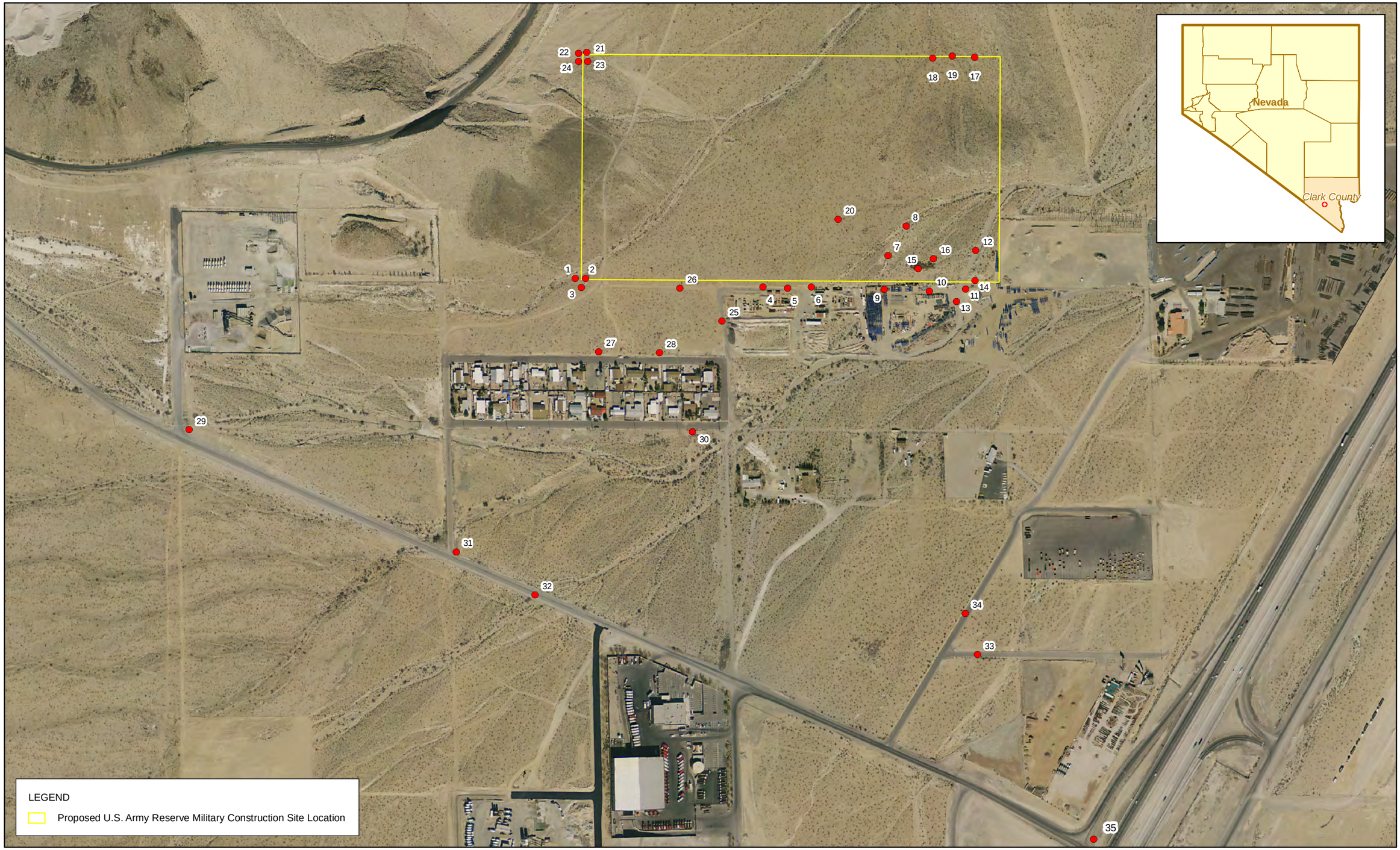
Site Layout
Proposed U.S. Army Reserve Military Construction Project
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\SloanNV_SiteLayout85x11.mxd, Date: February 24, 2009 4:02:20 PM, User: KBUCKVOL

Appendix C

Site Photographs



N

0 250 500
Feet

APPENDIX C
Photographic Locations
Proposed U.S. Army Reserve Military Construction Site Location
Sloan, Nevada

CH2MHILL

File Path: \\corvus\Proj\USACELouisvilleDist\337064MichiganFUDs\Nevada\MapFiles\SloanNV_PhotoLocs.mxd, Date: February 17, 2009 12:19:48 PM, User: KBUCKVOL

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 1

Southwest portion of Property facing north

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 2

Southwest portion of Property facing east

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 3

Southwest portion of Property facing west

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 4

Fenced storage area adjacent to the southern property boundary

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 5

Roll off storage units located adjacent to the southern property boundary

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 6

Drainage wash located in the south-eastern portion of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 7

Drainage wash located in the south-eastern portion of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 8

Steel crane storage yard located adjacent to the southern property boundary

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 9

Steel crane storage yard located adjacent to the southern property boundary

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 10

Recently constructed culvert near the southeast corner of Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 11

Wash with apparent dredging near the southeastern portion of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 12

Southeastern portion of the Property facing west

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 13

Southeastern portion of the Property facing north

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 14

Brush pile with intermixed household debris located in the southeastern portion of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 15

Cave located on northeast portion of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 16

Northeastern portion of the Property facing southwest

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 17

Yucca plant located in the central portion of the site

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 18

Wash located on northwestern portion of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 19

Northwestern portion of the Property facing south

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 20

Northwestern portion of Property facing east

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 21

Access road with improved grade south side of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 22

Unimproved road running east / west along southwest corner of Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 23

Residential area located south of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 24

Residential area located south of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 25

Concrete factory located south of the Property

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 26

Paved road located south of the residential area

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 27

Entrance to Roark Estates

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 28

Sloan Road facing east.

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 29

Paplinski Road facing east

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 30

Improved road southeast of the Property facing northeast

PHOTO LOG

Project Name: Proposed Military Construction Project – Sloan, Nevada Environmental Condition of Property Report	
Task: Visual Reconnaissance	Taken by: Tom Hutchinson – January 27, 2009

Photograph 31

Exit ramp from Interstate 15 facing northeast

Appendix D

Historical Research Documentation

TOPOGRAPHICAL MAPS

Sloan Nevada

Sloan Nevada

Sloan, NV 89124

Inquiry Number: 2398196.4

January 14, 2009

The EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

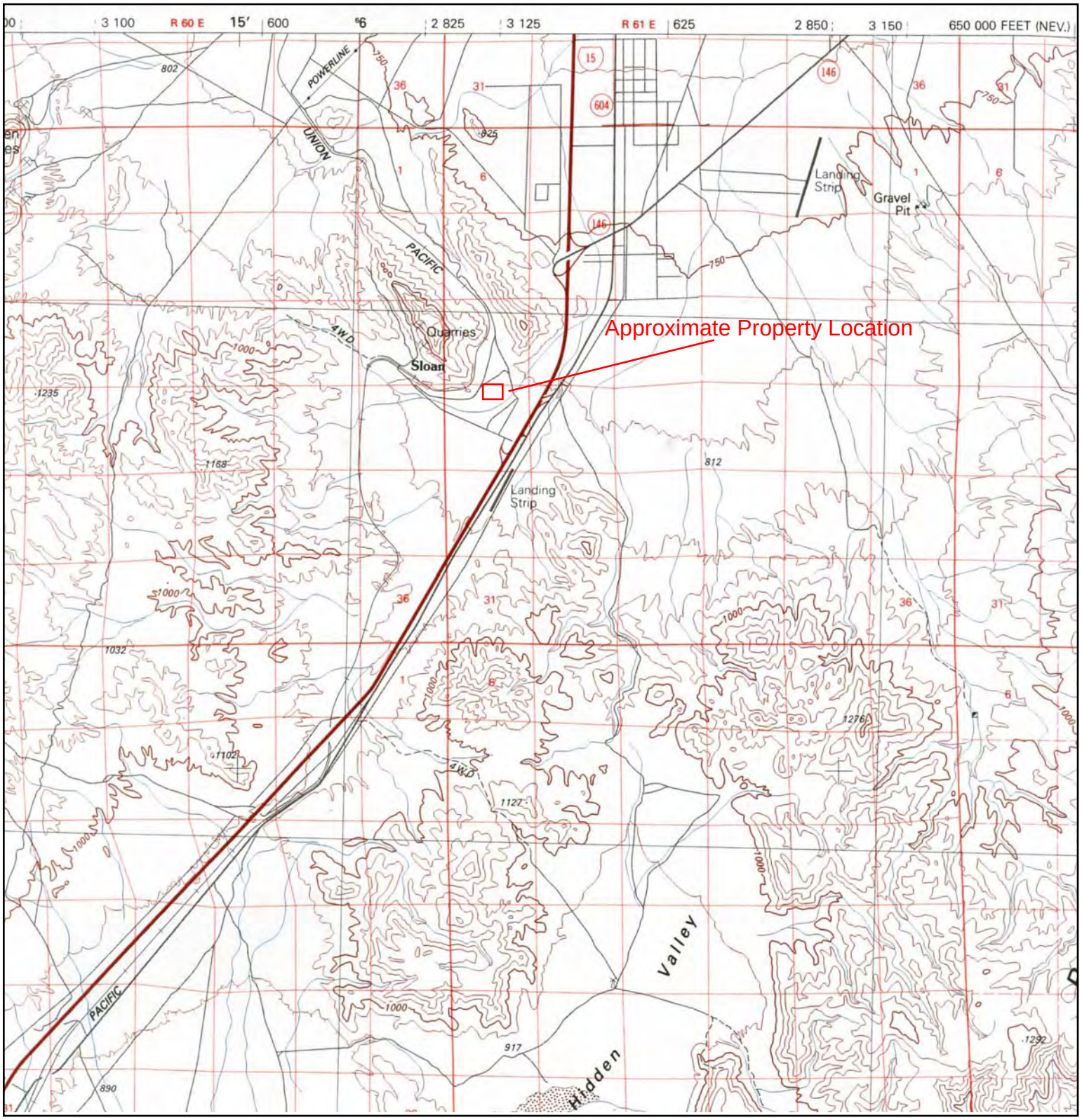
Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report AS IS. Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2009 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

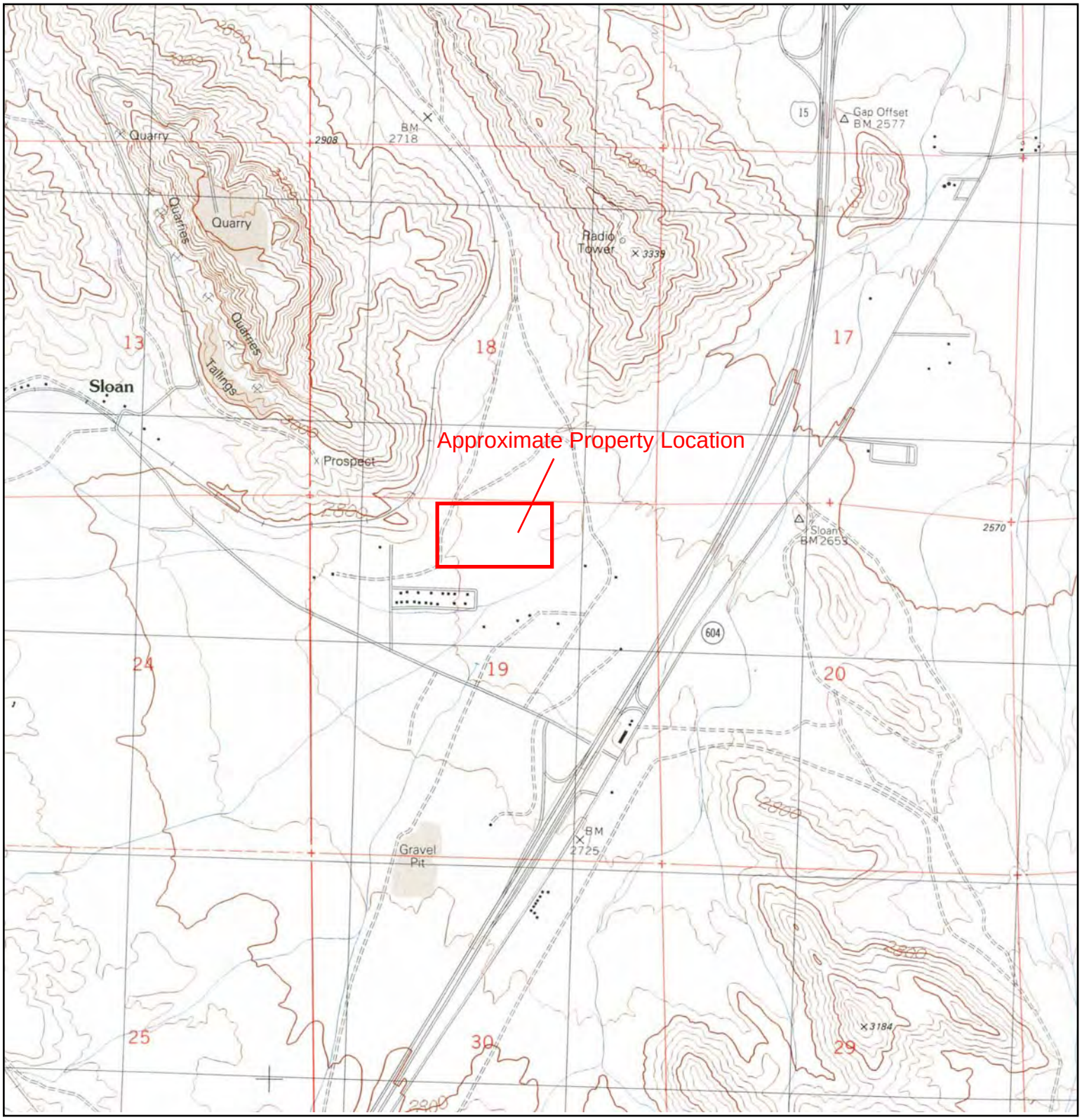
EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Historical Topographic Map



N	TARGET QUAD NAME: Mesquito Lake, NV/CA MAP YEAR: 1985 SERIES: 7.5 SCALE: 1:24,000	SITE NAME: Sloan Nevada ADDRESS: Sloan Nevada Sloan, NV 89124 LAT/LONG: 35.9384 / 115.198	CLIENT: CH2M Hill CONTACT: Nick Moore INQUIRY#: 2398196.4 RESEARCH DATE: 01/14/2009

Historical Topographic Map



N	TARGET QUAD NAME: Sloan, NV MAP YEAR: 1989 SERIES: 7.5 SCALE: 1:24,000	SITE NAME: Sloan Nevada ADDRESS: Sloan Nevada Sloan, NV 89124 LAT/LONG: 35.9384 / 115.198	CLIENT: CH2M Hill CONTACT: Nick Moore INQUIRY#: 2398196.4 RESEARCH DATE: 01/14/2009

SANBORN MAPS

Sloan Nevada

Sloan Nevada

Sloan, NV 89124

Inquiry Number: 2398196.3

January 19, 2009

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

1/19/09

Site Name:	**Client Name:**
Sloan Nevada	CH2M Hill
Sloan Nevada	2127 University Park Drive
Sloan, NV 89124	Okemos, MI 48864
EDR Inquiry # 2398196.3	Contact: Nick Moore

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by CH2M Hill were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name:	Sloan Nevada
Address:	Sloan Nevada
City, State, Zip:	Sloan, NV 89124
Cross Street:	
P.O. #	NA
Project:	Sloan, Nevada E
Certification #	C114-4C6A-8C51

Sanborn® Library search results
Certification # C114-4C6A-8C51

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

Limited Permission To Make Copies

CH2M Hill (the client) is permitted to make up to THREE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2009 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

AERIAL PHOTOGRAPHS

Sloan Nevada

Sloan Nevada

Sloan, NV 89124

Inquiry Number: 2398196.5

January 14, 2009

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report AS IS. Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2009 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Date EDR Searched Historical Sources:

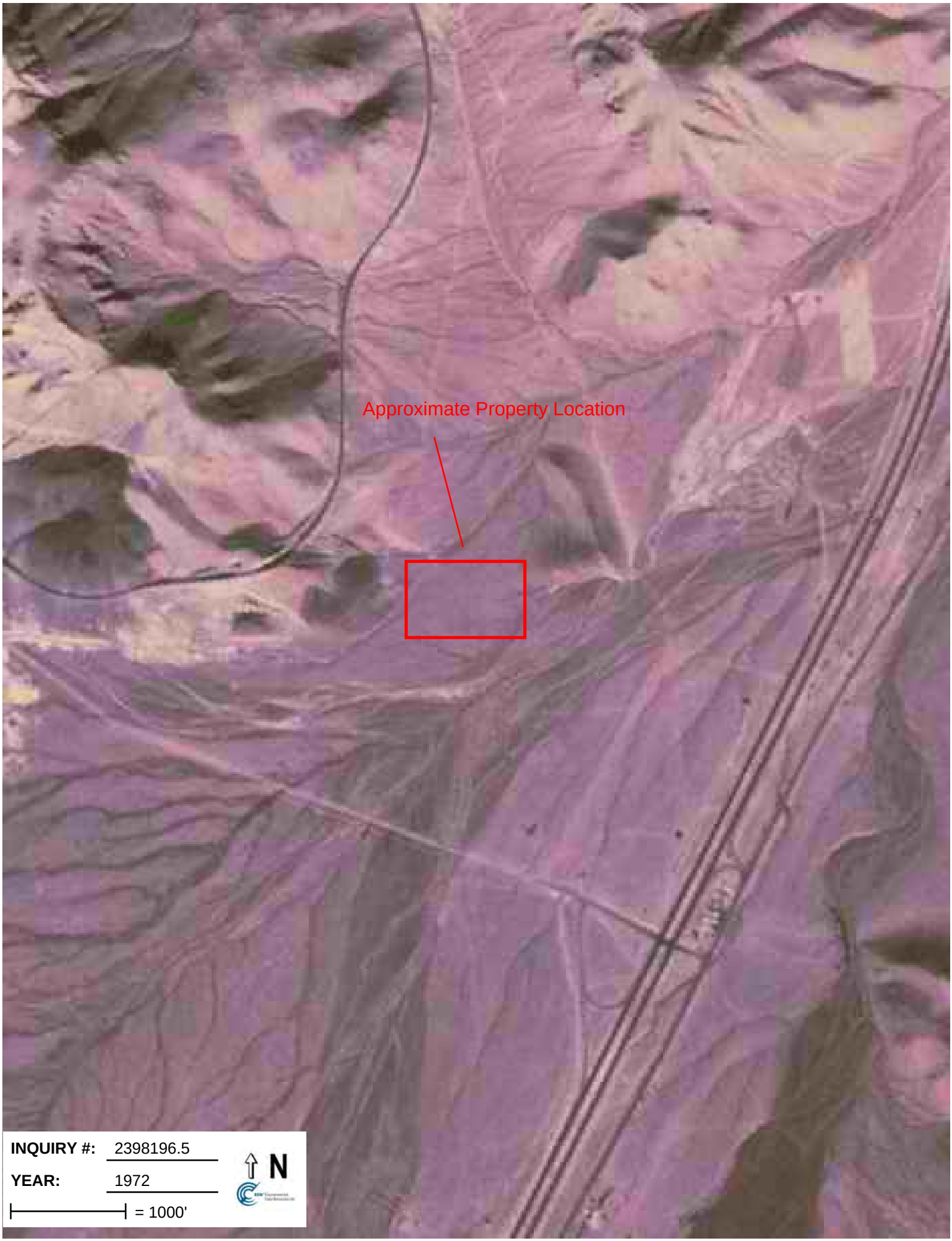
Aerial Photography January 14, 2009

Target Property:

Sloan Nevada

Sloan, NV 89124

Year	***Scale***	***Details***	***Source***
1972	Aerial Photograph. Scale: 1"=1000'	Panel #: 2435115-H2/Flight Date: June 11, 1972	EDR
1983	Aerial Photograph. Scale: 1"=1000'	Panel #: 2435115-H2/Flight Date: August 25, 1983	EDR
1990	Aerial Photograph. Scale: 1"=750'	Panel #: 2435115-H2/Flight Date: May 02, 1990	EDR
2006	Aerial Photograph. Scale: 1"=484'	Flight Year: 2006	EDR


Approximate Property Location
INQUIRY #: 2398196.5
YEAR: 1972
= 1000'
N

Approximate Property Location
INQUIRY #: 2398196.5
YEAR: 1983
= 1000'
N

Approximate Property Location
INQUIRY #: 2398196.5
YEAR: 1990
= 750'
N

Approximate Property Location
INQUIRY #: 2398196.5
YEAR: 2006
= 484'
N

PROPERTY TAX MAP

Sloan Nevada

Sloan Nevada
Sloan, NV 89124

Inquiry Number: 2398196.8
January 13, 2009

The EDR Property Tax Map Report

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

NO COVERAGE

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2008 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Appendix E

Regulatory Records Documentation

Sloan Nevada
Sloan Nevada
Sloan, NV 89124

Inquiry Number: 2398196.2s
January 13, 2009

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	7
Orphan Summary	8
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-9
Physical Setting Source Map Findings	A-10
Physical Setting Source Records Searched	A-34

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2009 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SLOAN NEVADA
SLOAN, NV 89124

COORDINATES

Latitude (North):	35.938400 - 35˚ 56' 18.2''
Longitude (West):	115.198000 - 115˚ 11' 52.8''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	662548.4
UTM Y (Meters):	3978416.2
Elevation:	2673 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	35115-H2 SLOAN, NV
Most Recent Revision:	1989

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2006

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites

EXECUTIVE SUMMARY

NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System

Federal CERCLIS NFRAP site List

CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

Federal ERNS list

ERNS ..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Landfill List

State and tribal leaking storage tank lists

LUST ..... Sites Database
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ..... Underground Storage Tank List
AST ..... Aboveground Storage Tank List
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing

EXECUTIVE SUMMARY

VCP ..... Voluntary Cleanup Program Sites

State and tribal Brownfields sites

BROWNFIELDS ..... Project Tracking Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ..... Recycling Information Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LUCIS ..... Land Use Control Information System

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System

Other Ascertainable Records

RCRA-NonGen ..... RCRA - Non Generators
DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
UMTRA ..... Uranium Mill Tailings Sites
MINES ..... Mines Master Index File
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ..... Section 7 Tracking Systems
ICIS ..... Integrated Compliance Information System
PADS ..... PCB Activity Database System
MLTS ..... Material Licensing Tracking System
RADINFO ..... Radiation Information Database
FINDS ..... Facility Index System/Facility Registry System
RAATS ..... RCRA Administrative Action Tracking System

EXECUTIVE SUMMARY

NPDES..... Permitted Facility Listing
AIRS..... Permitted Airs Facility Listing
TIER 2..... Hazardous Materials Repository Information Data
INDIAN RESERV..... Indian Reservations
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
PWS..... Public Water System Data

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations.. EDR Proprietary Historic Gas Stations
EDR Historical Cleaners..... EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

SHWS: Corrective Action Case list (Active, Non-ust Hazardous Waste and Regulated Substance. Correction Actions)

A review of the SHWS list, as provided by EDR, and dated 10/06/2008 has revealed that there is 1 SHWS site within approximately 1 mile of the target property.

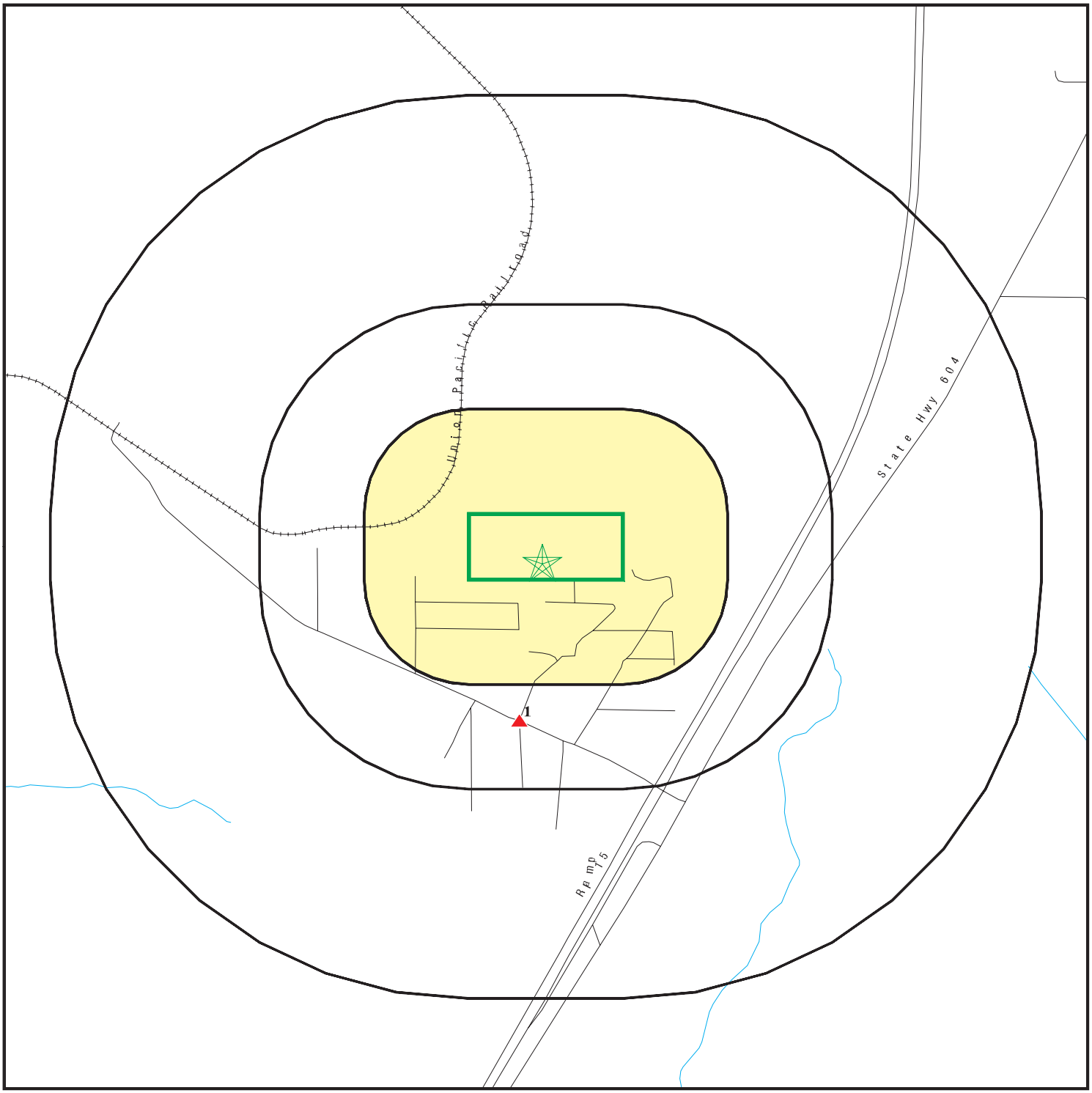
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SLOAN TRANSFER STATION Date Closed: 03/11/2005	4455 SLOAN ROAD	S 1/4 - 1/2 (0.336 mi.)	1	7

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CACTUS SPRINGS TRUCK STOP	SHWS
QUE WEST TRANSPORT	SHWS
FNF CONSTRUCTION	SHWS
INTERPOINT TRANSPORTATION MOBILE S	SHWS
NELLIS AIR FORCE BASE	SHWS
NELLIS AIR FORCE BASE	SHWS
INDIAN SPRINGS AIR FORCE BASE	SHWS
AMERICAN SAFETY INSTITUTE	SHWS
FREHNER CONSTRUCTION	SHWS
HOLDEN DEVELOPMENT COMPANY PROPERT	SHWS
MT. CHARLESTON MAINTENANCE STATION	SHWS
NEVADA DEPARTMENT OF TRANSPORTATIO	SHWS
AT&T - ANGEL PEAK	SHWS
U.S. FOREST SERVICE, 128-32-000-00	SHWS
SPRING MOUNTAIN YOUTH CAMP, 36.319	SHWS, LUST
LEE CANYON FIRE STATION	SHWS
CELADON TRUCKING SERVICES MOBILE S	SHWS
WILLS TRANSPORTATION MOBILE SOURCE	SHWS
SOUTHWEST IRON WORKS MOBILE SOURCE	SHWS
SAME AS 8001386	UST
CHEMSTAR - SLOAN FACILITY	UST
CACTUS SPRINGS TRUCK STOP	UST
CHUCK LENZIE GENERATING STATION	RCRA-SQG
US AVESTOR LLC	FINDS, RCRA-NonGen
USDA FOREST SERVICE KYLE CANYON	FINDS, RCRA-NonGen
NEVADA TEST SITE HWY 95	ERNS
NEVADA COGENERATION ASSOCIATES #2	FINDS
NEVADA COGENERATION ASSOCIATES #2	FINDS
BONNIE SPRINGS OLD NEVADA - WELL 1	FINDS
BONNIE SPRINGS OLD NEVADA - DISTRI	FINDS
BONNIE SPRINGS OLD NEVADA - DISTRI	FINDS
SLOAN TRANSFER STATION	FINDS
RINKER MATERIALS SLOAN FACILITY	FINDS
SLOAN 2	FINDS
SLOAN III	FINDS
NEVADA COMPANY ASSOCIATES # 2	ICIS

OVERVIEW MAP - 2398196.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

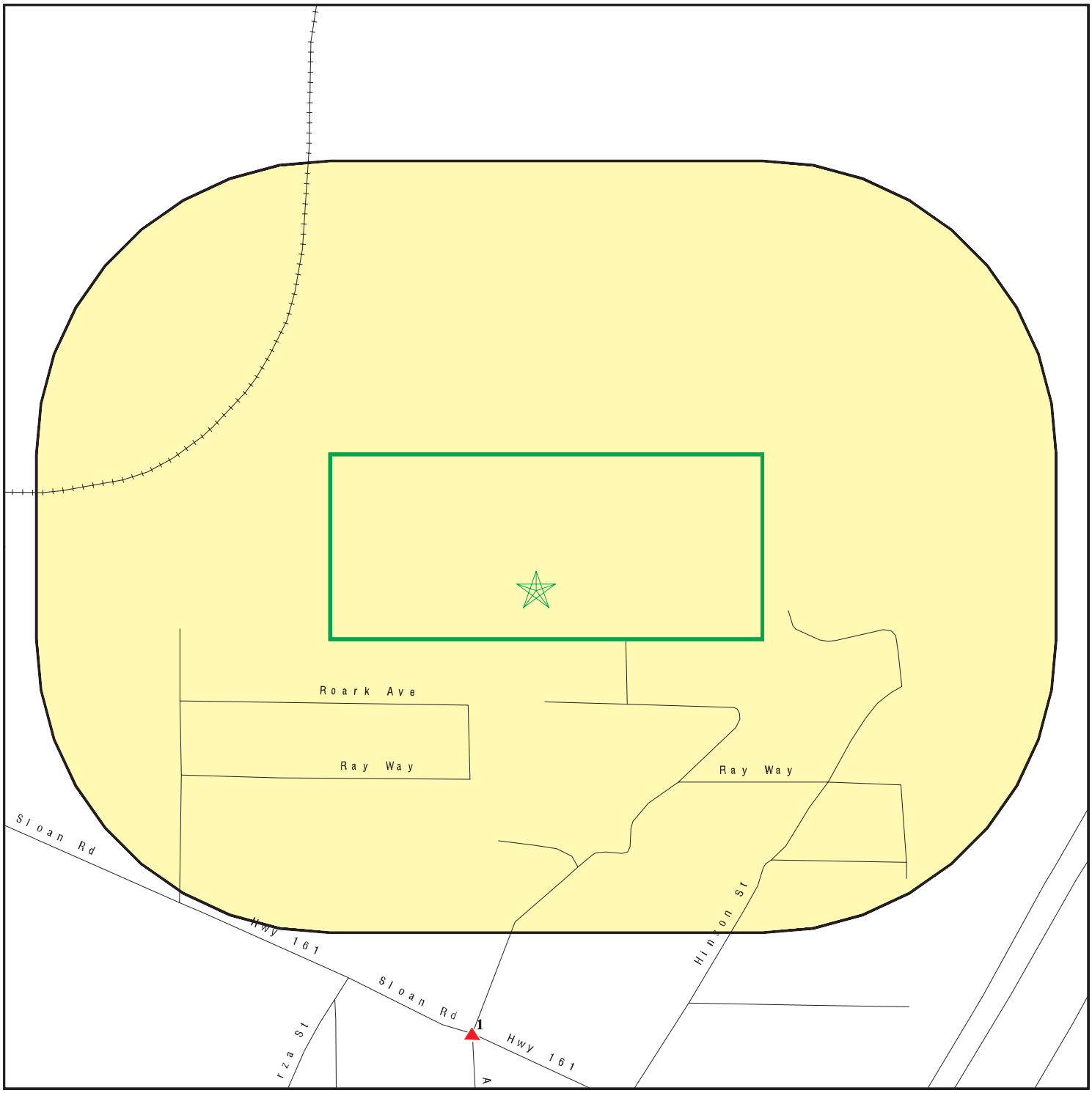
500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Sloan Nevada ADDRESS: Sloan Nevada Sloan NV 89124 LAT/LONG: 35.9384 / 115.1980	CLIENT: CH2M Hill CONTACT: Nick Moore INQUIRY #: 2398196.2s DATE: January 13, 2009 6:03 pm

Copyright © 2008 EDR, Inc. © 2008 Tele Atlas Rel. 07/2007.

DETAIL MAP - 2398196.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Sloan Nevada	CLIENT: CH2M Hill
ADDRESS: Sloan Nevada Sloan NV 89124	CONTACT: Nick Moore INQUIRY #: 2398196.2s
LAT/LONG: 35.9384 / 115.1980	DATE: January 13, 2009 6:03 pm

Copyright © 2008 EDR, Inc. © 2008 Tele Atlas Rel. 07/2007.

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS		1.000	0	0	1	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
TIER 2		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
PWS		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
South
1/4-1/2
0.336 mi.
1774 ft.

SLOAN TRANSFER STATION
4455 SLOAN ROAD
SLOAN, NV 89103

SHWS **S106870557**
N/A

Relative:
Higher

Actual:
2685 ft.

SHWS:

Flag:	CLOSED
Facility ID:	H-000268
Date Release Reported to NDEP:	10/06/2004
Program:	non-LUST
NDEP Case Officer:	danderson
Location of Paper File:	NDEP: Las Vegas
Type of Media Impacted:	Soil
Event:	Not reported
Date of Closure:	**03/11/2005**
Regulatory Type of Closure:	NAC 445A A-K
Description of Contaminant:	Diesel; Wash water

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
APEX	1004755435	CHUCK LENZIE GENERATING STATION	11405 U S HWY 93 NO	89124	RCRA-SQG
CACTUS SPRINGS	S103877695	CACTUS SPRINGS TRUCK STOP	99997 TONOPAH HIGHWAY, US 95	89124	SHWS
CLARK COUNTY	S108250295	QUE WEST TRANSPORT	INTERSTATE 15 @ MILE MARKER 02		SHWS
CLARK COUNTY	S108250101	FNF CONSTRUCTION	INTERSTATE 15 @ MILE MARKER 04		SHWS
CLARK COUNTY	S108250160	INTERPOINT TRANSPORTATION MOBILE S	INTERSTATE 15 @ EXIT 064		SHWS
CLARK COUNTY	S108250226	NELLIS AIR FORCE BASE	AREA 2, TANK 10-116		SHWS
CLARK COUNTY	S108250227	NELLIS AIR FORCE BASE	AREA 2, TANK 10-322		SHWS
CLARK COUNTY	S108250156	INDIAN SPRINGS AIR FORCE BASE	BOX CANYON		SHWS
CLARK COUNTY	S108250003	AMERICAN SAFETY INSTITUTE	U.S. HIGHWAY 95 @ U.S. HIGHWAY		SHWS
CLARK COUNTY	S108250110	FREHNER CONSTRUCTION	STATE ROUTE 376 @ MILE POST 8		SHWS
ENTERPRISE	S106870558	HOLDEN DEVELOPMENT COMPANY PROPERT	BUFFALO DRIVE @ CACTUS AVENUE	89124	SHWS
LAS VEGAS	U003380396	SAME AS 8001386	HCR 38 HIGHWAY 156	89124	UST
LAS VEGAS	1000638936	US AVESTOR LLC	11101 US HWY 93 N	89124	FINDS, RCRA-NonGen
LAS VEGAS	1011507076	NEVADA COMPANY ASSOCIATES # 2	E LAKE MEAD BLVD	89124	ICIS
LAS VEGAS	1009731906	NEVADA COGENERATION ASSOCIATES #2	E LAKE MEAD BLVD	89124	FINDS
LAS VEGAS	1008248452	NEVADA COGENERATION ASSOCIATES #2	EAST LAKE MEAD BLVD	89124	FINDS
LAS VEGAS	1000911881	USDA FOREST SERVICE KYLE CANYON	MILEPOST 3 HWY 157 18 MI W OF	89124	FINDS, RCRA-NonGen
LAS VEGAS	1009782350	BONNIE SPRINGS OLD NEVADA - WELL 1	* NOT GIVEN	89124	FINDS
LAS VEGAS	1009782349	BONNIE SPRINGS OLD NEVADA - DISTRI	* NOT GIVEN	89124	FINDS
LAS VEGAS	1009782348	BONNIE SPRINGS OLD NEVADA - DISTRI	* NOT GIVEN	89124	FINDS
LAS VEGAS	1009744400	SLOAN TRANSFER STATION	AT SLOAN EXIT AND I15,WEST SID	89124	FINDS
LAS VEGAS	1010352977	RINKER MATERIALS SLOAN FACILITY	2,250 FT SOUTH-EAST OF SLOAN R	89124	FINDS
LAS VEGAS	S103877684	MT. CHARLESTON MAINTENANCE STATION	STATE ROUTE 157	89124	SHWS
LAS VEGAS	U003380675	CHEMSTAR - SLOAN FACILITY	15 MI SW OF LAS VEGAS ON OLD	89124	UST
LAS VEGAS	U003380361	CACTUS SPRINGS TRUCK STOP	99997 TONOPAH HIGHWAY US 95	89124	UST
MERCURY NEVADA	98450022	NEVADA TEST SITE HWY 95	NEVADA TEST SITE HWY 95	89124	ERNS
MOUNTAIN SPRINGS	S106514230	NEVADA DEPARTMENT OF TRANSPORTATIO	STATE ROUTE 160 @ MILEPOST 21.	89124	SHWS
MT. CHARLESTON	S103875760	AT&T - ANGEL PEAK	ANGEL PEAK	89124	SHWS
MT. CHARLESTON	S109273028	U.S. FOREST SERVICE, 128-32-000-00	KYLE CANYON RANGER STATION	89124	SHWS
MT. CHARLESTON	S103876029	SPRING MOUNTAIN YOUTH CAMP, 36.319	LEE CANYON-ANGEL PEAK	89124	SHWS, LUST
MT. CHARLESTON	S103877639	LEE CANYON FIRE STATION	STATE ROUTE 156	89124	SHWS
SLOAN	S108250041	CELADON TRUCKING SERVICES MOBILE S	INTERSTATE 15 @ MILE MARKER 02		SHWS
SLOAN	S108250396	WILLS TRANSPORTATION MOBILE SOURCE	INTERSTATE 15 @ MILE MARKER 02		SHWS
SLOAN	S108855819	SOUTHWEST IRON WORKS MOBILE SOURCE	INTERSTATE 15 @ MILE MARKER 02		SHWS
SLOAN	1010150522	SLOAN 2	SLOAN ROAD, 1.5 MILES WEST OF	89124	FINDS
SLOAN	1010342550	SLOAN III	1.5 MI. SOUTH OF I-15	89124	FINDS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/29/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 40

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/29/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 40

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/29/2008	Source: EPA
Date Data Arrived at EDR: 10/10/2008	Telephone: N/A
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 09/29/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 01/26/2009
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/07/2008	Source: EPA
Date Data Arrived at EDR: 10/16/2008	Telephone: 703-412-9810
Date Made Active in Reports: 12/08/2008	Last EDR Contact: 10/16/2008
Number of Days to Update: 53	Next Scheduled EDR Contact: 01/12/2009
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007	Source: EPA
Date Data Arrived at EDR: 12/06/2007	Telephone: 703-412-9810
Date Made Active in Reports: 02/20/2008	Last EDR Contact: 01/12/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: 03/16/2009
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/11/2008	Source: EPA
Date Data Arrived at EDR: 09/19/2008	Telephone: 800-424-9346
Date Made Active in Reports: 10/16/2008	Last EDR Contact: 12/01/2008
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/02/2009
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 54

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/21/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Sites Database

A listing of correction action sites.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 11/06/2008
Number of Days to Update: 21

Source: Department of Conservation and Natural Resources
Telephone: 775-687-5872
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Varies

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Landfill List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/03/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 09/30/2008
Number of Days to Update: 7

Source: Department of Conservation and Natural Resources
Telephone: 775-687-5872
Last EDR Contact: 12/23/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Sites Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 11/06/2008
Number of Days to Update: 21

Source: Department of Conservation and Natural Resources
Telephone: 775-687-5872
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/18/2008
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 34

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/03/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 20

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/19/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/25/2008
Date Data Arrived at EDR: 11/26/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 27

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/06/2008
Date Data Arrived at EDR: 10/09/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 41

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 12/02/2008
Date Data Arrived at EDR: 12/04/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 19

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Underground Storage Tank List
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 11/04/2008
Number of Days to Update: 19

Source: Department of Conservation and Natural Resources
Telephone: 775-687-5872
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Varies

AST: Aboveground Storage Tank List
Registered Aboveground Storage Tanks.

Date of Government Version: 01/10/2000
Date Data Arrived at EDR: 01/11/2000
Date Made Active in Reports: 02/16/2000
Number of Days to Update: 36

Source: Department of Conservation and Natural Resources
Telephone: 775-687-5872
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 11/18/2008
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 34

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/05/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 12/01/2008
Date Data Arrived at EDR: 12/04/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 19

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/19/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 11/25/2008
Date Data Arrived at EDR: 11/26/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 27

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 06/06/2008
Date Data Arrived at EDR: 10/09/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 41

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites
The Voluntary Cleanup Program provides relief from liability to owners who undertake cleanups of contaminated properties under the oversight of the Nevada Division of Environmental Protection.

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 05/13/2008
Date Made Active in Reports: 05/21/2008
Number of Days to Update: 8

Source: Department of Conservation & Natural Resources
Telephone: 775-687-9381
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Project Tracking Database

Brownfields sites included in the Project Tracking Database. The term "brownfields" is used to describe abandoned, idled, or underused industrial or commercial properties taken out of productive use because of real or perceived risks from environmental contamination. The State of Nevada has initiated Brownfields, a land-recycling program, to provide an opportunity to redevelop these undesirable properties and revitalize communities.

Date of Government Version: 10/06/2008	Source: Division of Environmental Protection
Date Data Arrived at EDR: 10/16/2008	Telephone: 775-687-9384
Date Made Active in Reports: 11/06/2008	Last EDR Contact: 10/16/2008
Number of Days to Update: 21	Next Scheduled EDR Contact: 01/12/2009
	Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/14/2008	Telephone: 202-566-2777
Date Made Active in Reports: 12/23/2008	Last EDR Contact: 10/16/2008
Number of Days to Update: 39	Next Scheduled EDR Contact: 01/12/2009
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008	Source: EPA, Region 9
Date Data Arrived at EDR: 04/17/2008	Telephone: 415-972-3336
Date Made Active in Reports: 05/15/2008	Last EDR Contact: 12/22/2008
Number of Days to Update: 28	Next Scheduled EDR Contact: 03/23/2009
	Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

SWRCY: Recycling Information Listing
A listing of recycling facilities in Nevada.

Date of Government Version: 07/11/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/30/2008
Number of Days to Update: 11

Source: Department of Environmental Protection
Telephone: 775-687-9463
Last EDR Contact: 12/10/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/24/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 10/31/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/19/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 12/08/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 34

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/13/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Annually

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 11/26/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/15/2008
Date Data Arrived at EDR: 10/22/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 62

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/21/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 55

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 07/13/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/16/2009
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/07/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/23/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/19/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 12/15/2008
Next Scheduled EDR Contact: 03/16/2009
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 12/15/2008
Next Scheduled EDR Contact: 03/16/2009
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 12/04/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2008
Date Data Arrived at EDR: 08/13/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 09/18/2008
Next Scheduled EDR Contact: 11/03/2008
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/03/2008
Date Data Arrived at EDR: 10/15/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 35

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/28/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/30/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/09/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Biennially

NPDES: Permitted Facility Listing
A listing of permitted wastewater facilities.

Date of Government Version: 10/20/2008
Date Data Arrived at EDR: 10/21/2008
Date Made Active in Reports: 11/06/2008
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 775-687-9414
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Varies

AIRS: Permitted Airs Facility Listing
A listing of permitted Airs facilities and their associated emissions information.

Date of Government Version: 08/29/2006
Date Data Arrived at EDR: 08/31/2006
Date Made Active in Reports: 10/10/2006
Number of Days to Update: 40

Source: Division of Environmental Protection
Telephone: 775-687-9359
Last EDR Contact: 01/12/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Varies

HMRI: Hazardous Materials Repository Information Data
Emergency Planning and Community Right-to-Know Act (EPCRA) required facilities which store or manufacture hazardous materials to prepare and submit a chemical inventory report by March 1st of each year to the State Emergency Response Commission (SERC), LEPC and the local fire department. The inventory form must include information on all hazardous chemicals present at the facility during the previous calendar year in amounts that meet or exceed thresholds.

Date of Government Version: 08/05/2008
Date Data Arrived at EDR: 08/05/2008
Date Made Active in Reports: 08/13/2008
Number of Days to Update: 8

Source: State Emergency Response Commission
Telephone: 775-687-6973
Last EDR Contact: 01/05/2009
Next Scheduled EDR Contact: 04/06/2009
Data Release Frequency: Semi-Annually

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/10/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 12/08/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: N/A

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 09/30/2008
Date Made Active in Reports: 10/07/2008
Number of Days to Update: 7

Source: EPA
Telephone: 202-564-6064
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

PWS: Public Water System Data
This Safe Drinking Water Information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

Date of Government Version: 02/24/2000
Date Data Arrived at EDR: 04/27/2005
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA
Telephone: N/A
Last EDR Contact: 12/29/2008
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

WASHOE COUNTY:

Underground Storage Tank in Washoe County
A listing of underground storage tank sites located in Washoe County.

Date of Government Version: 09/30/2008
Date Data Arrived at EDR: 10/01/2008
Date Made Active in Reports: 11/04/2008
Number of Days to Update: 34

Source: Washoe County Department of Environmental Health
Telephone: 775-328-2493
Last EDR Contact: 12/22/2008
Next Scheduled EDR Contact: 03/23/2009
Data Release Frequency: Quarterly

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 06/15/2007
Date Made Active in Reports: 08/20/2007
Number of Days to Update: 66

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 12/11/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/21/2008
Date Data Arrived at EDR: 11/26/2008
Date Made Active in Reports: 12/11/2008
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/26/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facility List
Source: Department of Human Resources
Telephone: 775-684-1100

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

© 2009 Tele Atlas North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SLOAN NEVADA
SLOAN NEVADA
SLOAN, NV 89124

TARGET PROPERTY COORDINATES

Latitude (North):	35.93840 - 35˚ 56’ 18.2’’
Longitude (West):	115.198 - 115˚ 11’ 52.8’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	662548.4
UTM Y (Meters):	3978416.2
Elevation:	2673 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	35115-H2 SLOAN, NV
Most Recent Revision:	1989

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

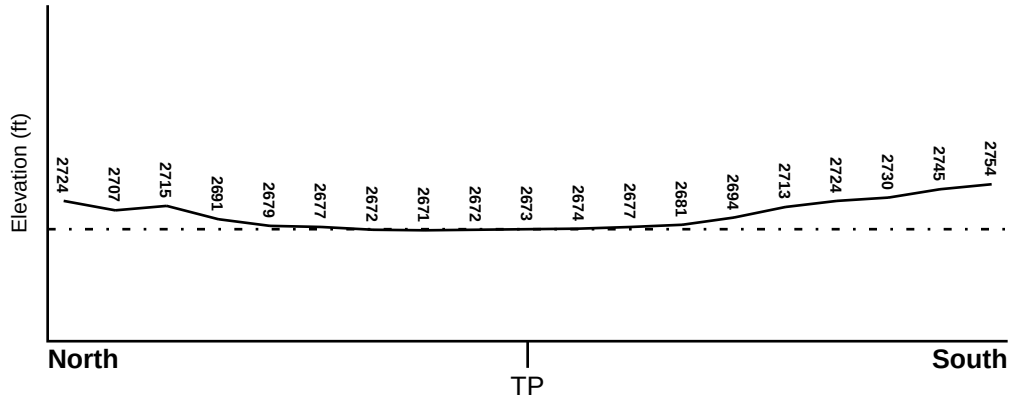
TOPOGRAPHIC INFORMATION

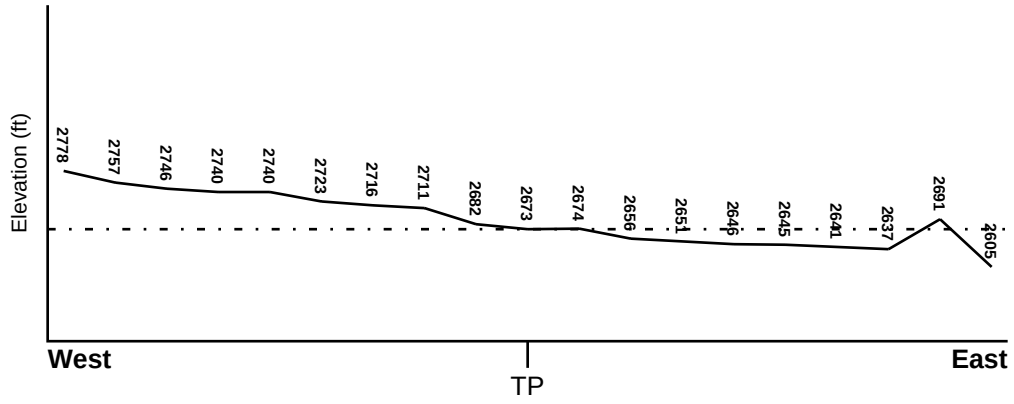
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General East

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 2673 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
CLARK, NV	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 32003C2925D

Additional Panels in search area: 32003C2910D

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

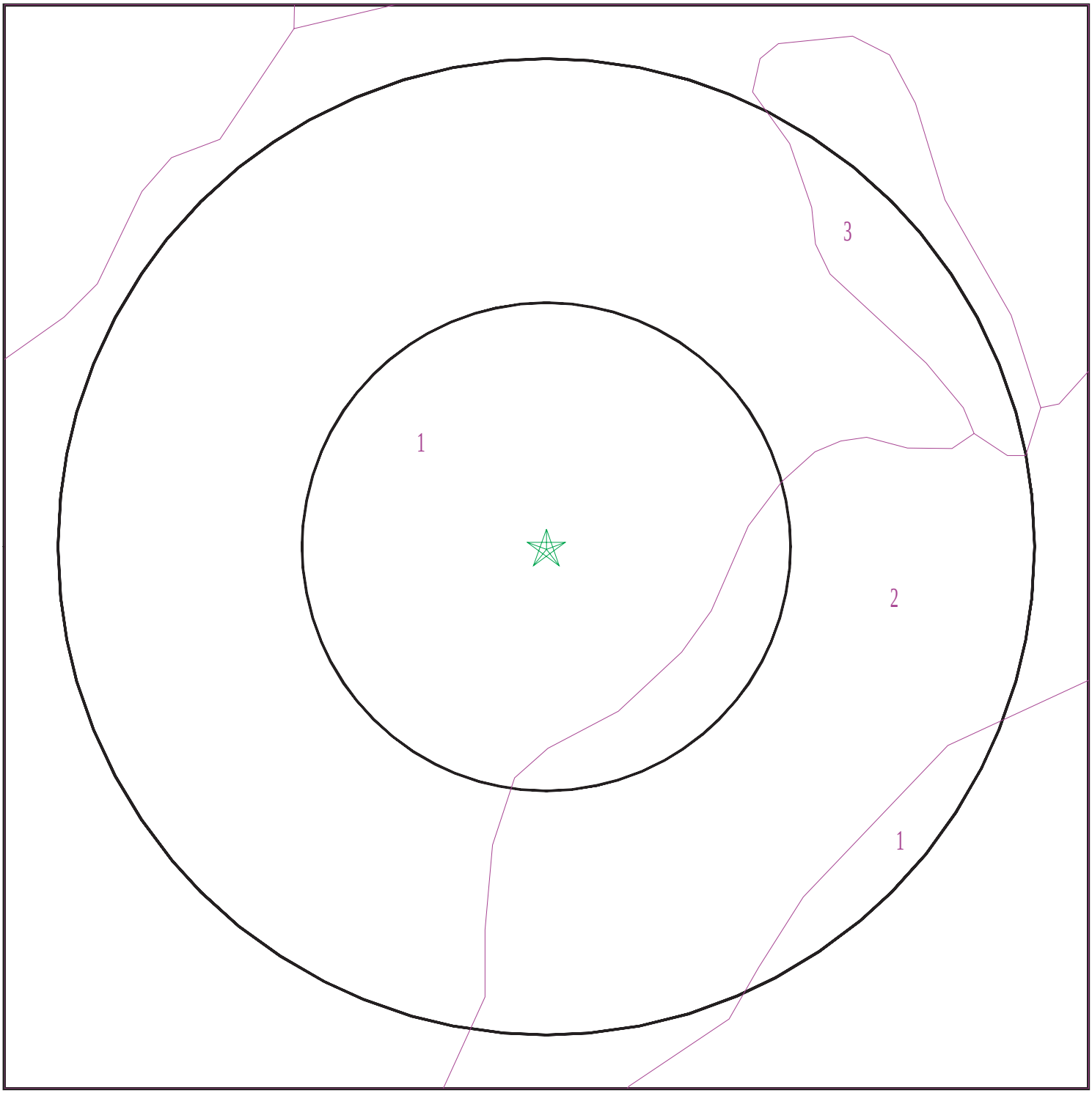
Era:	Paleozoic
System:	Pennsylvanian
Series:	Upper Paleozoic
Code:	uPz *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 2398196.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Sloan Nevada	CLIENT:	CH2M Hill
ADDRESS:	Sloan Nevada Sloan NV 89124	CONTACT:	Nick Moore
		INQUIRY #:	2398196.2s
LAT/LONG:	35.9384 / 115.1980	DATE:	January 13, 2009 6:03 pm

Copyright © 2008 EDR, Inc. © 2008 Tele Atlas Rel. 07/2007.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Cave

Soil Surface Texture: gravelly fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	gravelly fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	11 inches	35 inches	indurated	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 42 Min: 14	Max: 8.4 Min: 7.9
3	35 inches	59 inches	very gravelly sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 42 Min: 14	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Jean

Soil Surface Texture: gravelly loamy fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	gravelly loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel. COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel.	Max: 141 Min: 42	Max: 9 Min: 7.9
2	1 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel. COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel.	Max: 141 Min: 42	Max: 9 Min: 7.9
3	11 inches	59 inches	sr to extremely gravelly sand to very gravelly loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel. COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel.	Max: 141 Min: 42	Max: 9 Min: 7.9

Soil Map ID: 3

Soil Component Name:	Rock outcrop
Soil Surface Texture:	gravelly loamy fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	
Hydric Status: Unknown	
Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 18 inches
Depth to Watertable Min:	> 0 inches

No Layer Information available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

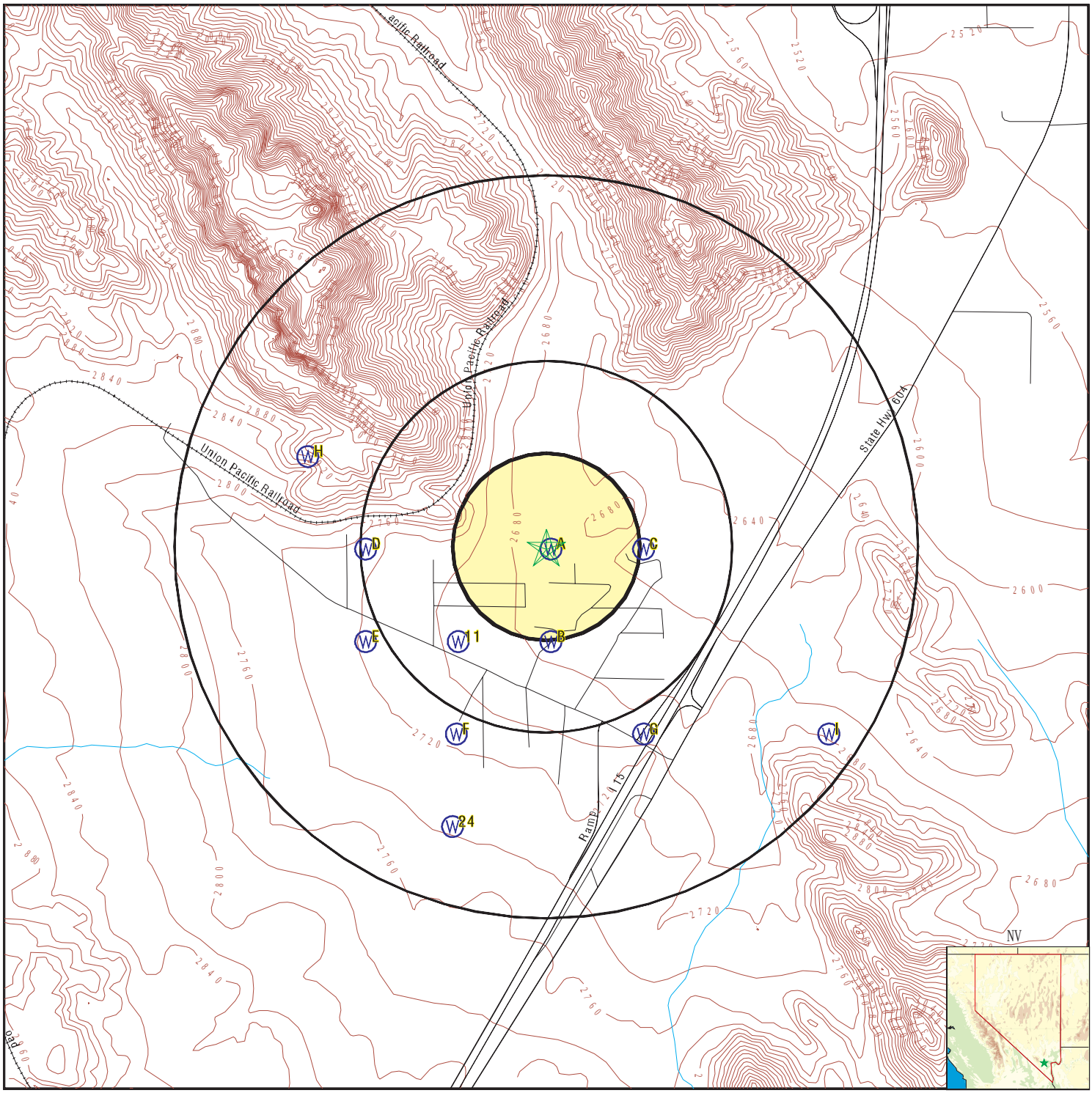
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	NV2000000001835	0 - 1/8 Mile ESE
A2	NV2000000001836	0 - 1/8 Mile ESE
B3	NV2000000001827	1/4 - 1/2 Mile South
B4	NV2000000001826	1/4 - 1/2 Mile South
B5	NV2000000001829	1/4 - 1/2 Mile South
B6	NV2000000001828	1/4 - 1/2 Mile South
B7	NV2000000001824	1/4 - 1/2 Mile South
B8	NV2000000001825	1/4 - 1/2 Mile South
C9	NV2000000001837	1/4 - 1/2 Mile East
C10	NV2000000001838	1/4 - 1/2 Mile East
11	NV2000000001823	1/4 - 1/2 Mile SW
D12	NV2000000001832	1/4 - 1/2 Mile West
D13	NV2000000001833	1/4 - 1/2 Mile West
D14	NV2000000001834	1/4 - 1/2 Mile West
E15	NV2000000001821	1/2 - 1 Mile WSW
E16	NV2000000001822	1/2 - 1 Mile WSW
F17	NV2000000001815	1/2 - 1 Mile SSW
F18	NV2000000001816	1/2 - 1 Mile SSW
F19	NV2000000001814	1/2 - 1 Mile SSW
G20	NV2000000001817	1/2 - 1 Mile SSE
G21	NV2000000001818	1/2 - 1 Mile SSE
H22	NV2000000001840	1/2 - 1 Mile WNW
H23	NV2000000001841	1/2 - 1 Mile WNW
24	NV2000000001813	1/2 - 1 Mile SSW
I25	NV2000000001819	1/2 - 1 Mile ESE
I26	NV2000000001820	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 2398196.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data

N

SITE NAME: Sloan Nevada	CLIENT: CH2M Hill
ADDRESS: Sloan Nevada Sloan NV 89124	CONTACT: Nick Moore
LAT/LONG: 35.9384 / 115.1980	INQUIRY #: 2398196.2s
	DATE: January 13, 2009 6:03 pm

Copyright © 2008 EDR, Inc. © 2008 Tele Atlas Rel. 07/2007.

Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **ESE** **0 - 1/8 Mile** **Higher**	**NV WELLS**	**NV2000000001835**

Sequence #:	25326	Well log:	48667
App:	Not Reported	Notice of :	16317
Waiver no:	Not Reported	Date log r:	10/03/1995 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AB
Legal quarter:	NW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9375
Longitude:	-115.195999145508	Lat long s:	NV003
Lat long acc:	G		
Owner current:	GREENE, GRANT		
Owner addr:	13990 SCHIRLLS ST		
Owner no:	Not Reported		
Parcel no:	400-230-008	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	09/27/1995 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	60
Depth drilled:	700	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	700
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	640
Bottom perf:	680	Perf interval:	1
Static wl:	516		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	34274	Contract 1:	DESERT DRILLING
Contract 2:	6475 GARY AVE LAS VEGAS NV 89139		
Contract 3:	0		
Driller li:	1966	Source age:	NV003
User id:	DBRANTLE	Date entry:	10/19/1995 00:00:00
Update use:	Not Reported	Date updat:	07/15/1996 00:00:00
Edit statu:	F	Well start:	09/19/1995 00:00:00
Gravel p 1:	60	Gravel p 2:	700
Utm x:	662643.812713		
Utm y:	3978410.74126		

A2 **ESE** **0 - 1/8 Mile** **Higher**	**NV WELLS**	**NV2000000001836**

Sequence #:	28396	Well log:	51410
App:	Not Reported	Notice of :	1936
Waiver no:	Not Reported	Date log r:	05/01/1996 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AB
Legal quarter:	NW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.937198638916
Longitude:	-115.197998046875	Lat long s:	NV003
Lat long acc:	G		
Owner current:	GETTEL, ALAN		
Owner addr:	4310 ROARK AVE		
Owner no:	Not Reported		
Parcel no:	400-230-027	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	04/16/1996 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	70
Depth drilled:	703	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	703
Casing diameter:	6.62		
Casing reduc:	0	Top perf:	612
Bottom perf:	692	Perf interval:	2
Static wl:	525		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	6294A	Contract 1:	BRINER DRILLING INC
Contract 2:	555 N PARKSON RD HENDERSON NV 89015		
Contract 3:	0		
Driller li:	1338	Source age:	NV003
User id:	KLOHAIR	Date entry:	07/02/1996 00:00:00
Update use:	Not Reported	Date updat:	07/08/1997 00:00:00
Edit statu:	F	Well start:	04/04/1996 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662643.812713		
Utm y:	3978410.74126		

B3
South
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001827**

Sequence #:	31778	Well log:	53988
App:	Not Reported	Notice of :	0
Waiver no:	Not Reported	Date log r:	08/23/1983 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E

Section:	19	Sec quarter:	AC
Legal quarter:	SW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9352989196777
Longitude:	-115.194999694824	Lat long s:	NV003
Lat long acc:	G		
Owner current:	SUFIAN, WILLARD		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	08/15/1983 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	50
Depth drilled:	640	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	640
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	540
Bottom perf:	640	Perf interval:	1
Static wl:	510		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	10062	Contract 1:	DIMICK DRILLING
Contract 2:	5360 N BONITA VISTA ST LAS VEGAS NV 89129		
Contract 3:	0		
Driller li:	552	Source age:	NV003
User id:	DBRANTLE	Date entry:	09/20/1996 00:00:00
Update use:	Not Reported	Date updat:	10/17/1996 00:00:00
Edit statu:	F	Well start:	08/08/1983 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662651.213337		
Utm y:	3978010.16844		

B4
South **NV WELLS** **NV2000000001826**
1/4 - 1/2 Mile
Higher

Sequence #:	31777	Well log:	53987
App:	Not Reported	Notice of :	2998
Waiver no:	Not Reported	Date log r:	09/22/1989 00:00:00
Date log 1:	D	Site type:	E
Work type:	R		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AC
Legal quarter:	SW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.934700012207
Longitude:	-115.196998596191	Lat long s:	NV003
Lat long acc:	T		
Owner current:	KOPER, GEORGE		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported

Well finish:	09/13/1989 00:00:00	Date cmplt:	D
Gravel pack:	Not Reported	Depth seal:	0
Depth drilled:	0	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	0
Casing diameter:	0		
Casing reduc:	0	Top perf:	0
Bottom perf:	0	Perf interval:	0
Static wl:	0		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	N
Qual lith :	N		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	27030	Contract 1:	MITCHELL ENTERPRISES
Contract 2:	4250 S ARVILLE #262 LAS VEGAS NV 89103		
Contract 3:	1475		
Driller li:	1475	Source age:	NV003
User id:	DBRANTLE	Date entry:	09/20/1996 00:00:00
Update use:	Not Reported	Date updat:	10/17/1996 00:00:00
Edit statu:	F	Well start:	09/13/1989 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662651.213337		
Utm y:	3978010.16844		

B5
South
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001829**

Sequence #:	81975	Well log:	93049
App:	Not Reported	Notice of :	25686
Waiver no:	Not Reported	Date log r:	04/21/2004 00:00:00
Date log 1:	D	Site type:	E
Work type:	P		
Work type 2:	PLUGGING OF LOG 53988		
Proposed use:	H	Drilling method:	U
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AC
Legal quarter:	SW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.934700012207
Longitude:	-115.196998596191	Lat long s:	NV003
Lat long acc:	M		
Owner current:	DRAUDEN, WILLIAM		
Owner addr:	14055 HINSON ST		
Owner no:	Not Reported		
Parcel no:	191-19-601-002	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	03/15/2004 00:00:00	Date cmplt:	D
Gravel pack:	Not Reported	Depth seal:	0

Depth drilled:	640	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	0
Casing diameter:	0		
Casing reduc:	0	Top perf:	0
Bottom perf:	0	Perf interval:	0
Static wl:	561		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	38155	Contract 1:	REDDING DRILLING
Contract 2:	8170 HAVEN ST LAS VEGAS NV 89123		
Contract 3:	0		
Driller li:	1617	Source age:	NV003
User id:	DBRANTLE	Date entry:	05/07/2004 00:00:00
Update use:	DBRANTLE	Date updat:	05/27/2004 00:00:00
Edit statu:	F	Well start:	03/11/2004 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662651.213337		
Utm y:	3978010.16844		

B6
South
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001828**

Sequence #:	81105	Well log:	92695
App:	Not Reported	Notice of :	26286
Waiver no:	Not Reported	Date log r:	04/06/2004 00:00:00
Date log 1:	D	Site type:	N
Work type:	S		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AC
Legal quarter:	SW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.934700012207
Longitude:	-115.196998596191	Lat long s:	NV003
Lat long acc:	M		
Owner current:	DRAUDEN, WILLIAM		
Owner addr:	14055 HINSON ST		
Owner no:	Not Reported		
Parcel no:	191-19-601-002	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	04/01/2004 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	50
Depth drilled:	725	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	725
Casing diameter:	6		
Casing reduc:	0	Top perf:	645
Bottom perf:	725	Perf interval:	1
Static wl:	540		
Temperature:	0		
Yield:	10		
Drawdown:	0		
Hours pump:	1		

Test method:	A	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	38155	Contract 1:	REDDING DRILLING
Contract 2:	8170 HAVEN ST LAS VEGAS NV 89123		
Contract 3:	0		
Driller li:	1617	Source age:	NV003
User id:	DBRANTLE	Date entry:	04/09/2004 00:00:00
Update use:	Not Reported	Date updat:	05/19/2004 00:00:00
Edit statu:	F	Well start:	03/15/2004 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662651.213337		
Utm y:	3978010.16844		

B7
South
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001824**

Sequence #:	2323	Well log:	27474
App:	Not Reported	Notice of :	1496
Waiver no:	Not Reported	Date log r:	05/06/1986 00:00:00
Date log 1:	Not Reported	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	R
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AC
Legal quarter:	SW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9357986450195
Longitude:	-115.195999145508	Lat long s:	NV003
Lat long acc:	G		
Owner current:	KOPER, GEORGE		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	04/10/1986 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	100
Depth drilled:	695	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	695
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	580
Bottom perf:	680	Perf interval:	1
Static wl:	595		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	10062	Contract 1:	DIMICK DRILLING
Contract 2:	5360 N BONITA VISTA ST LAS VEGAS NV 89129		
Contract 3:	552		
Driller li:	552	Source age:	NV003
User id:	NAFLECKS	Date entry:	08/05/1999 00:00:00
Update use:	Not Reported	Date updat:	09/11/1996 00:00:00
Edit statu:	F	Well start:	04/21/1986 00:00:00

Gravel p 1:	0	Gravel p 2:	0
Utm x:	662651.213337		
Utm y:	3978010.16844		

B8
South
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001825**

Sequence #:	31775	Well log:	53985
App:	Not Reported	Notice of :	99
Waiver no:	Not Reported	Date log r:	09/24/1984 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AC
Legal quarter:	SW NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9352989196777
Longitude:	-115.197998046875	Lat long s:	NV003
Lat long acc:	G		
Owner current:	ERICKSON, ROY		
Owner addr:	4350 HUCKLEBERRY LN		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	03/23/1984 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	62
Depth drilled:	660	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	660
Casing diameter:	6.62		
Casing reduc:	0	Top perf:	600
Bottom perf:	660	Perf interval:	1
Static wl:	525		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	6294A	Contract 1:	BRINER DRILLING INC
Contract 2:	555 N PARKSON RD HENDERSON NV 89015		
Contract 3:	0		
Driller li:	693	Source age:	NV003
User id:	DBRANTLE	Date entry:	09/20/1996 00:00:00
Update use:	Not Reported	Date updat:	10/17/1996 00:00:00
Edit statu:	F	Well start:	03/14/1984 00:00:00
Gravel p 1:	62	Gravel p 2:	660
Utm x:	662651.213337		
Utm y:	3978010.16844		

Map ID Direction Distance Elevation	Database	EDR ID Number
C9 **East** **1/4 - 1/2 Mile** **Lower**	**NV WELLS**	**NV2000000001837**

Sequence #:	5181	Well log:	29620
App:	Not Reported	Notice of :	4809
Waiver no:	Not Reported	Date log r:	02/24/1988 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	R
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AA
Legal quarter:	NE NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.937801361084
Longitude:	-115.193000793457	Lat long s:	NV003
Lat long acc:	G		
Owner current:	CULLEN, FRED		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	02/23/1988 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	80
Depth drilled:	670	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	670
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	640
Bottom perf:	670	Perf interval:	1
Static wl:	520		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	10062	Contract 1:	DIMICK DRILLING
Contract 2:	5360 N BONITA VISTA ST LAS VEGAS NV 89129		
Contract 3:	1006		
Driller li:	552	Source age:	NV003
User id:	NAFLECKS	Date entry:	05/18/2000 00:00:00
Update use:	Not Reported	Date updat:	09/14/2000 00:00:00
Edit statu:	F	Well start:	01/08/1988 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	663044.7635		
Utm y:	3978418.15833		

C10 **East** **1/4 - 1/2 Mile** **Lower**	**NV WELLS**	**NV2000000001838**

Sequence #:	31779	Well log:	53989
App:	Not Reported	Notice of :	0
Waiver no:	Not Reported	Date log r:	09/11/1979 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	AA
Legal quarter:	NE NE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.937198638916
Longitude:	-115.192001342773	Lat long s:	NV003
Lat long acc:	G		
Owner current:	TREVINO, M G		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	07/09/1979 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	50
Depth drilled:	600	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	600
Casing diameter:	6.62		
Casing reduc:	0	Top perf:	540
Bottom perf:	600	Perf interval:	1
Static wl:	489		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	10831	Contract 1:	DESERT DRILLING
Contract 2:	4547 N RANCHO LAS VEGAS NV 89108		
Contract 3:	0		
Driller li:	623	Source age:	NV003
User id:	DBRANTLE	Date entry:	09/20/1996 00:00:00
Update use:	Not Reported	Date updat:	10/17/1996 00:00:00
Edit statu:	F	Well start:	06/28/1979 00:00:00
Gravel p 1:	50	Gravel p 2:	600
Utm x:	663044.7635		
Utm y:	3978418.15833		

11
SW
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001823**

Sequence #:	24612	Well log:	20147
App:	35475	Notice of :	0
Waiver no:	Not Reported	Date log r:	07/19/1979 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E

Section:	19	Sec quarter:	BD
Legal quarter:	SE NW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9366989135742
Longitude:	-115.200996398926	Lat long s:	NV003
Lat long acc:	G		
Owner current:	ROARK, RAY		
Owner addr:	1401 S MARYLAND PKWY		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	07/11/1979 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	55
Depth drilled:	1015	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	1015
Casing diameter:	8.62		
Casing reduc:	1	Top perf:	800
Bottom perf:	1000	Perf interval:	1
Static wl:	490		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	10062	Contract 1:	DIMICK DRILLING
Contract 2:	5360 N BONITA VISTA ST LAS VEGAS NV 89129		
Contract 3:	0		
Driller li:	552	Source age:	NV003
User id:	PCOOKE	Date entry:	09/19/1995 00:00:00
Update use:	dsdavis	Date updat:	06/17/1996 00:00:00
Edit statu:	F	Well start:	07/04/1979 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662250.244597		
Utm y:	3978002.76996		

D12
West
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001832**

Sequence #:	3069	Well log:	28142
App:	54641	Notice of :	4315
Waiver no:	Not Reported	Date log r:	03/11/1987 00:00:00
Date log 1:	Not Reported	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	R
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	BB
Legal quarter:	NW NW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9375
Longitude:	-115.206001281738	Lat long s:	NV003
Lat long acc:	G		
Owner current:	DRAUDEN, WILLIAM J		
Owner addr:	5297 EDNA AVE LAS VEGAS NV		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported

Well finish:	01/12/1987 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	55
Depth drilled:	620	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	595
Casing diameter:	6		
Casing reduc:	1	Top perf:	535
Bottom perf:	595	Perf interval:	1
Static wl:	490		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	20295	Contract 1:	J & M WELL SERVICE
Contract 2:	236 MESA VERDE LN LAS VEGAS NV		
Contract 3:	0		
Driller li:	1478	Source age:	NV003
User id:	NAFLECKS	Date entry:	08/05/1999 00:00:00
Update use:	dsdavis	Date updat:	07/01/1998 00:00:00
Edit statu:	F	Well start:	02/10/1987 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	661841.912058		
Utm y:	3978395.96196		

D13
West
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001833**

Sequence #:	4234	Well log:	28793
App:	Not Reported	Notice of :	5085
Waiver no:	Not Reported	Date log r:	08/14/1984 00:00:00
Date log 1:	Not Reported	Site type:	E
Work type:	R		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	R
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	BB
Legal quarter:	NW NW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9383010864258
Longitude:	-115.206001281738	Lat long s:	NV003
Lat long acc:	T		
Owner current:	DRAUDEN, WILLIAM		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	08/05/1987 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	0

Depth drilled:	0	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	0
Casing diameter:	0		
Casing reduc:	0	Top perf:	0
Bottom perf:	0	Perf interval:	0
Static wl:	0		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	N
Qual lith :	N		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	20295	Contract 1:	J & M WELL SERVICE
Contract 2:	236 MESA VERDE LN LAS VEGAS NV		
Contract 3:	0		
Driller li:	1475	Source age:	NV003
User id:	NAFLECKS	Date entry:	08/05/1999 00:00:00
Update use:	dsdavis	Date updat:	10/21/1996 00:00:00
Edit statu:	F	Well start:	06/25/1984 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	661841.912058		
Utm y:	3978395.96196		

D14
West
1/4 - 1/2 Mile
Higher

NV WELLS **NV2000000001834**

Sequence #:	31776	Well log:	53986
App:	Not Reported	Notice of :	97
Waiver no:	Not Reported	Date log r:	02/02/1984 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	BB
Legal quarter:	NW NW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9380989074707
Longitude:	-115.204002380371	Lat long s:	NV003
Lat long acc:	G		
Owner current:	HILL, HERB		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	01/07/1984 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	65
Depth drilled:	770	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	770
Casing diameter:	6.62		
Casing reduc:	0	Top perf:	650
Bottom perf:	750	Perf interval:	1
Static wl:	520		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		

Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	6294A	Contract 1:	BRINER DRILLING INC
Contract 2:	555 N PARKSON RD HENDERSON NV 89015		
Contract 3:	0		
Driller li:	693	Source age:	NV003
User id:	DBRANTLE	Date entry:	09/20/1996 00:00:00
Update use:	Not Reported	Date updat:	10/17/1996 00:00:00
Edit statu:	F	Well start:	12/12/1983 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	661841.912058		
Utm y:	3978395.96196		

E15
WSW **NV WELLS** **NV2000000001821**
1/2 - 1 Mile
Higher

Sequence #:	63990	Well log:	84815
App:	68507T	Notice of :	22848
Waiver no:	Not Reported	Date log r:	12/12/2001 00:00:00
Date log 1:	D	Site type:	N
Work type:	S		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	BC
Legal quarter:	SW NW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.934700012207
Longitude:	-115.206001281738	Lat long s:	NV003
Lat long acc:	M		
Owner current:	SIERRA READY MIX		
Owner addr:	13890 S DECATUR BLVD		
Owner no:	Not Reported		
Parcel no:	191-19-101-008	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	11/06/2001 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	60
Depth drilled:	810	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	810
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	730
Bottom perf:	810	Perf interval:	1
Static wl:	364		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	47333	Contract 1:	GREAT BASIN DRILLING CO
Contract 2:	P O BOX 4220 PAHRUMP NV 89041		
Contract 3:	0		
Driller li:	1642	Source age:	NV003
User id:	DBRANTLE	Date entry:	12/12/2001 00:00:00
Update use:	DBRANTLE	Date updat:	12/12/2001 00:00:00
Edit statu:	F	Well start:	11/05/2001 00:00:00

Gravel p 1:	50	Gravel p 2:	810
Utm x:	661849.276163		
Utm y:	3977995.38975		

E16
WSW
1/2 - 1 Mile
Higher

NV WELLS **NV2000000001822**

Sequence #:	63991	Well log:	84816
App:	54641	Notice of :	22933
Waiver no:	Not Reported	Date log r:	12/12/2001 00:00:00
Date log 1:	D	Site type:	E
Work type:	P		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	U
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	BC
Legal quarter:	SW NW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.934700012207
Longitude:	-115.206001281738	Lat long s:	NV003
Lat long acc:	M		
Owner current:	SIERRA READY MIX		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	12/06/2001 00:00:00	Date cmplt:	D
Gravel pack:	Not Reported	Depth seal:	0
Depth drilled:	0	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	536
Casing diameter:	8		
Casing reduc:	1	Top perf:	399
Bottom perf:	525	Perf interval:	1
Static wl:	0		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	47333	Contract 1:	GREAT BASIN DRILLING CO
Contract 2:	P O BOX 4220 PAHRUMP NV 89041		
Contract 3:	0		
Driller li:	1594	Source age:	NV003
User id:	DBRANTLE	Date entry:	12/12/2001 00:00:00
Update use:	Not Reported	Date updat:	12/12/2001 00:00:00
Edit statu:	F	Well start:	12/05/2001 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	661849.276163		
Utm y:	3977995.38975		

Map ID Direction Distance Elevation	Database	EDR ID Number
F17 **SSW** **1/2 - 1 Mile** **Higher**	**NV WELLS**	**NV2000000001815**

Sequence #:	58033	Well log:	79303
App:	65484	Notice of :	19486
Waiver no:	Not Reported	Date log r:	04/14/2000 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	CA
Legal quarter:	NE SW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9319000244141
Longitude:	-115.198997497559	Lat long s:	NV003
Lat long acc:	G		
Owner current:	REPUBLIC SILVER STATE DISPOSAL		
Owner addr:	4455 N SLOAN AVE		
Owner no:	Not Reported		
Parcel no:	191-19-301-013	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	03/30/2000 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	55
Depth drilled:	988	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	988
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	926
Bottom perf:	968	Perf interval:	1
Static wl:	560		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	10062	Contract 1:	DIMICK DRILLING
Contract 2:	5360 N BONITA VISTA ST LAS VEGAS NV 89129		
Contract 3:	0		
Driller li:	552	Source age:	NV003
User id:	DBRANTLE	Date entry:	05/01/2000 00:00:00
Update use:	Not Reported	Date updat:	05/01/2000 00:00:00
Edit statu:	F	Well start:	02/17/2000 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662257.626315		
Utm y:	3977602.19766		

F18 **SSW** **1/2 - 1 Mile** **Higher**	**NV WELLS**	**NV2000000001816**

Sequence #:	85780	Well log:	94165
App:	70443	Notice of :	26683
Waiver no:	Not Reported	Date log r:	09/17/2004 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	CA
Legal quarter:	NE SW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9310989379883
Longitude:	-115.200996398926	Lat long s:	NV003
Lat long acc:	M		
Owner current:	DIAMOND SLOAN L L C		
Owner addr:	14425 ARVILLE ST		
Owner no:	Not Reported		
Parcel no:	191-19-301-010	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	09/08/2004 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	50
Depth drilled:	1000	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	1000
Casing diameter:	6		
Casing reduc:	0	Top perf:	100
Bottom perf:	1000	Perf interval:	1
Static wl:	584		
Temperature:	0		
Yield:	100		
Drawdown:	0		
Hours pump:	2		
Test method:	A	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	38155	Contract 1:	REDDING DRILLING
Contract 2:	8170 HAVEN ST LAS VEGAS NV 89123		
Contract 3:	0		
Driller li:	1617	Source age:	NV003
User id:	DBRANTLE	Date entry:	10/26/2004 00:00:00
Update use:	SGARDELL	Date updat:	11/18/2004 00:00:00
Edit statu:	F	Well start:	08/29/2004 00:00:00
Gravel p 1:	50	Gravel p 2:	1000
Utm x:	662257.626315		
Utm y:	3977602.19766		

F19
SSW
1/2 - 1 Mile
Higher

NV WELLS **NV2000000001814**

Sequence #:	13480	Well log:	37743
App:	Not Reported	Notice of :	9731
Waiver no:	Not Reported	Date log r:	06/16/1992 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E

Section:	19	Sec quarter:	CA
Legal quarter:	NE SW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9308013916016
Longitude:	-115.202003479004	Lat long s:	NV003
Lat long acc:	G		
Owner current:	BEGER, JOHN		
Owner addr:	SLOAN		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	06/10/1992 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	50
Depth drilled:	945	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	945
Casing diameter:	6.62		
Casing reduc:	0	Top perf:	750
Bottom perf:	945	Perf interval:	1
Static wl:	0		
Temperature:	0		
Yield:	15		
Drawdown:	0		
Hours pump:	2		
Test method:	A	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	18917	Contract 1:	ALLEN DRILLING INC
Contract 2:	4847 S VALLEY VIEW LAS VEGAS NV 89103		
Contract 3:	0		
Driller li:	1661	Source age:	NV003
User id:	KLOHAIR	Date entry:	05/18/2000 00:00:00
Update use:	Not Reported	Date updat:	11/21/1996 00:00:00
Edit statu:	F	Well start:	03/17/1992 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	662232.564637		
Utm y:	3977601.73588		

G20
SSE **NV WELLS** **NV2000000001817**
1/2 - 1 Mile
Higher

Sequence #:	27172	Well log:	50511
App:	54601	Notice of :	13476
Waiver no:	Not Reported	Date log r:	01/31/1996 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	DA
Legal quarter:	NE SE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9338989257813
Longitude:	-115.192001342773	Lat long s:	NV003
Lat long acc:	G		
Owner current:	MASCARO, JIM		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	400-230-016	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported

Well finish:	12/29/1995 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	50
Depth drilled:	720	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	750
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	640
Bottom perf:	720	Perf interval:	1
Static wl:	540		
Temperature:	0		
Yield:	100		
Drawdown:	0		
Hours pump:	3		
Test method:	A	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	27030	Contract 1:	MITCHELL ENTERPRISES
Contract 2:	4250 S ARVILLE #262 LAS VEGAS NV 89103		
Contract 3:	0		
Driller li:	1617	Source age:	NV003
User id:	DBRANTLE	Date entry:	03/12/1996 00:00:00
Update use:	Not Reported	Date updat:	04/11/1997 00:00:00
Edit statu:	F	Well start:	12/04/1995 00:00:00
Gravel p 1:	50	Gravel p 2:	720
Utm x:	663059.600619		
Utm y:	3977617.01228		

G21
SSE **NV WELLS** **NV2000000001818**
1/2 - 1 Mile
Higher

Sequence #:	98561	Well log:	99293
App:	Not Reported	Notice of :	29086
Waiver no:	C-1032	Date log r:	05/17/2006 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	Z	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	DA
Legal quarter:	NE SE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9310989379883
Longitude:	-115.192001342773	Lat long s:	Not Reported
Lat long acc:	M		
Owner current:	FREHNER		
Owner addr:	SLOAN & I15		
Owner no:	Not Reported		
Parcel no:	191-19-799-001	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	05/08/2006 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	50

Depth drilled:	1050	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	1005
Casing diameter:	8.62		
Casing reduc:	0	Top perf:	905
Bottom perf:	1005	Perf interval:	1
Static wl:	542		
Temperature:	0		
Yield:	100		
Drawdown:	0		
Hours pump:	4		
Test method:	A	Qual constr:	G
Qual lith :	G		
Remarks:	PROP USE = CONSTRUCTION		
Remarks ad:	Not Reported		
Contractor:	38155	Contract 1:	REDDING DRILLING
Contract 2:	530 LARSON HENDERSON NV 89044		
Contract 3:	0		
Driller li:	1617	Source age:	NV003
User id:	SGARDELL	Date entry:	06/07/2006 00:00:00
Update use:	SGARDELL	Date updat:	07/10/2006 00:00:00
Edit statu:	F	Well start:	04/25/2006 00:00:00
Gravel p 1:	50	Gravel p 2:	1005
Utm x:	663059.600619		
Utm y:	3977617.01228		

H22
WNW **NV WELLS** **NV2000000001840**
1/2 - 1 Mile
Higher

Sequence #:	87563	Well log:	95093
App:	71709T	Notice of :	27130
Waiver no:	Not Reported	Date log r:	02/07/2005 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	K	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E60	Legal range:	60E
Section:	13	Sec quarter:	DD
Legal quarter:	SE SE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9418983459473
Longitude:	-115.208999633789	Lat long s:	NV003
Lat long acc:	M		
Owner current:	FREHNER CONSTRUCTION		
Owner addr:	3920 W HACIENDA		
Owner no:	Not Reported		
Parcel no:	192-13-000-002	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	01/10/2005 00:00:00	Date cmplt:	D
Gravel pack:	Not Reported	Depth seal:	0
Depth drilled:	825	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	0
Casing diameter:	0		
Casing reduc:	0	Top perf:	0
Bottom perf:	0	Perf interval:	0
Static wl:	0		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		

Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	4286A	Contract 1:	THOMPSON DRILLING CO INC
Contract 2:	7227 HAUCK ST LAS VEGAS NV 89118		
Contract 3:	0		
Driller li:	290	Source age:	NV003
User id:	DBRANTLE	Date entry:	02/16/2005 00:00:00
Update use:	DBRANTLE	Date updat:	02/18/2005 00:00:00
Edit statu:	F	Well start:	11/18/2004 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	661583.96502		
Utm y:	3978791.93067		

H23
WNW
1/2 - 1 Mile
Higher

NV WELLS **NV2000000001841**

Sequence #:	96964	Well log:	97717
App:	71709T	Notice of :	28076
Waiver no:	Not Reported	Date log r:	10/11/2005 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	A
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E60	Legal range:	60E
Section:	13	Sec quarter:	DD
Legal quarter:	SE SE	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9418983459473
Longitude:	-115.208999633789	Lat long s:	Not Reported
Lat long acc:	M		
Owner current:	AGGREGATE INDUSTRIES		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	192-13-000-002	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	08/25/2005 00:00:00	Date cmplt:	D
Gravel pack:	N	Depth seal:	50
Depth drilled:	1100	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	1100
Casing diameter:	12.75		
Casing reduc:	1	Top perf:	756
Bottom perf:	1100	Perf interval:	3
Static wl:	837		
Temperature:	0		
Yield:	225		
Drawdown:	130		
Hours pump:	2		
Test method:	P	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	4286A	Contract 1:	THOMPSON DRILLING CO INC
Contract 2:	7227 HAUCK ST LAS VEGAS NV 89118		
Contract 3:	0		
Driller li:	2286	Source age:	NV003
User id:	DBRANTLE	Date entry:	11/30/2005 00:00:00
Update use:	Not Reported	Date updat:	01/23/2006 00:00:00
Edit statu:	F	Well start:	02/03/2005 00:00:00

Gravel p 1:	0	Gravel p 2:	0
Utm x:	661583.96502		
Utm y:	3978791.93067		

24
SSW
1/2 - 1 Mile
Higher

NV WELLS **NV2000000001813**

Sequence #:	72126	Well log:	89664
App:	68889	Notice of :	23847
Waiver no:	Not Reported	Date log r:	06/11/2003 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	P	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	19	Sec quarter:	CD
Legal quarter:	SE SW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9294013977051
Longitude:	-115.198997497559	Lat long s:	NV003
Lat long acc:	G		
Owner current:	SERVICE ROCK PRODUCTS		
Owner addr:	ARVILLE RD		
Owner no:	Not Reported		
Parcel no:	191-19-401-002	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	05/23/2003 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	50
Depth drilled:	1060	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	1060
Casing diameter:	8.625		
Casing reduc:	1	Top perf:	900
Bottom perf:	1060	Perf interval:	1
Static wl:	571		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	47333	Contract 1:	GREAT BASIN DRILLING CO
Contract 2:	P O BOX 4220 PAHRUMP NV 89041		
Contract 3:	0		
Driller li:	1642	Source age:	NV003
User id:	DBRANTLE	Date entry:	06/17/2003 00:00:00
Update use:	DBRANTLE	Date updat:	06/26/2003 00:00:00
Edit statu:	F	Well start:	04/28/2003 00:00:00
Gravel p 1:	50	Gravel p 2:	1060
Utm x:	662239.944568		
Utm y:	3977201.16382		

Map ID Direction Distance Elevation	Database	EDR ID Number
I25 **ESE** **1/2 - 1 Mile** **Higher**	**NV WELLS**	**NV2000000001819**

Sequence #:	31780	Well log:	53990
App:	Not Reported	Notice of :	0
Waiver no:	Not Reported	Date log r:	12/06/1979 00:00:00
Date log 1:	D	Site type:	N
Work type:	N		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	H
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	20	Sec quarter:	CA
Legal quarter:	NE SW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9303016662598
Longitude:	-115.18399810791	Lat long s:	NV003
Lat long acc:	G		
Owner current:	STIEFEL, MELVIN		
Owner addr:	Not Reported		
Owner no:	Not Reported		
Parcel no:	Not Reported	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	11/29/1979 00:00:00	Date cmplt:	D
Gravel pack:	Y	Depth seal:	100
Depth drilled:	650	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	650
Casing diameter:	6		
Casing reduc:	0	Top perf:	560
Bottom perf:	650	Perf interval:	1
Static wl:	515		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	6294A	Contract 1:	BRINER DRILLING INC
Contract 2:	555 N PARKSON RD HENDERSON NV 89015		
Contract 3:	0		
Driller li:	693	Source age:	NV003
User id:	DBRANTLE	Date entry:	09/20/1996 00:00:00
Update use:	Not Reported	Date updat:	10/17/1996 00:00:00
Edit statu:	F	Well start:	11/13/1979 00:00:00
Gravel p 1:	100	Gravel p 2:	650
Utm x:	663861.576155		
Utm y:	3977631.90001		

I26 **ESE** **1/2 - 1 Mile** **Higher**	**NV WELLS**	**NV2000000001820**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sequence #:	65450	Well log:	85818
App:	Not Reported	Notice of :	23239
Waiver no:	Not Reported	Date log r:	03/12/2002 00:00:00
Date log 1:	D	Site type:	E
Work type:	P		
Work type 2:	Not Reported		
Proposed use:	H	Drilling method:	U
Sc:	32003	Ha:	212
Town:	S23	Legal town:	23S
Range:	E61	Legal range:	61E
Section:	20	Sec quarter:	CA
Legal quarter:	NE SW	Quarters section:	Not Reported
Ref:	MD	Latitude:	35.9310989379883
Longitude:	-115.18399810791	Lat long s:	NV003
Lat long acc:	M		
Owner current:	SPECHT, PAUL		
Owner addr:	LAS VEGAS BLVD & I-15 RAMP		
Owner no:	Not Reported		
Parcel no:	191-20-301-007	Subdivisio:	Not Reported
Lot no:	Not Reported	Block no:	Not Reported
Well finish:	03/08/2002 00:00:00	Date cmplt:	D
Gravel pack:	Not Reported	Depth seal:	0
Depth drilled:	643	Depth bedrock:	0
Aquifer depth:	Not Reported	Depth case:	0
Casing diameter:	0		
Casing reduc:	0	Top perf:	0
Bottom perf:	0	Perf interval:	0
Static wl:	0		
Temperature:	0		
Yield:	0		
Drawdown:	0		
Hours pump:	0		
Test method:	Not Reported	Qual constr:	G
Qual lith :	G		
Remarks:	Not Reported		
Remarks ad:	Not Reported		
Contractor:	35639	Contract 1:	B L WEBER GROUP INC (THE)
Contract 2:	16825 S WEBER DR CHANDLER AZ 85226-4112		
Contract 3:	0		
Driller li:	2024	Source age:	NV003
User id:	DBRANTLE	Date entry:	05/02/2002 00:00:00
Update use:	Not Reported	Date updat:	06/28/2002 00:00:00
Edit statu:	F	Well start:	03/07/2002 00:00:00
Gravel p 1:	0	Gravel p 2:	0
Utm x:	663861.576155		
Utm y:	3977631.90001		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for CLARK County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 89124

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Nevada Well Log Database
Source: Nevada Division of Water Resources
Telephone: 775-687-4380

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

© 2009 Tele Atlas North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

Appendix F

Interview Documentation

Interview Record

Project: **US Army Reserve**
Proposed Military Construction Project
Site: Sloan, Nevada

Interview Date: February 3, 2009

Person Interviewed: Ms. Brenda Warner – via telephone
Title: Real Estate Specialist - Point of Contact for Project
Organization: Department of the Interior - Bureau of Land Management

Interviewer: Thomas Hutchinson - CH2M HILL

Knowledge of Current Property Use: Ms. Warner was familiar with the Property.

Knowledge of Historical Property Uses: Ms. Warner indicated the land has belonged to the federal government since it was acquired from Mexico in 1848. There has not been any development on the property. The property has been used for recreational purpose.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Property: Ms. Warner indicated that there has been no known storage, disposal or use of hazardous materials on the Property.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Adjacent Properties: Ms. Warner indicated that she had no knowledge regarding hazardous materials use on adjacent properties.

Knowledge of any Environmental Liens, Land use Restrictions, or Engineering Controls on Property: Ms. Warner indicated there were no Environmental Liens, Land Use Restrictions, or Engineering Controls associated with the Property.

Additional Information Pertaining to Environmental Condition of Property: Ms. Warner indicated there were no known Environmental Conditions on the Property.

Interview Record

Project: **US Army Reserve**
Proposed Military Construction Project
Site: Sloan, Nevada

Interview Date: February 19, 2009

Person Interviewed: Mr. Todd Croft – via telephone
Title: Supervisor for the Bureau of Corrective Actions
Organization: Nevada Department of Environmental Protection

Interviewer: Nick Moore - CH2M HILL

Knowledge of Current Property Use: Mr. Croft was not familiar with the current property use.

Knowledge of Historical Property Uses: Mr. Croft had no knowledge of the historical use of the Property.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Property: Mr. Croft searched his database under "Sloan" and found 7 sites under this search. None of the 7 were located on the Property.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Adjacent Properties: Mr. Croft's search revealed that 5 of the 7 "hits" in the database were related to diesel spills on the interstate near the project area. The other two hits were associated with the Chemstar Lime Company and the Sloan Transfer Station. The Chemstar Lime Company hit was associated with bunker oil and diesel and was closed March 18, 1999. The Sloan Transfer Station hit was associated with diesel and was closed March 11, 2005.

Knowledge of any Environmental Liens, Land use Restrictions, or Engineering Controls on Property: Mr. Croft had no knowledge of Environmental Liens, Land Use Restrictions, or Engineering Controls associated with the Property.

Additional Information Pertaining to Environmental Condition of Property: Mr. Croft had no information pertaining to the Environmental Condition of the Property.

Interview Record

Project: **US Army Reserve**
Proposed Military Construction Project
Site: Sloan, Nevada

Interview Date: January 28, 2009

Person Interviewed: Mr. Charles Vanderpool – in person
Title: Site Supervisor
Organization: Republic Crane

Interviewer: Thomas Hutchinson - CH2M HILL

Knowledge of Current Property Use: The Property is located adjacent to the north of the Republic Crane site. Mr. Vanderpool indicated he has worked at the storage yard for approximately 2 years - from the time Republic Crane began crane tower storage at the site.

Knowledge of Historical Property Uses: Mr. Vanderpool indicated there were no storage tanks or drums of hazardous materials on the Republic Crane site.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Property: Mr. Vanderpool indicated that he had never observed any dumping or disposal of hazardous materials on the Property.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Adjacent Properties: Mr. Vanderpool indicated he had never observed any dumping or disposal of hazardous materials on the adjacent properties.

Knowledge of any Environmental Liens, Land use Restrictions, or Engineering Controls on Property: Mr. Vanderpool had no knowledge of Environmental Liens, Land Use Restrictions, or Engineering Controls associated with the Property.

Additional Information Pertaining to Environmental Condition of Property: Mr. Vanderpool had no information pertaining to the Environmental Condition of the Property.

Interview Record

Project: **US Army Reserve**
Proposed Military Construction Project
Site: Sloan, Nevada

Interview Date: February 13, 2009

Person Interviewed: Ms. Lynn Cintron – via telephone
Title: Senior Administrative Assisstant
Organization: Southern Nevada Department of Environmental Health

Interviewer: Nick Moore - CH2M HILL

Knowledge of Current Property Use: Ms. Cintron was not familiar with the Property.

Knowledge of Historical Property Uses: Ms. Cintron had no knowledge of the historical use of the Property.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Property: Ms. Cintron searched her database and there were no records of underground storage tanks (UST) on the Property.

Knowledge of Storage, Disposal, or Use of Hazardous Materials on Adjacent Properties: Ms. Cintron conducted a database search for the entire Sloan, NV area. The only hit in her database search was associated with Chemline Quarry, located west of the Property. Chemline Quarry was shown as having 4 UST, which were listed as "permanently out of use". Two dates were associated with deactivation of the tanks, 1986 and 1990. Ms. Cintron was unaware whether the tanks were removed or closed in place.

Knowledge of any Environmental Liens, Land use Restrictions, or Engineering Controls on Property: Ms. Cintron had no knowledge of Environmental Liens, Land Use Restrictions, or Engineering Controls associated with the Property.

Additional Information Pertaining to Environmental Condition of Property: Ms. Cintron had no information pertaining to the Environmental Condition of the Property.

Appendix G

Supporting Documentation

WELL LOGS

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

OFFICE USE ONLY
Log No. 79303
Permit No. 65484
Basin 212

NOTICE OF INTENT NO. 19486

1. OWNER Republic Silver State Disposal
MAILING ADDRESS 770 E. Sahara Ave
LV Nev 89104

ADDRESS AT WELL LOCATION
~~4455 Sloan Av LV Nev~~
4455 N. SLOAN

2. LOCATION NE ¼ SW ¼ Sec. 19 T. 23 N/S R. 61 E. Clark County
PERMIT NO. 65484 Issued by Water Resources
191-19-301-~~004-009~~ 2 013 Parcel No.
Subdivision Name

3. WORK PERFORMED
☒ New Well ☐ Replace ☐ Recondition
☐ Deepen ☐ Abandon ☐ Other

4. PROPOSED USE
☐ Domestic ☐ Irrigation ☐ Test
☒ Municipal/Industrial ☐ Monitor ☐ Stock

5. WELL TYPE
☐ Cable ☐ Rotary ☐ RVC
☒ Air ☐ Other

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Gravel		0	15	
Cemented Gravel		15	175	
Volcanic Rock		175	515	
Sandstone		515	620	
Lime stone & Water	xx	620	625	
Reddish Lime stone		625	665	
Limestone & Water	xx	665	670	
Hard Limestone		670	795	
Limestone & Water	xx	795	805	
Hard Limestone		805	920	
Limestone & Water	xx	920	930	
Hard limestone		930	988	

APR 14 2000

Date started 2/17/2000, 19
Date completed 3/30/2000, 19

7. WELL TEST DATA
TEST METHOD: ☐ Bailer ☐ Pump ☐ Air Lift

G.P.M.	Draw Down (Feet Below Static)	Time (Hours)

8. WELL CONSTRUCTION
Depth Drilled 988 Feet Depth Cased 988 Feet

HOLE DIAMETER (BIT SIZE)

		From	To
12 1/4 Inches		0 Feet	55 Feet
10 5/8 Inches		55 Feet	988 Feet
Inches		Feet	Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
8 5/8	16.94	.188	+2	988

Perforations:
Type perforation Factory
Size perforation 3/16 x 8 row
From 926 feet to 968 feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

Surface Seal: ☒ Yes ☐ No
Depth of Seal 55
Placement Method: ☐ Pumped ☒ Poured
Seal Type: ☐ Neat Cement ☐ Cement Grout ☒ Concrete Grout

Gravel Packed: ☐ Yes ☒ No
From feet to feet

9. WATER LEVEL
Static water level 560 feet below land surface
Artesian flow G.P.M. P.S.I.
Water temperature warm °F Quality

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name Vernon H. Dimick (Contractor)
Address 5360 Bonita Vista (Contractor)
Las Vegas Nev
Nevada contractor's license number issued by the State Contractor's Board 10062
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 552
Signed V H Dimick (By driller performing actual drilling on site or contractor)
Date 3-31-2000

(Rev. 3-91)

USE ADDITIONAL SHEETS IF NECESSARY

(O)-627

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLERS REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 20147
Permit No. 35475
Basin [redacted]

1. OWNER Ray Roark ADDRESS 1401 S Maryland Parkway, lv

2. LOCATION SE ¼ NW ¼ Sec. 19 T. 23S N/S R. 61 E. Clark County
PERMIT NO. 35475

3. TYPE OF WORK
New Well ☒ Recondition ☐
Deepen ☐ Other ☐

4. PROPOSED USE
Domestic ☐ Irrigation ☐ Test ☐
Municipal ☒ Industrial ☐ Stock ☐

5. TYPE WELL
Cable ☐ Rotary ☐
Other ☐ Air

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Gravel & Sand		0	75	
Volcanic Gravel		75	285	
Hard Limestone		285	355	
Pinkish Limestone		355	375	
Greyish Limestone (hard)		375	505	
White Limestone		505	610	
Limestone & Water(very little)		610	670	
Grey Limestone (hard)		670	770	
Grey Limestone 2nd Water		770	880	(not much)
Grey Limestone		880	980	
Limestone & Water		980	1015	

RECEIVED
JUL 17 1979
Div. of Water Resources
Engr. Office - Las Vegas, Nev.

Date started July 4, 19 79
Date completed July 11, 19 79

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION
Diameter hole 12¼ inches Total depth 1015 feet
Casing record
Weight per foot ..... Thickness 10ga

Diameter	From	To
8 5/8 inches	+1 feet	55 feet
6 5/8 inches	+1 feet	1015 feet
inches	feet	feet
inches	feet	feet
inches	feet	feet
inches	feet	feet

Surface seal: Yes ☒ No ☐ Type Cement
Depth of seal 55 feet
Gravel packed: Yes ☐ No ☒
Gravel packed from ..... feet to ..... feet

Perforations:
Type perforation Torch
Size perforation ¼ X 18"
From 800 feet to 1000 feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet

9. WATER LEVEL
Static water level 490' Feet below land surface
Flow ..... G.P.M.
Water temperature ..... ° F. Quality

10. DRILLERS CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.

Name Vernon H. Dimick
Address 4375 N. Tioga, L.V.
Nevada contractor's license number 10062
Nevada driller's license number 552
Signed
Date July 18, 1979

USE ADDITIONAL SHEETS IF NECESSARY

WHITE - DIVISION OF WATER RESOURCES
CANARY - CLIENT'S COPY
PINK - WELL DRILLER'S COPY

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

STATE OF NEVADA
DIVISION OF WATER RESOURCES
WELL DRILLER'S REPORT

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

OFFICE USE ONLY
Log No. 896664
Permit No. 68889
Basin 212

NOTICE OF INTENT NO. 23847

OWNER SERVICE ROCK PRODUCTS
MAILING ADDRESS

ADDRESS AT WELL LOCATION ARVILLE RD
SLONE NEVADA

2. LOCATION SE 1/4 SW 1/4 Sec. 19 T 23S N/S R 61E E CLARK County
PERMIT NO. 68889 (Issued by Water Resources) ~~3119401002~~ 191-19-401-002 (Parcel No.) Subdivision Name

3. WORK PERFORMED
[X] New Well [ ] Replace [ ] Recondition
[ ] Deepen [ ] Abandon [ ] Other

4. PROPOSED USE
[ ] Domestic [ ] Irrigation [ ] Test
[X] Municipal/Industrial [ ] Monitor [ ] Stock

5. WELL TYPE
[ ] Cable [X] Rotary [ ] RVC
[ ] Air [ ] Other

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
GRAVEL AND SAND		0	300	300
RED VOLCANIC		300	450	150
FRACTURED ROCK		450	570	120
FRACTURED ROCK	WB	570	610	40
FRACTURED ROCK		610	950	340
FRACTURED ROCK	WB	950	1060	110

DCNR/DWR
RECEIVED
JUN 11 2003
LAS VEGAS OFFICE

Date started 4/28/2003, 19__
Date completed 5/23/2003, 19__

7. WELL TEST DATA
TEST METHOD: [ ] Bailer [ ] Pump [ ] Air Lift

G.P.M.	Draw Down (Feet Below Static)	Time (Hours)

8. WELL CONSTRUCTION
Depth Drilled 1060 Feet Depth Cased 1060 Feet

HOLE DIAMETER (BIT SIZE)

		From		To	
12.25	Inches	0	Feet	1000	Feet
9.875	Inches	1000	Feet	1060	Feet
	Inches		Feet		Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
8.625	16.94	.188	0	1005
6.625	12.92	.188	1005	1060

Perforations:
Type perforation FACTORY SAWCUT
Size perforation 1/8 X 3
From 900 feet to 1060 feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

Surface Seal: [X] Yes [ ] No
Depth of Seal 50
Placement Method: [ ] Pumped [X] Poured
Seal Type: [ ] Neat Cement [ ] Cement Grout [X] Concrete Grout

Gravel Packed: [X] Yes [ ] No
From 50 feet to 1060 feet

9. WATER LEVEL
Static water level 571 feet below land surface
Artesian flow G.P.M. P.S.I.
Water temperature °F Quality

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.

Name GREAT BASIN DRILLING CO. OF NEVADA, INC. (Contractor)
Address P.O. BOX 4220 (Contractor)
PAHRUMP,NV. 89048
Nevada contractor's license number issued by the State Contractor's Board 47333
Nevada driller's license number issued by the Division of Water Resources, the on-site driller 1642
Signed Thomas Du (By driller performing actual drilling on-site or contractor)
Date 5/30/03

USE ADDITIONAL SHEETS IF NECESSARY

WHITE—DIVISION OF WATER RESOURCES
CANARY—CLIENT'S COPY
PINK—WELL DRILLER'S COPY

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLERS REPORT

Please complete this form in its entirety

OFFICE USE ONLY
Log No. 28142
Permit No.
Basin

PRINT OR TYPE ONLY

NOTICE OF INTENT NO. 4315

1. OWNER William J. Dpauden
MAILING ADDRESS 5297 Edna Ave
Las Vegas NV

ADDRESS AT WELL LOCATION

2. LOCATION NW ¼ NW ¼ Sec. 19 T. 23 N OR 61 E Clark County
PERMIT NO. 54641 (Issued by Water Resources) Parcel No. Subdivision Name

3. TYPE OF WORK
New Well ☒ Recondition ☐
Deepen ☐ Other ☐

4. PROPOSED USE
Domestic ☒ Irrigation ☐ Test ☐
Municipal ☐ Industrial ☐ Stock ☐

5. TYPE WELL
Cable ☐ Rotary ☒
Other ☐

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Sandy Clay + Boulders		0	5	5
Brown Volcanics		5	130	125
Clay, Gravel + Boulders		130	270	140
Clay Limestone	520	270	560	290
Cemented gravel		560	620	60

RECEIVED
MAR 1 1 1987
Div. of Water Resources
Branch Office - Las Vegas, NV

Date started 12-30, 1986
Date completed 1-12, 1987

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump

BAILER TEST
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours
G.P.M. ..... Draw down ..... feet ..... hours

8. WELL CONSTRUCTION
Diameter hole 8 5/8 inches Total depth 620 feet
Casing record
Weight per foot ..... Thickness 156

Diameter	From	To
8 inches	0 feet	35 feet
6 inches	35 feet	595 feet
inches	feet	feet
inches	feet	feet
inches	feet	feet
inches	feet	feet

Surface seal: Yes ☒ No. ☐ Type
Depth of seal 55' feet
Gravel packed: Yes ☐ No ☒
Gravel packed from ..... feet to ..... feet

Perforations:
Type perforation Torch
Size perforation 1/8" x 6"
From 535 feet to 595 feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet
From ..... feet to ..... feet

9. WATER LEVEL
Static water level 490 feet below land surface
20 G.P.M. ..... P.S.I.
Water temperature Cool F. Quality Good

10. DRILLERS CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
Name J & M Well Service (Contractor)
Address 236 Mesa Verde Sp. (Contractor)
Nevada contractor's license number 020295
Nevada contractor's drillers number
Nevada driller's license number 1478
Signed Merrill Robbins (Actual Driller) (Contractor)
Date 1-28-87

USE ADDITIONAL SHEETS IF NECESSARY

(Rev. 6-81) O-627 CR434

Appendix H

Qualifications of the Environmental Professional(s)

Thomas M Hutchinson
Project Manager

Education

B.S., Forensic Chemistry, Michigan State University, 1989

Professional Registrations

Certified Hazardous Materials Manager

Distinguishing Qualifications

- Project Manager with 18 years experience in environmental consulting specializing in Hydrogeological Investigations
- Extensive knowledge pertaining to Michigan's Natural Resources and Environmental Protection Act including Part 201 (Environmental Remediation)
- Prepared, received approval, and implemented Remedial Action Plans in accordance with Part 201.
- Extensive interaction with MDEQ personnel while successfully closing sites under Part 201 for government agencies and private clients.
- Served on Base Realignment and Closure Team for Wurtsmith Air Force Base with MDEQ's Remediation and Redevelopment Division Assistant Division Chief and Formerly Used Defense Sites and
- Participated in Part 201 Discussion Group with Michigan Department of Environmental Quality, Private Corporations, Environmental Consulting Firms and the Public

Relevant Experience

Mr. Hutchinson has over 18 years of experience in the environmental field including performing, implementing and managing hydrogeologic and remedial investigations in accordance with the National Resource and Environmental Protection Act, Michigan Public Act 451, Parts 201 and 213; conducting Phase I and II Environmental Site Assessments, Baseline Environmental Assessments, Due Care Plans, and Section 7a Compliance Analyses; conducting corridor studies and environmental assessments as part of National Environmental Policy Act projects, as well as conducting building materials surveys as an Accredited Asbestos Inspector.

Representative Projects

Project Manager, Site Investigations, United States Army Corps of Engineers. Managed overall project activities associated with conducting site inspections at 27 Formerly Used Defense Sites located throughout Michigan. Management activities included: primary contact with United States Army Corps of Engineers Project manager and regulatory agency (Michigan Department of Environmental Quality); coordinating site activities with client, regulatory agency, and field staff; preparation and review of work plans and site investigation reports; budget and schedule management; and strategic project planning. Project has resulted MDEQ formal approval of No further Action at eight sites to date.

Project Manager, Preliminary Assessments, United States Army Corp of Engineers. Managed overall project activities associated with conducting Preliminary Assessments at two Formerly Used Defense Sites located in Michigan and one Formerly Used Defense Site in Illinois. Management activities included: primary contact with United States Army Corps of Engineers Project manager; coordinating research activities with project staff; preparation and review of Preliminary Assessment reports; budget and schedule management; and strategic project planning.

Project Manager, Site Activities, Union Pacific Railroad. Manage daily activities associated with site including; implementation of remedial alternatives, site investigations, subcontractor and staff schedule, budget tracking, work plan development, permit application preparation, coordination of national contingency plan compliance (public meetings), and document review.

Task Manager, PCB impacted Soil Removal, Michigan State University. Provided contractor and field staff oversight during PCB impacted soil removal activities. Coordinated verification sampling activities with field staff and laboratory. Maintained daily correspondence with MSU staff regarding daily field activities, and provided review for Construction Summary Report.

Task Manager, Remedial Investigation Activities, Dow Chemical. Manage daily activities associated with remedial investigation activities including preparation of remedial investigation work plan for cone penetrometer study, field staff and subcontractor scheduling, and document review.

Experience Prior to CH2M HILL

Project Manager, Site Investigation/Remedial Action Plan Implementation, Former Alma Sugar Beet Company. Managed hydrogeological investigations and preparation and implementation of approved Remedial Action Plan. Primary contact with Michigan Department of Environmental Quality Project Manager during site investigations and comment resolution during Remedial Action Plan approval process.

Project Manager, Site Investigation/Interim Response Designed to Meet Criteria Implementation, State Prison of Southern Michigan. Managed hydrogeological investigations, contractor operation and maintenance oversight and preparation of Interim Measure Designed to Meet Criteria. Primary contact with Michigan Department of Environmental Quality Project Manager during site investigations and State of Michigan Department of Management and Budget personnel.

Project Manager, Kalamazoo Tank and Silo, City of Kalamazoo. Responsible for overseeing all aspects of the project. This site was a light industrial property approximately nine acres in size that had been acquired by the City of Kalamazoo as part of the City's Riverfront Redevelopment Project. Nine structures were located on the site. The project involved conducting a Phase I and II Environmental Site Assessment, preparing a Baseline Environmental Assessment and Due Care Plan, conducting a building materials survey, preparing demolition specifications, providing full time demolition oversight of all existing structures, and site restoration. The project was funded by a grant from the Clean Michigan Initiative program; therefore, all aspects of the project were coordinated with the Michigan Department of Environmental Quality (MDEQ).

Project Manager (Environmental), Airport Expansion, Jackson County. The overall project was managed by DLZ's Planning Department and includes conducting an Environmental Assessment in accordance with the National Environmental Policy Act

(NEPA). The project included expanding the existing runways, a portion of which will be located over an old municipal landfill. As part of the NEPA Environmental Assessment, Phase I and II Environmental Site Assessments were performed. As Project Manager, was responsible for preparing the Phase I and II Environmental Site Assessment Work Plans, overseeing all environmental aspects of the project, as well as attending meetings with Jackson County Airport, MDEQ, Michigan Department of Transportation, and the Federal Aviation Administration.

Assistant Project Manager, Consulting Services, Wurtsmith Air Force Base. DLZ provided consulting services to the MDEQ, which included, overseeing investigation and remedial activities being conducted by the United States (U.S.) Air Force at the base. As Assistant Project Manager, was responsible for reviewing remedial investigation work plans, remedial action plans and other documents submitted by the U.S. Air Force to the MDEQ. Also provided oversight for the MDEQ of the Air Force's consultants during site investigation activities and attended monthly meetings with the MDEQ, U.S. Air Force and their consultants, the U.S. EPA, and local government officials.

Assistant Project Manager, Hotel Demolition, Statler Hilton Hotel, Detroit, Michigan. For this demolition project of an 18-story building, responsible for reviewing demolition specifications, pay requests, contractor submittals, providing contractor oversight, attending progress meetings, and verifying proper asbestos abatement prior to demolition.

Project Manager, Operation and Maintenance Oversight, Americhem Plant. This site was a large chemical production, storage and transfer facility. DLZ operated and maintained a free product recovery system under the State of Michigan's Level of Effort Program. As Project Manager, served as the primary contact with the MDEQ and responsible for overseeing the operation and maintenance of the remedial system, coordinating pickup and disposal of recovered hazardous wastes, and preparation of monthly and yearly progress reports as required by the MDEQ.

Project Manager, Landfill Residential Groundwater Sampling Program, Metamora Landfill. The site was a residential area located down gradient of the Metamora Landfill, State Hazardous Waste Site. DLZ conducted periodic sampling of residential drinking water wells located down gradient of the Metamora Landfill site under the State of Michigan's, Level of Effort Program. Served as primary contact with the MDEQ and was responsible for overseeing all aspects of the project including: coordinating sampling events with residential property owners and preparation of reports detailing the findings of the sampling events as required by the MDEQ.

Professional Organizations / Affiliations

Michigan Association of Environmental Professionals

Professional Development

Certified Hazardous Materials Manager Training Course, Indianapolis, Indiana, January 2004

Asbestos Hazardous Emergency Response Act Certified Asbestos Training, Lansing, Michigan, December 2003

OSHA – Asbestos Worker Training Course, Lansing, Michigan, April 2002 and yearly refresher courses

OSHA – Lead in Construction Training Course, Lansing, Michigan, April 2002 and yearly refresher courses

OSHA 40-hour Hazwoper Training, Findley, Ohio, April 1990 and yearly refresher courses

Supplemental Information

Years Experience Previous to CH2M HILL: 15 years

CH2M HILL Hire Date: 6/15/05