



VISUAL ASSESSMENT REPORT

RWF 43-9 Well Pad & Access Road

Garfield County, CO

May 2020

Prepared for Submission to:

Bureau of Land Management
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Visual Resources

This report discusses the visual resources including the potential effects that may result from implementation of the Proposed RWF 43-9 pad, located near West Rifle in central Garfield County, north of Interstate 70. Visual resources include both objects (natural and man-made) and features (landforms and water bodies) observable on a landscape; the combination of these resources is examined and ranked to determine visual quality. Visual impacts can be either positive or negative based on a number of contributing factors or conditions.

Regulatory Framework

Bureau of Land Management (BLM)

Visual Resource Management System

Visual resources on BLM lands are managed by the Visual Resource Management (VRM) system, a framework with the stated objective of managing public lands in a manner that protects the quality of the scenic values of the lands (BLM 1986). The VRM system is a methodical framework for 1) inventorying and 2) managing visual resources on public lands pursuant with Section 102(a)(8) of the Federal Land Policy and Management Act of 1976 (FLPMA). The complete policy direction for the BLM's VRM is provided in the BLM's Manual 8400, Visual Resource Management.

Visual Resource Inventory

The objective of the VRM system is achieved by first establishing visual values of all BLM administered public lands, as outlined in BLM's Manual H-8410-1, Visual Resource Inventory (VRI). The VRI is a means for assessing visual values within a landscape based on three primary factors; 1) delineation of defined distance zones, 2) scenic quality evaluations, and 3) sensitivity level analyses. The combination of these three factors dictate placement of the public lands into one of four VRI Classes.

Visual Resource Management Classes

VRM classes are established through the BLM's Resource Management Plan (RMP) process and must reflect the value of the visual resources (BLM 1986). The objective of VRM is to minimize the visual impacts of surface-disturbing activities and must reflect the value of visual resources.

Visual Resource Classes

Visual Resource Classes utilize 1) visual resource inventory classes to portray the relative value of the assessed visual resources and 2) visual resource management classes to dictate management direction of visual resources on public lands. The four Visual Resource Classes and their management objectives include:

- **Class I:** The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

- **Class II:** The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- **Class III:** The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- **Class IV:** The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Visual Resource Contrast Rating

Visual resource impacts are analyzed in accordance with the guidelines set forth in BLM's Manual 8431, Visual Resource Contrast Rating. The manual requires potential visual resource impacts to be analyzed from critical viewpoints, or key observation points (KOP's), near and surrounding proposed project sites. The KOP's are generally sited along travel routes and observation points that typically receive higher traffic. Factors used to consider selection of KOP's include angle of observation, length of time project can be observed, amount and frequency of viewers, season and light conditions. The contrast rating is a systematic method for analyzing the potential for visual impacts based on implementation of a proposed project and associated activities. Contrast is evaluated by first identifying the major elements of the landscape (e.g., landforms, vegetation types and patterns, water bodies, man-made features, etc.) and second by evaluating the amount of contrast that may occur from project implementation concerning forms, lines, colors and textures.

Interstate 70 Viewshed Stipulation

The BLM's Colorado River Valley Field Office (CRVFO) has a No Surface Occupancy (NSO) stipulation in place to protect approximately 9,780 acres of VRM Class II lands that precludes ground-disturbing activities on slopes greater than 30%. The affected lands are within five miles north of the Interstate 70 corridor with moderate to high visual exposure, where details of vegetation and landform are readily discernible, and changes in contrast can be easily noticed by the casual observer on Interstate 70. The stipulation states that a ground-disturbing activity may be permitted if the BLM determines that the requested activity would not impair values associated with VRM Class II objectives or degrade the visual characteristics of the viewshed below Class II standards. Should the ground-disturbing activity be permitted, the proponent must collect monitoring data prior to, during, and subsequent to the proposed activity using widely accepted scientific methods as approved by and reported to the BLM not less than annually. If the unanticipated types or levels of adverse effects are noted during monitoring, the BLM must be promptly notified, and corrective measures, as approved by the BLM, will be identified and implemented by the proponent.

Affected Environment

Visual Character and Scenic Quality

Garfield County

Garfield County sits on the western slope of Colorado, encompassing nearly 3,000 square miles of diverse terrain reaching from Eagle County on its eastern border to the State of Utah on its western edge. The varied landscape includes mountain peaks, rugged and dramatic canyons, steep and eroded plateaus and mesas, high desert terrain and fertile river valleys. The Colorado River enters Garfield County on its eastern border and parallels the I-70 corridor through the eastern half of the county, supporting ranch and agricultural operations along its banks and creating the dramatic Glenwood Canyon that begins at the County's eastern border. The eastern portion of the County includes Flat Top Peak within the Flat Tops Wilderness, the highest point of elevation in the County at 12,361 feet. Elevations drop precipitously from the Flat Tops towards Glenwood Canyon and the Colorado River and continue to decrease to approximately 4,900 feet as the terrain stretches west towards Utah. The scenic quality of the County epitomizes the history and natural beauty of the Western Slope of Colorado. Visual resources inherent to Garfield County include mountains, canyons, mesas, plateaus, water bodies, expansive forests, agricultural fields and high desert environments.

Sagebrush, saltbush and pinyon-juniper are the dominant vegetation communities at lower elevations across a terrain of rough and erodible soils, typical of high desert environments. In the upper elevations, the arid landscape transitions to more mesic mixed-mountain shrub communities and mature aspen and mixed-conifer forests. Likewise, the Colorado River and its tributaries create fertile valley bottoms that support large cottonwood and willow stands. Ongoing ranch and agricultural operations depend on this critical water source, creating lush agricultural fields that stand in stark contrast to the surrounding high desert landscape.

The diverse terrain, unique geology and scenic vistas of Garfield County are abundant and visible in all directions. The flattened peaks of the appropriately named Flat Tops Mountains are visible as visitors approach the county from the east in Eagle County, and provide a striking backdrop over Glenwood Springs as observers travel east along I-70. Glenwood Canyon provides a dramatic welcome to visitors entering from the County's eastern side, extending nearly 13 miles with steep and rugged walls climbing over 1,300 feet above the Colorado River. The fortress-like walls and deep canyons of the Roan Plateau loom directly to the north above the I-70 corridor rising over 2,000 feet from the valley floor. Further west along the Utah border, the impressive Book Cliffs abruptly climb nearly 2,000 feet out of the Grand Valley. Other protected areas include the Grand Mesa, Routt and White River National Forests, as well as Harvey Gap, Rifle Gap and Rifle Falls State Parks.

Glenwood Springs is the County seat and largest municipality in Garfield County. The city lies at the western mouth of Glenwood Canyon at the confluence of the Colorado and Roaring Fork Rivers and is home to approximately 10,000 residents. The economies of the eastern portion of the Garfield County, including Glenwood Springs, are primarily centered on hospitality and tourism-based operations, catering to the tourists that flock to the nearby mountain resorts in the Eagle and Roaring Fork Valleys. By contrast, the oil and gas industry is a major contributor to local economies west of Glenwood Springs; production activities are readily apparent across much of the landscape, particularly along the Interstate

70 corridor, due to a strong presence of active field operations, gas well pads and pipeline routes that traverse the surrounding landscape.

Proposed Action and Scope of Analysis

The Proposed Action involves developing a well pad site and access road northwest of the West Rifle interchange along I-70. The proposed road and pad site are located on BLM lands and occur almost entirely within a VRM Class II designated area, excluding the lower portion of the proposed access road, or which approximately 300 feet occur within a VRM Class IV designated area. The BLM conducted on-site visits to assess potential visibility of the proposed project components from the Town of Rifle, along the I-70 corridor, as well as along County Road 320 that parallels the I-70 corridor to the south. Based on this assessment, it was determined that the proposed project has the potential for impacting scenic resources, albeit minimally, due to foreground screening and the amount of distance from potential observation locations and the proposed project site. The scope of this report examines the proposed pad site, access road and associated operating equipment (e.g., wellheads, tanks, meter houses, separators, etc.) described in the Proposed Action.

RWF 43-9 Project Area

The project area is situated approximately five miles west of the Town of Rifle, north of Interstate 70 at the West Rifle interchange. The proposed site is elevated on the western slope of an unnamed drainage oriented approximately north to south, having a Class II designation. In addition, portions of the project site occur within the Interstate 70 viewshed stipulation area.

The project site is accessed via a network of unnamed gravel roads that originate from Highway 6 immediately north of the West Rifle interchange. The proposed road begins at the existing RWF 513-10 pad site at an elevation of approximately 5,870 feet. The road meanders up the western slope of the unnamed drainage for approximately 1.2 miles before arriving at the proposed pad site that lies on a naturally occurring bench at an elevation of 6,368 feet. Viewsheds from elevated areas of the project site are expansive and open looking south and east, while nearly fully constrained looking north and west.

A VRI of the Roan Plateau was completed by BLM in 2014 and included an inventory of the lands where the RWF 43-9 project site occurs; the resulting VRM Classes were subsequently used in the approved 2015 Colorado River Valley Field Office (CRVFO) RMP to manage visual resources. The proposed project area is located almost entirely within the VRM Class II Rim-Anvil Points Road Scenic Quality Rating Unit (SQRU), while approximately 300 feet of the lower proposed road occur within another SQRU to the south having a VRM Class IV designation. In addition, portions of the proposed project area intersect the Interstate 70 viewshed stipulation area. The scope of this report focuses on potential impacts to scenic resources within the Rim-Anvil Points Road SQRU Class II designated areas. VRM Classes, the Interstate 70 viewshed stipulation area and the proposed project site are displayed in Figure 1-1.

The three components of the VRI for Rim-Anvil Points Road SQRU are documented as follows:

Scenic Quality Evaluation

Landforms, vegetation, water, color, adjacent scenery and cultural modifications were all reviewed, described and rated in accordance with the VRI. The Rim-Anvil Points Road SQRU received a Scenic Quality Rating of B, indicating a moderate scenic value.

Sensitivity Level Analysis

The Sensitivity Levels for the Rim-Anvil Points Road was rated as high.

Delineation of Distance Zones

The Rim-Anvil Points Road SQRU is located in the foreground-middleground distance zone, indicating visibility from a travel route, use area, or observation point to distances up to five miles.

Based on the scenic quality evaluation, sensitivity level analysis, and delineation of distance zones, the Rim-Anvil Points Road SQRU was rated as VRM Class II.

Analyzed Project Sites: Existing Conditions

The proposed RWF 43-9 pad site is located at an elevated position on the western slope of the unnamed drainage on a naturally occurring bench feature at 6,368 feet. The pad site sits at the end of the drainage area near the steep southern face of the ridge. The unnamed drainage generally runs along a north to south orientation. The terrain in the drainage is rough and rugged with narrow valley bottoms containing deeply incised intermittent stream channels. The western slope of the drainage is heavily vegetated while the eastern slope shows only sparse vegetation. Vegetation on the western slope is primarily comprised of mature pinyon-juniper stands, having moderate densities on southern aspects with increased densities on northern aspects; small parks of sagebrush occur sporadically on the western slope where shallower slopes exist. The southern face of the western ridge is entirely devoid of vegetation.

Visibility

Views on to the proposed project site are possible from the surrounding landscape and travelers along I-70, county road 320 south of I-70, as well as from the Town of Rifle. The visibility of the project site varies considerably based on the observer location, direction of travel and foreground screening. For example, observers traveling east along I-70 have minimal opportunity for noticing the proposed project site.

Key Observation Points

The selected KOPs represent locations where local traffic occurs with a potential for visual impacts from the proposed project site in the middleground (i.e. one to five miles from the proposed project site) and background distance zones (i.e. greater than five miles from the proposed project site). Five KOPs were selected for analysis from an initial set of many potential locations that best represent the diversity of viewpoints that are likely to be affected by the proposed action; the following list describes the location of the selected KOPs as shown in Figure 1-1:

KOP #1 – Located in the northern area of the Town of Rifle on the elevated ridge running north to south just east of Railroad Avenue. The observer is standing at the intersection of 16th Street and Rifle Heights Drive, approximately 5.5 miles from the proposed project site.

KOP #2 – Located in the central area of the Town of Rifle on the elevated ridge running north to south just east of Railroad Avenue. The observer is standing at the intersection of East 7th Street and McCarron Court, approximately 5.5 miles from the proposed project site.

KOP #3 - Located in the western portion of the Town of Rifle. The observer is standing along Prefontaine Avenue in front of the Rifle High School, approximately 4.5 miles from the proposed project site.

KOP #4 - Located in southern portion of the town of Rifle south of I-70. The observer is standing on a sharp corner of the Rifle-Rulison Road (county road 320) near the intersection with Ramsey Gulch Road. approximately 5.5 miles from the proposed project site.

KOP #5 - Located in West Rifle. The observer is standing on the shoulder of the west-bound West Rifle interchange along I-70 approximately 2.5 miles from the proposed project site.

Environmental Consequences

This section identifies potential impacts to visual resources on BLM lands within the project area. Quantifying impacts to visual resources is inherently subjective and relative to the observer analyzing the potential for visual impacts; the concept of what is, or is not, aesthetically pleasing or appropriate will vary from person to person. Site visits were conducted at each identified KOP on April 14th 2019 to study the existing landscape surrounding the proposed project site and examine existing scenic resources to understand potential visual impacts that may arise from project implementation. Photographs looking at the proposed project sites were collected from each KOP to document the existing visual character; subsequently, photo simulations were performed to depict potential long-term visual impacts.

Methodology

Visual resource impacts are analyzed and assessed by comparing the Proposed Action to the assigned Visual Resource Class of the project area. Impacts are defined in terms of context and intensity. Context means that the significance of an action must be analyzed in several frameworks such as society as a whole (human, national), the affected region, the affected interests, and the locality. Intensity refers to the severity of impact and includes numerous factors considered for evaluation, including the unique characteristics of the geographic area, the degree of controversy, the degree of uncertainty, the degree to which the action may establish a precedent for future actions, and the degree to which the action may contribute to significant cumulative effects (40 CFR §1508.27).

This impact analysis primarily addresses potential changes to scenic quality that may result in changes to the current VRI classification. Sensitivity levels within the project area are expected to remain high and are therefore excluded from this analysis. Furthermore, this analysis does not consider changes to distance zones as the project area is entirely within the foreground-middleground distance zone and the activities associated with the Proposed Action are not anticipated to change these delineations.

Visual Simulations

This analysis employed photographic simulations of the Proposed Action to assess potential impacts to scenic quality. Photographic simulations are a highly effective tool for assessing potential impacts to visual resources as they provide a means to directly compare the existing character of a site to conditions that will result from implementation of a proposed action.

The process for developing the photographic simulations is:

1. The proposed project sites are photographed with a 50-mm lens to best match the human visual perception. Photographs are taken from each defined KOP location looking at the proposed project sites during optimal field conditions with clear weather to provide the best clarity of the scene.
2. A Digital Elevation Model (DEM) of the terrain surrounding the proposed project sites is developed from a site-specific survey using two-foot contours in a GIS (ArcGIS 10.4). The DEM incorporates all proposed grading activities associated with project implementation, including cut/fill resulting from pad and road construction as well as berms surrounding the construction site.
3. 3D model objects of proposed surface equipment, including wellheads, water tanks, separators and meter houses are constructed to scale in 3D programs (SketchUp, Eon Vue Infinite).
4. The proposed DEM and 3D model objects are imported into a 3D program (Eon Vue Infinite) and assembled according to detailed site plans (provided by the operator) to construct the proposed modeled scene. The camera(s) for the scene are located using the coordinates obtained for each identified KOP and set to a height to approximate a human observer. Vegetation on the proposed sites and the immediate surrounding terrain are mapped and subsequently placed within the modeled scene to accurately represent vegetation conditions resulting from project implementation. The final scene is rendered to produce a photographic-quality image demonstrating implementation of the proposed action.
5. The rendered image is merged with the existing site photo in a digital photo editing program (Adobe Photoshop). The rendered image is scaled and aligned by matching landforms and objects in the modeled scene to those in the existing condition photo. Areas beyond the limits of the proposed action are erased from the rendered scene to reveal the existing condition photo underneath. Color, brightness and contrast of the rendered scene are manually adjusted to be consistent with the existing conditions scene.

All modeled simulations include the following features and components as depicted in detailed site plans provided from the operator:

1. Re-contoured terrain reflecting proposed grading activities necessary for well pad surface implementation and accommodation of necessary operational equipment.
2. Proposed access roads with associated grading.
3. Equipment necessary for well pad operations and resource extraction, including wellheads, water tanks, meter houses and separators.
4. Post-construction mitigation strategy of scattering cleared pinyon-juniper across cut and fill faces of proposed well pad sites.

Visual Contrast Rating

Impacts in this analysis are assessed in accordance with the guidelines set forth in BLM's Manual 8431. For each KOP, a Visual Contrast Rating Worksheet was completed to rate the degree of contrast to the elements of form, line, color and texture. The degree of contrast are rated as either none, weak, moderate or strong.

The four key elements are described as follows:

Form – Contrast in form results from changes in the shape and mass of landforms or structures. The degree of change depends on how dissimilar the introduced forms are to those continuing to exist in the landscape.

Line – Contrasts in line results from changes in the edge types and interruptions or introduction of edges, bands and silhouette lines. New lines may differ in their sub-elements (boldness, complexity, and orientation) from existing lines.

Color – Changes in value and hue tend to create the greatest contrast. Other factors such as chroma, reflectivity, and color temperature, also increase contrast.

Texture – Noticeable contrast in texture usually stems from differences in the grain, density, and internal contrast. Other factors such as irregularity and directional patterns of texture may affect the rating.

The degrees of contrast are defined as follows:

None – The element contrast is not visible or perceived.

Weak – The element contrast can be seen but does not attract attention.

Moderate – The element contrast begins to attract attention and begins to dominate the characteristic landscape.

Strong – The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

The contrast rating worksheets are used to determine if the VRM objectives are met by comparing the contrast ratings to the objective of the VRM class. The four levels of contrast (none, weak, moderate and strong) generally correspond to Visual Resource Classes I, II, III and IV, respectively. The completed Visual Contrast Rating Worksheets are included in Appendix A.

Indicators

For purposes of this analysis, a significant impact to visual resources would occur if 1) implementation of the Proposed Action resulted in a contrast rating that exceeds the level of contrast generally allowed by the designated visual resource class, and/or 2) implementation of the Proposed Action within the defined bounds of the Interstate 70 viewshed stipulation area resulted in a contrast rating incompatible with VRM Class II standards. For example, a contrast rating of none or weak would not result in significant impacts to visual resources in a Class II designation; however, a contrast rating of strong would most likely exceed the level of contrast generally allowed to a Class II visual resource, indicating a significant impact to visual resources would occur with implementation of the proposed action.

Visual Impacts

Findings from the Visual Contrast Rating Worksheets and review of the simulated proposed conditions are summarized below. Visual simulations were completed for KOP's #1, #2, #3, #4 and #5. Factors considered when assessing visual impacts include form, line, color, texture, angle of observation, length of time the project is in view, recovery time (remediation) and relative size or scale.

KOPs #1, #2 and #3

KOPs 1, 2 and 3 are discussed together as the observers share a similar viewing orientation and experience from their respective locations looking west onto the proposed project site. Figures 1-4, 1-5, and 1-6 simulate implementation of the proposed road and pad site for KOPs #1, #2 and #3, respectively. From each of the three locations, the proposed pad site is fully hidden and not visible to the observer due to existing mature pinyon-juniper stands that remain on the southern and eastern perimeters of the proposed pad site. While the upper portion of the cut face on the pads western perimeter is visible, the exposed slope blends seamlessly with the ridges southern face that is naturally devoid of vegetation, and therefore not drawing attention to the observer. Due to differences in observer elevations, the three KOPs observe different amounts of the proposed access road leading to the proposed pad site. The observer at KOP #2 can see nearly the entire proposed road alignment. By contrast, the lower two-thirds and lower half of the proposed access road are not visible to the KOP #1 and KOP #3 observers, respectively, due to an existing low-slung ridge lying directly west of the proposed project site. While the resulting cut and fill faces along the proposed road alignment are technically visible to all three observer locations, implementing the recommended mitigation strategy of applying a surface colorant in an irregular stippled pattern to exposed soils is highly effective in minimizing potential visual impacts. The mitigation strategy results in conditions where the exposed cut and fill faces, exceeding 40 feet in some areas, are nearly imperceptible to the observers and appear as a continuation of similar color and texture of the surrounding existing vegetation.

The degree of contrast regarding 1) linear elements concerning vegetative features and 2) color concerning land/water bodies are both rated as *weak* from KOPs #1, #2 and #3, as project implementation will result in the introduction of a faint horizontal line with a color slightly different than the surrounding existing pinyon-juniper woodland that may be noticed, but will not draw attention to the viewer. No changes in contrast will occur to any elements regarding structural features. The project site is located in an area designated as VRM Class II, which provides for management activities that may be seen, but should not attract attention of the casual observer. The *weak* level of contrast that will occur from implementation of the RWF 43-9 well pad and access road meet the objectives of a Class II designation and does not degrade the viewshed below Class II standards, and therefore avoids significant impacts to visual resources.

KOP #4

Figure 1-7 demonstrates that the proposed RWF 43-9 pad site and associated operating equipment are fully hidden to the KOP #4 observer due to existing mature pinyon-juniper stands that remain on the southern and eastern perimeters of the proposed pad site. From this location, only the bottom portion of the road is screened by an existing ridge, while the remainder of the proposed road alignment is visible. Because the observer is looking onto the proposed road alignment at an approximate 45-degree angle, the cut and fill faces are more visible as compared to observers at KOP locations #1, #2 and #3.

However, application of surface colorant to exposed soils using an irregular stippled pattern successfully mitigate the potential visual impacts, resulting in conditions where the exposed faces are barely noticed to the casual observer. Short portions of the proposed roadbed may be visible from this location, though appear as scattered patches of exposed soil, similar to the natural character of the surrounding existing environment.

The degree of contrast regarding 1) linear elements concerning vegetative features and 2) color concerning land/water bodies are both rated as *weak* from the KOP #4 location. Implementation of the proposed project will result in patches of the proposed roadbed being visible and a faint horizontal line with a color slightly different than the surrounding existing pinyon-juniper woodland may be noticed, but will not draw attention to the viewer. No changes in contrast will occur to any elements regarding structural features. The project site is located in an area designated as VRM Class II, which provides for management activities that may be seen, but should not attract attention of the casual observer. The impacted viewshed occurs in a VRM Class II designated area. The *weak* degree of contrast that would result from implementation of the proposed action comply with Class II designations and would not degrade the viewshed below Class II standards, thereby avoiding significant impacts to visual resources.

KOP #5

Figure 1-8 depicts proposed conditions that result from installation of the proposed RWF 43-9 pad site and access road from the KOP #5 location. The viewer at this location is approximately 2.5 miles southeast of the project area. Similar to all other KOP locations, the existing mature pinyon-juniper stands that remain on the southern and eastern perimeters of the proposed pad prevent any portion of the pad site from being visible to the observer. An intervening existing ridge feature fully obscures the lower two-thirds of the proposed access road from this location. The potential visual impacts from the remaining upper portion of the road that is visible to the observer are again successfully mitigated by application of the surface colorant to exposed soils. While a faint horizontal line is again evident in the dense pinyon-juniper woodland along the proposed access road and pad sites, the line does not draw attention as the color and texture blend almost seamlessly with the surrounding existing vegetation.

From KOP #5, the degree of contrast regarding 1) linear elements concerning vegetative features and 2) color concerning land/water bodies are both rated as *weak*. The proposed action results in no changes in contrast to any elements associated with structural features. The project site is located in an area designated as VRM Class II, which provides for management activities that may be seen, but should not attract attention of the casual observer. The *weak* level of contrast that will occur meets the objectives of a Class II designation and will not diminish the viewshed below Class II standards. As such, implementation of the proposed action will not result in significant impacts to visual resources.

Conclusions and Recommendations

The Visual Contrast Rating Worksheets and visual simulations prepared for this analysis indicate that implementation of the proposed RWF 43-9 and associated access road would have no significant impacts to visual resources or degrade the viewshed below Class II standards, thereby meeting the objectives of their respective visual resource class designations and the Interstate 70 Viewshed stipulation. The Visual Contrast Rating Worksheets indicate a weak level of contrast may result to 1) color concerning land/water bodies, and 2) linear elements concerning vegetation. In addition, the

worksheets report no changes would occur to the four key elements concerning structural features for any of the defined KOP locations.

While the proposed project is in compliance with, and meet the management objectives of their respective visual resource class designations, the following additional mitigation measures should be implemented to reduce the degree of contrast associated with implementation of the proposed action:

Mitigation Measure 1: All proposed operating equipment located on pad surfaces should be painted a non-reflective dark green color to blend with adjacent and background pinyon-juniper woodlands.

Mitigation Measure 2: All proposed operating equipment should be located away from the outer proposed pad surface perimeters above fill faces to avoid the potential for creating a ridgeline effect whereby the operating equipment are silhouetted against the sky at certain viewing angles, increasing the chance of visibility. When feasible, all operating equipment should be located within the interior portion of the pad or along the toe of cut slopes at the pad surface perimeter.

Mitigation Measure 3: Install double net biodegradable Erosion Control Blankets (ECBs) infilled with a bonded fiber matrix product or flexible growth medium for effective erosion control and establishment of vegetation following construction activities. Subsequently, a surface colorant should be hydraulically applied to the ECB surfaces in an irregular pattern utilizing hues that harmonize with the on-site vegetation. Application of the surface colorant should result in conditions where exposed cut and fill slopes appear to blend seamlessly with the surrounding environment.

Mitigation Measure 4: Perform annual monitoring of the proposed project sites to ensure compliance with the objectives of the Interstate 70 Viewshed stipulation. The operator shall ensure cut and fill slopes are stabilized and that vegetation in re-seeded areas have been established. If the applied surface colorant has deteriorated to the point of being no longer effective prior to acceptable growth of revegetated areas, a second application of surface colorant should be applied to the ECBs during the late summer/early fall months so growth performance of the re-seeded vegetation is not impeded. In addition, project sites should be viewed from each KOP location to ensure the level of contrast regarding, form, line, color or texture are rated no greater than *weak* to prevent the viewshed from being degraded below Class II standards.

FIGURE 1.1

KOP Locations

RWF 43-9

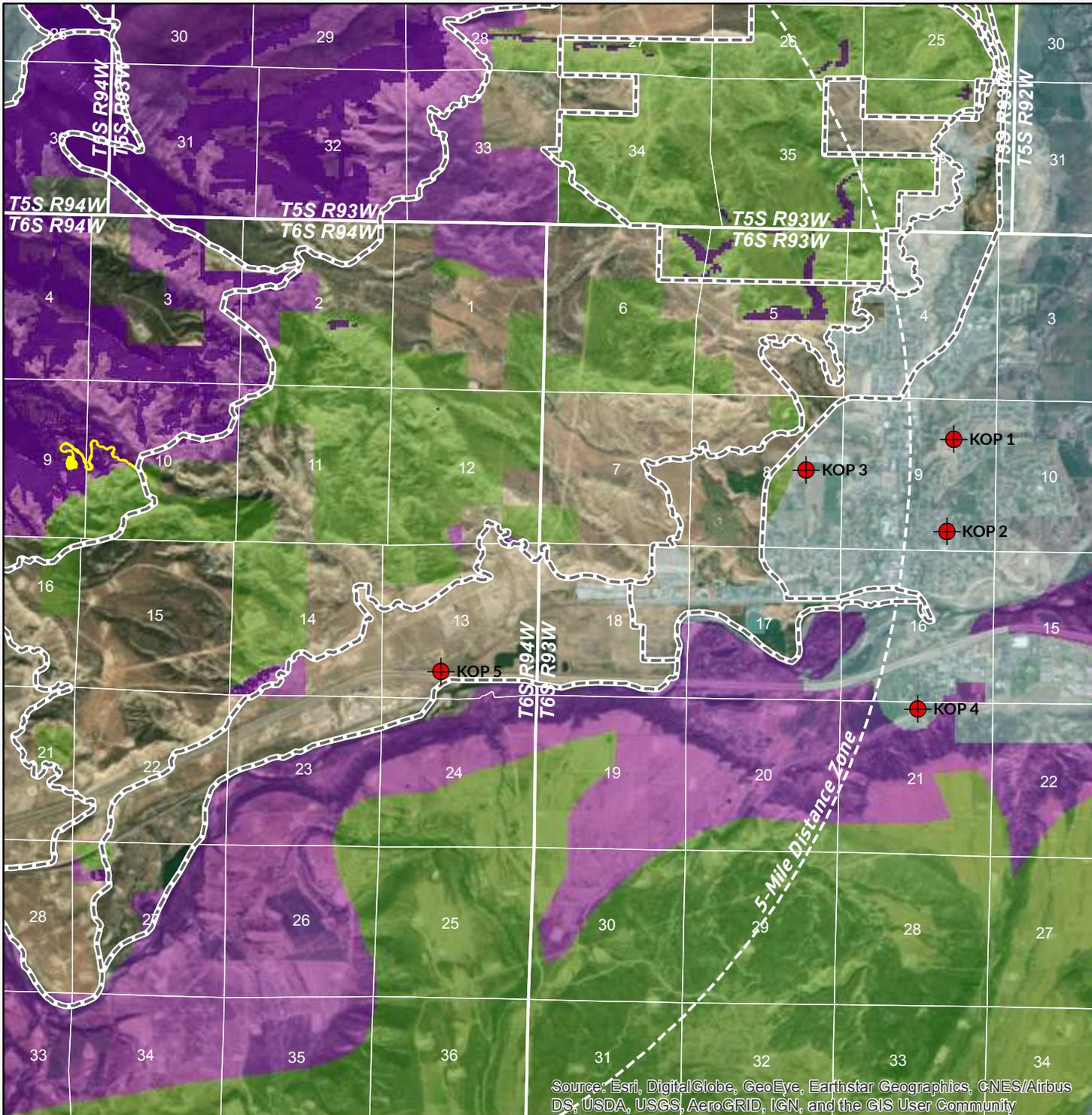
Garfield County, CO

LEGEND

-  Project Area
-  KOP Location
-  SQRU Boundary

VRM Classes

-  Class II
-  Class III
-  Class IV
-  Urban
-  I-70 Viewshed Stipulation Area (Class II)



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PROJECTION	StatePlane Colorado Central 2011 (US Feet)		
DATUM	North American Datum 1983		
PREPARED FOR	Terra Energy Partners		
PREPARED BY	ELEV8		
DRAWN BY	DATE	VERSION	
ZDP	09.30.2019		001

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FIGURE 1.2

TITLE

Viewshed Analysis (Proposed Pad)

PROJECT

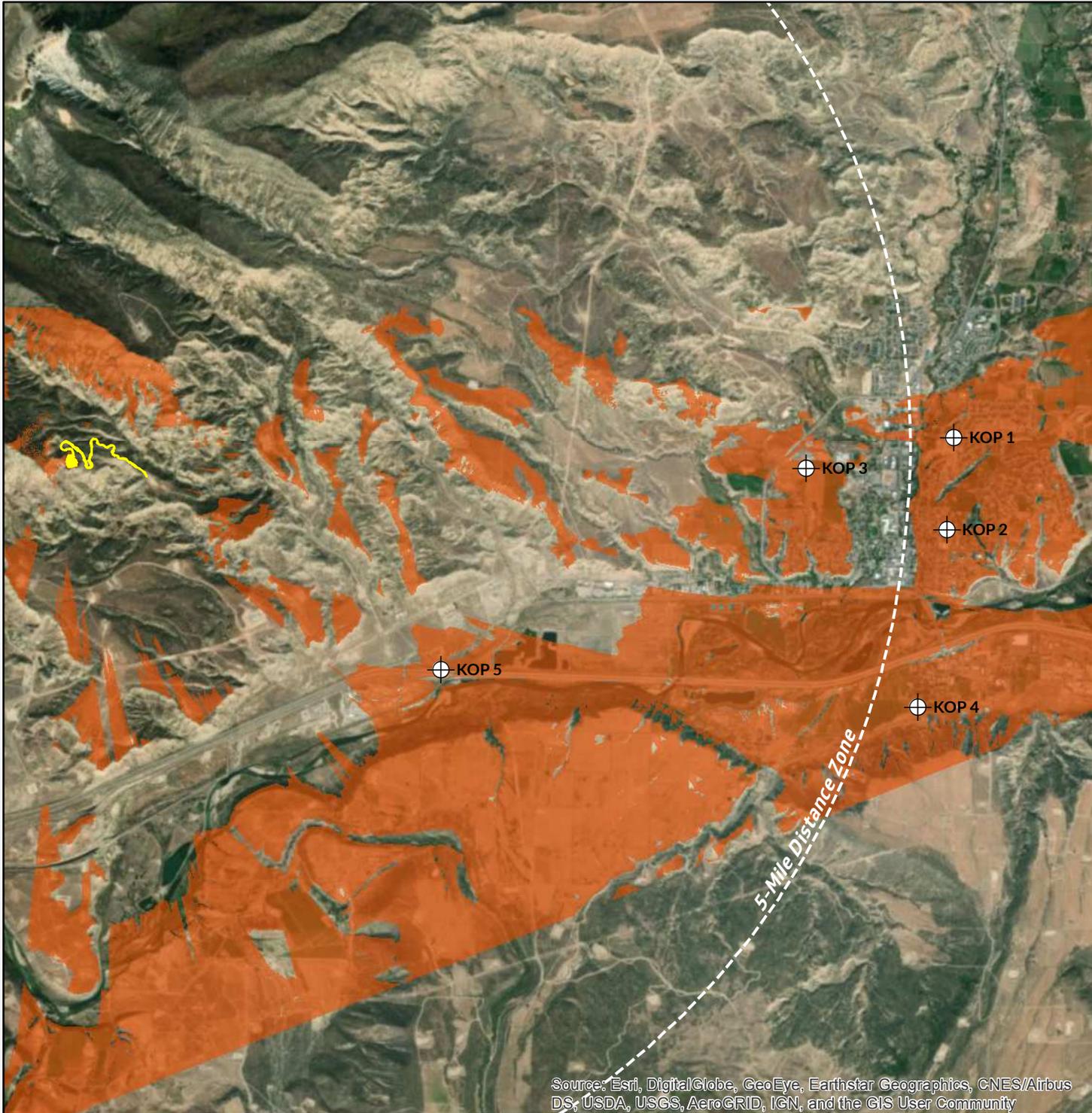
RWF 43-9

LOCATION

Garfield County, CO

LEGEND

-  Project Area
-  KOP Location
-  Areas where proposed pad is potentially visible



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PROJECTION StatePlane Colorado Central 2011 (US Feet)

DATUM North American Datum 1983

PREPARED FOR Terra Energy Partners

PREPARED BY ELEV8

DRAWN BY ZDP | DATE 09.30.2019 | VERSION 001

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FIGURE 2.3

TITLE

Viewshed Analysis (Proposed Road)

PROJECT

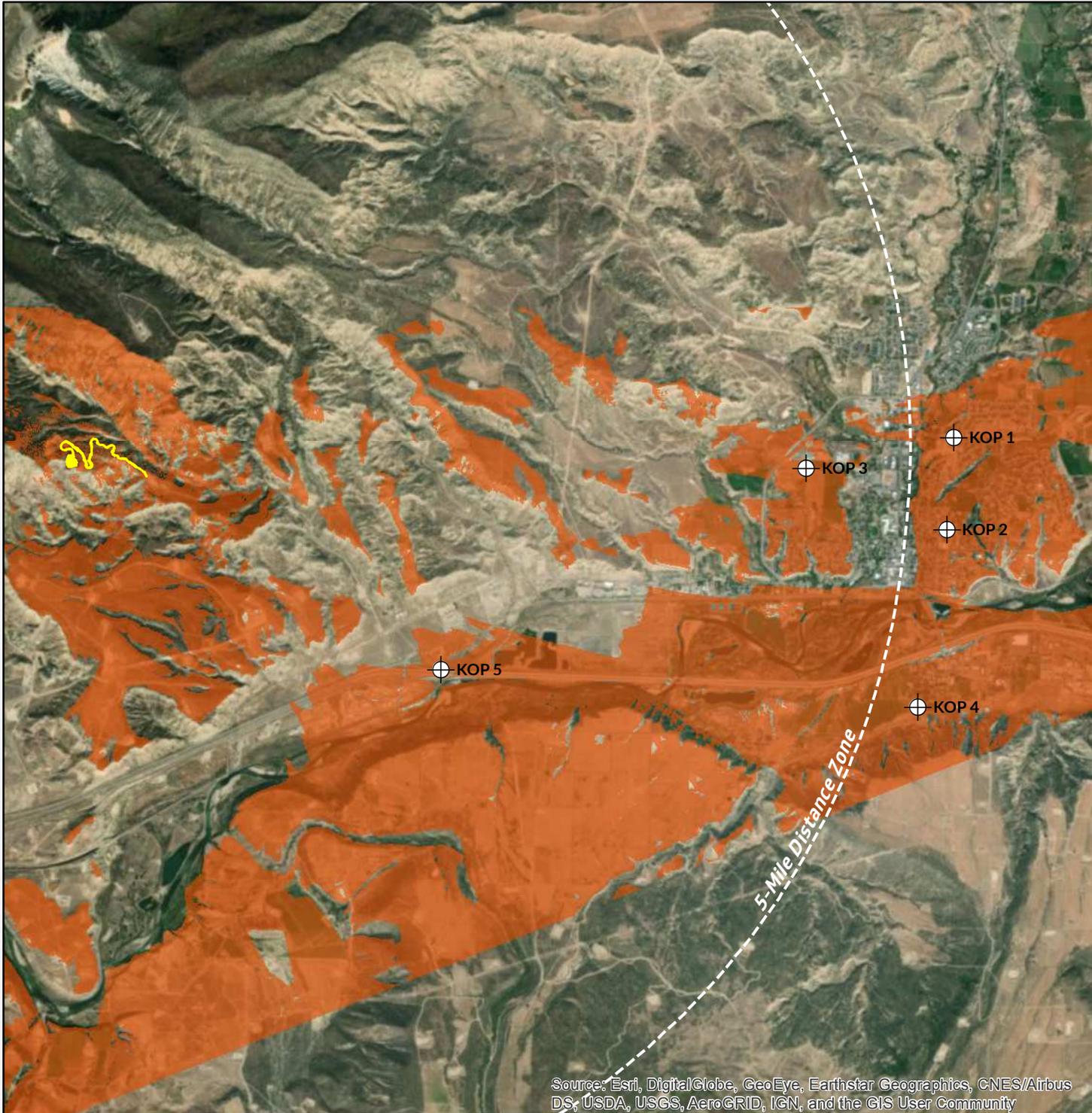
RWF 43-9

LOCATION

Garfield County, CO

LEGEND

-  Project Area
-  KOP Location
-  Areas where proposed road is potentially visible



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SCALE

1:60,000

1 inch = 5,000 feet

PROJECTION

StatePlane Colorado Central 2011 (US Feet)

DATUM

North American Datum 1983

PREPARED FOR

Terra Energy Partners

PREPARED BY

ELEV8

DRAWN BY

ZDP

DATE

09.30.2019

VERSION

001



Existing Conditions

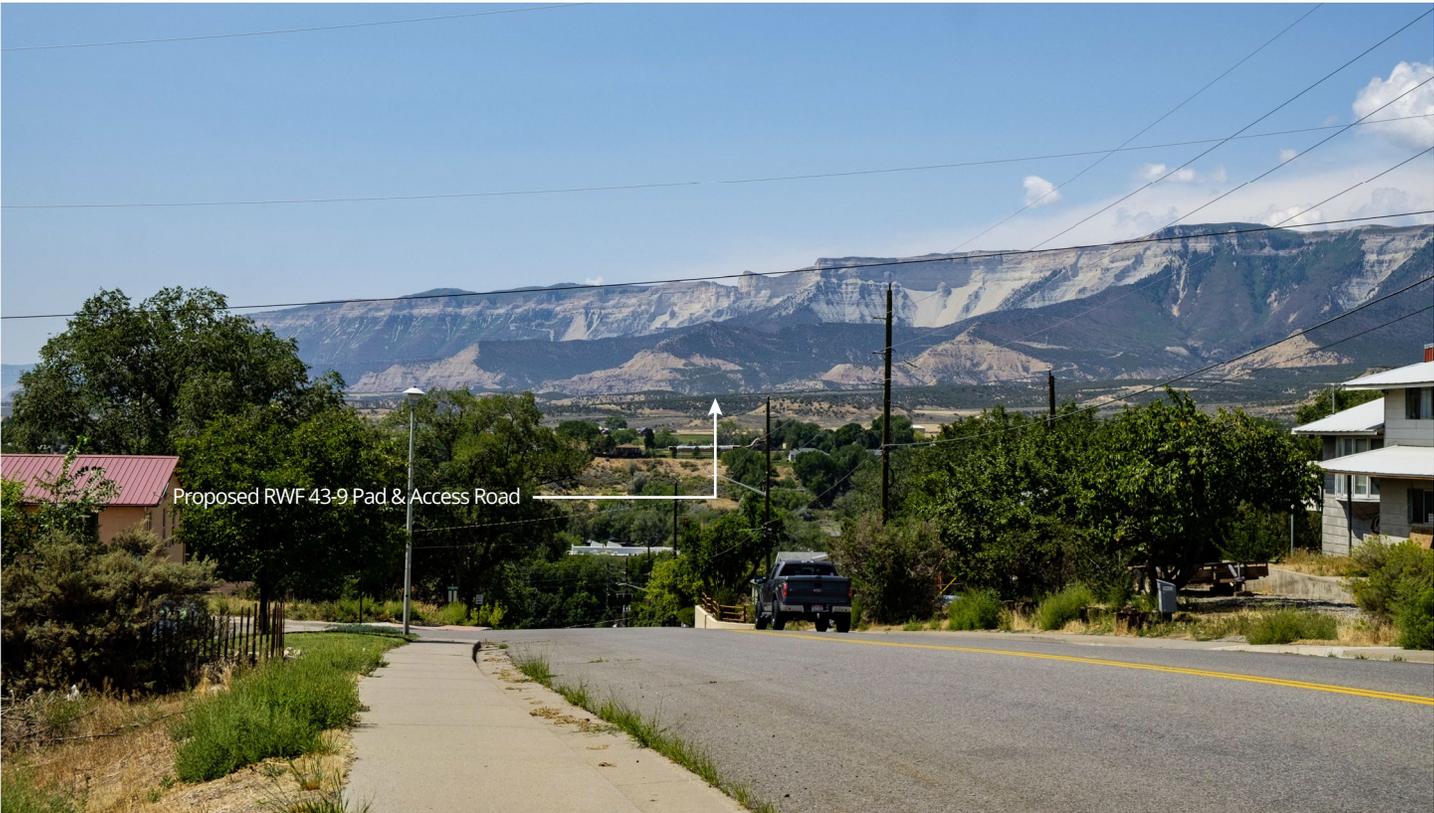


Proposed Conditions

Visual Simulation: KOP 1
Looking West onto RWF 43-9 Pad and Access Road
Background Distance Zone
RWF 43-9
Figure 1-4



Existing Conditions



Proposed Conditions

Visual Simulation: KOP 2
Looking West onto RWF 43-9 Pad and Access Road
Background Distance Zone
RWF 43-9
Figure 1-5



Existing Conditions



Proposed Conditions

Visual Simulation: KOP 3
Looking West onto RWF 43-9 Pad and Access Road
Background Distance Zone
RWF 43-9
Figure 1-6



Existing Conditions



Proposed Conditions

Visual Simulation: KOP #4
Looking Northwest onto RWF 43-9 Pad and Access Road
Background Distance Zone
RWF 43-9
Figure 1-7



Existing Conditions



Proposed Conditions

Visual Simulation: KOP #5
Looking Northwest onto RWF 43-9 Pad and Access Road
Middleground Distance Zone
RWF 43-9
Figure 1-8

Appendix A: Visual Contrast Rating Worksheets

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

VISUAL CONTRAST RATING WORKSHEET

Date
09/30/2019

District
Colorado River Valley

Resource Area

Activity (program)
Installation of Gas Pad

SECTION A. PROJECT INFORMATION

1. Project Name RWF 43-9 Pad	4. Location Township 6 S _____ Range 94 W _____ Section 9, 10 _____	5. Location Sketch See Figure 1-1
2. Key Observation Point KOP #1		
3. VRM Class Class II		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Wide, steep, rugged and irregular.	Bold, rough and patchy.	Numerous, diverse, short and rectangular.
LINE	Jagged, complex and irregular.	Bold, hard, broken and irregular.	Hard, simple, straight and angular.
COLOR	Monotone, dull browns, reddish brown, tans and grey.	Uniform, dark greens and browns.	Diverse, mix of pale and saturated colors.
TEXTURE	Patches of rough and smooth, striated.	Uneven/random, medium grain, high density and rough.	Smooth and scattered.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
LINE	No change.	Nearly imperceptible thin horizontal line where proposed vegetation clearing occurs along road alignment.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
COLOR	Cut/fill faces stained dark brown/green in previously vegetated areas to blend with surrounding vegetation.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
TEXTURE	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.

SECTION D. CONTRAST RATING **SHORT TERM** **LONG TERM**

1.	DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
				X				X					X		
					X				X						X
ELEMENTS	Form				X				X				X		
	Line				X		X						X		
	Color			X				X					X		
	Texture				X			X					X		
3. Additional mitigating measures recommended?											<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)				
Evaluator's Names											Date				
Zach Perdue											09/30/2019				

SECTION D. (Continued)

The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The photographic simulation of the proposed conditions simulates short-term conditions and incorporates a mitigation technique whereby a colorant is applied to planar slopes to blend with surrounding vegetation color and texture to minimize visual contrast of exposed soils. This approach is a temporary mitigation technique intended to be applied post-construction activities. The applied surface colorant has a lifespan of approximately 12 months before the colorant deteriorates and is replaced by germinating grass seed.

Proposed vegetation clearing and grading resulting from implementation of the proposed RWF 43-9 pad, while technically visible, are nearly imperceptible to viewers looking west from the KOP #1 location onto the proposed project site. While proposed grading activities result in exposed cut/fill walls in excess of 40 feet in areas, application of the Terraflage mitigation technique produces conditions where impacts to vegetation and landforms are largely undetected. Furthermore, the scale of the observed cut/fill walls and vegetation clearing relative to the observer location are indistinct and small as a function of distance from the proposed project site. In addition, no surface operating equipment is visible from the observer location due to line-of-sights to the pad surface being impeded by existing vegetation on the pads eastern edge. Modifications to the landscape that result from implementation of this project may be noticed but will not draw attention to observers.

In summary, potential visual impacts to observers at the KOP #1 location are rated as weak and therefore meet the objectives of the Class II designation.

For all pad sites, it is recommended to first install double net biodegradable Erosion Control Blankets (ECBs) infilled with a bonded fiber matrix product or flexible growth medium for effective erosion control and establishment of vegetation following construction activities. Subsequently, a surface colorant should be hydraulically applied to the ECB surfaces in an irregular pattern utilizing hues that harmonize with the on-site vegetation. Application of the surface colorant should result in conditions where exposed cut and fill slopes appear to blend seamlessly with the surrounding environment. In addition, all proposed surface operating equipment should be painted with a non-reflective darker green color to blend with the surrounding pinyon-juniper cover and be located away from the outer proposed pad surface perimeters above fill faces to avoid the potential for creating a ridgeline effect whereby the operating equipment are silhouetted against the sky at certain viewing angles, increasing the chance of visibility. No additional mitigation measures are recommended.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

VISUAL CONTRAST RATING WORKSHEET

Date
09/30/2019

District
Colorado River Valley

Resource Area

Activity (program)
Installation of Gas Pad

SECTION A. PROJECT INFORMATION

1. Project Name RWF 43-9 Pad	4. Location Township 6 S _____ Range 94 W _____ Section 9, 10 _____	5. Location Sketch See Figure 1-1
2. Key Observation Point KOP #2		
3. VRM Class Class II		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Wide, steep, rugged and irregular.	Bold, rough and patchy.	Numerous, diverse, short and rectangular.
LINE	Jagged, complex and irregular.	Bold, hard, broken and irregular.	Hard, simple, straight and angular.
COLOR	Monotone, dull browns, reddish brown, tans and grey.	Uniform, dark greens and browns.	Diverse, mix of pale and saturated colors.
TEXTURE	Patches of rough and smooth, striated.	Uneven/random, medium grain, high density and rough.	Smooth and scattered.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
LINE	No change.	Nearly imperceptible thin horizontal line where proposed vegetation clearing occurs along road alignment.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
COLOR	Cut/fill faces stained dark brown/green in previously vegetated areas to blend with surrounding vegetation.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
TEXTURE	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.

SECTION D. CONTRAST RATING **SHORT TERM** **LONG TERM**

1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
	LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
			X				X					X		
				X				X				X		
ELEMENTS	Form											X	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
	Line			X			X					X		
	Color			X				X						X
	Texture			X				X						X
											Evaluator's Names		Date	
											Zach Perdue		09/30/2019	

SECTION D. (Continued)

The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The photographic simulation of the proposed conditions simulates short-term conditions and incorporates a mitigation technique whereby a colorant is applied to planar slopes to blend with surrounding vegetation color and texture to minimize visual contrast of exposed soils. This approach is a temporary mitigation technique intended to be applied post-construction activities. The applied surface colorant has a lifespan of approximately 12 months before the colorant deteriorates and is replaced by germinating grass seed.

Proposed vegetation clearing and grading resulting from implementation of the proposed RWF 43-9 pad, while technically visible, are nearly imperceptible to viewers looking west from the KOP #2 location onto the proposed project site. While proposed grading activities result in exposed cut/fill walls in excess of 40 feet in areas, application of the Terraflage mitigation technique produces conditions where impacts to vegetation and landforms are largely undetected. Furthermore, the scale of the observed cut/fill walls and vegetation clearing relative to the observer location are indistinct and small as a function of distance from the proposed project site. In addition, no surface operating equipment is visible from the observer location due to line-of-sights to the pad surface being impeded by existing vegetation on the pads eastern edge. Modifications to the landscape that result from implementation of this project may be noticed but will not draw attention to observers.

In summary, potential visual impacts to observers at the KOP #2 location are rated as weak and therefore meet the objectives of the Class II designation.

For all pad sites, it is recommended to first install double net biodegradable Erosion Control Blankets (ECBs) infilled with a bonded fiber matrix product or flexible growth medium for effective erosion control and establishment of vegetation following construction activities. Subsequently, a surface colorant should be hydraulically applied to the ECB surfaces in an irregular pattern utilizing hues that harmonize with the on-site vegetation. Application of the surface colorant should result in conditions where exposed cut and fill slopes appear to blend seamlessly with the surrounding environment. In addition, all proposed surface operating equipment should be painted with a non-reflective darker green color to blend with the surrounding pinyon-juniper cover and be located away from the outer proposed pad surface perimeters above fill faces to avoid the potential for creating a ridgeline effect whereby the operating equipment are silhouetted against the sky at certain viewing angles, increasing the chance of visibility. No additional mitigation measures are recommended.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

VISUAL CONTRAST RATING WORKSHEET

Date
09/30/2019

District
Colorado River Valley

Resource Area

Activity (program)
Installation of Gas Pad

SECTION A. PROJECT INFORMATION

1. Project Name RWF 43-9 Pad	4. Location Township 6 S _____ Range 94 W _____ Section 9, 10 _____	5. Location Sketch See Figure 1-1
2. Key Observation Point KOP #2		
3. VRM Class Class II		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Wide, steep, rugged and irregular.	Bold, rough and patchy.	Few, short and rectangular.
LINE	Jagged, complex and irregular.	Bold, hard, broken and irregular.	Hard, simple and straight.
COLOR	Monotone, dull browns, reddish brown, tans and grey.	Uniform, dark greens and browns.	Pale brown and white.
TEXTURE	Patches of rough and smooth, striated.	Uneven/random, medium grain, high density and rough.	Smooth.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
LINE	No change.	Nearly imperceptible thin horizontal line where proposed vegetation clearing occurs along road alignment.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
COLOR	Cut/fill faces stained dark brown/green in previously vegetated areas to blend with surrounding vegetation.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
TEXTURE	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.

SECTION D. CONTRAST RATING **SHORT TERM** **LONG TERM**

1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
			X				X					X	
				X				X				X	
ELEMENTS	Form											X	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Line			X			X					X	
	Color			X								X	
	Texture			X								X	
Evaluator's Names											Date		
Zach Perdue											09/30/2019		

SECTION D. (Continued)

The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The photographic simulation of the proposed conditions simulates short-term conditions and incorporates a mitigation technique whereby a colorant is applied to planar slopes to blend with surrounding vegetation color and texture to minimize visual contrast of exposed soils. This approach is a temporary mitigation technique intended to be applied post-construction activities. The applied surface colorant has a lifespan of approximately 12 months before the colorant deteriorates and is replaced by germinating grass seed.

Proposed vegetation clearing and grading resulting from implementation of the proposed RWF 43-9 pad, while technically visible, are nearly imperceptible to viewers looking west from the KOP #3 location onto the proposed project site. While proposed grading activities result in exposed cut/fill walls in excess of 40 feet in areas, application of the Terraflage mitigation technique produces conditions where impacts to vegetation and landforms are largely undetected. Furthermore, the scale of the observed cut/fill walls and vegetation clearing relative to the observer location are indistinct and small as a function of distance from the proposed project site. In addition, no surface operating equipment is visible from the observer location due to line-of-sights to the pad surface being impeded by existing vegetation on the pads eastern edge. Modifications to the landscape that result from implementation of this project may be noticed but will not draw attention to observers.

In summary, potential visual impacts to observers at the KOP #3 location are rated as weak and therefore meet the objectives of the Class II designation.

For all pad sites, it is recommended to first install double net biodegradable Erosion Control Blankets (ECBs) infilled with a bonded fiber matrix product or flexible growth medium for effective erosion control and establishment of vegetation following construction activities. Subsequently, a surface colorant should be hydraulically applied to the ECB surfaces in an irregular pattern utilizing hues that harmonize with the on-site vegetation. Application of the surface colorant should result in conditions where exposed cut and fill slopes appear to blend seamlessly with the surrounding environment. In addition, all proposed surface operating equipment should be painted with a non-reflective darker green color to blend with the surrounding pinyon-juniper cover and be located away from the outer proposed pad surface perimeters above fill faces to avoid the potential for creating a ridgeline effect whereby the operating equipment are silhouetted against the sky at certain viewing angles, increasing the chance of visibility. No additional mitigation measures are recommended.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

VISUAL CONTRAST RATING WORKSHEET

Date
09/30/2019

District
Colorado River Valley

Resource Area

Activity (program)
Installation of Gas Pad

SECTION A. PROJECT INFORMATION

1. Project Name RWF 43-9 Pad	4. Location Township 6 S _____ Range 94 W _____ Section 9, 10 _____	5. Location Sketch See Figure 1-1
2. Key Observation Point KOP #2		
3. VRM Class Class II		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Wide, steep, rugged and irregular.	Bold, rough and patchy.	Few, short, and rectangular.
LINE	Jagged, complex and irregular.	Bold, hard, broken and irregular.	Hard, simple, angular and straight.
COLOR	Monotone, dull browns, reddish brown, tans and grey.	Uniform, dark greens and browns.	Bright red and dull green.
TEXTURE	Patches of rough and smooth, striated.	Uneven/random, medium grain, high density and rough.	Smooth.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
LINE	No change.	Nearly imperceptible thin horizontal line where proposed vegetation clearing occurs along road alignment.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
COLOR	Cut/fill faces stained dark brown/green in previously vegetated areas to blend with surrounding vegetation.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
TEXTURE	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.

SECTION D. CONTRAST RATING **SHORT TERM** **LONG TERM**

1.	DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
				X				X					X		
					X				X				X		
ELEMENTS	Form				X				X				X	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
	Line				X				X				X		
	Color			X					X				X		
	Texture				X				X				X		
Evaluator's Names											Date				
Zach Perdue											09/30/2019				

SECTION D. (Continued)

The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The photographic simulation of the proposed conditions simulates short-term conditions and incorporates a mitigation technique whereby a colorant is applied to planar slopes to blend with surrounding vegetation color and texture to minimize visual contrast of exposed soils. This approach is a temporary mitigation technique intended to be applied post-construction activities. The applied surface colorant has a lifespan of approximately 12 months before the colorant deteriorates and is replaced by germinating grass seed.

Proposed vegetation clearing and grading resulting from implementation of the proposed RWF 43-9 pad, while technically visible, are nearly imperceptible to viewers looking west from the KOP #4 location onto the proposed project site. While proposed grading activities result in exposed cut/fill walls in excess of 40 feet in areas, application of the Terraflage mitigation technique produces conditions where impacts to vegetation and landforms are largely undetected. Furthermore, the scale of the observed cut/fill walls and vegetation clearing relative to the observer location are indistinct and small as a function of distance from the proposed project site. In addition, no surface operating equipment is visible from the observer location due to line-of-sights to the pad surface being impeded by existing vegetation on the pads eastern edge. Modifications to the landscape that result from implementation of this project may be noticed but will not draw attention to observers.

In summary, potential visual impacts to observers at the KOP #4 location are rated as weak and therefore meet the objectives of the Class II designation.

For all pad sites, it is recommended to first install double net biodegradable Erosion Control Blankets (ECBs) infilled with a bonded fiber matrix product or flexible growth medium for effective erosion control and establishment of vegetation following construction activities. Subsequently, a surface colorant should be hydraulically applied to the ECB surfaces in an irregular pattern utilizing hues that harmonize with the on-site vegetation. Application of the surface colorant should result in conditions where exposed cut and fill slopes appear to blend seamlessly with the surrounding environment. In addition, all proposed surface operating equipment should be painted with a non-reflective darker green color to blend with the surrounding pinyon-juniper cover and be located away from the outer proposed pad surface perimeters above fill faces to avoid the potential for creating a ridgeline effect whereby the operating equipment are silhouetted against the sky at certain viewing angles, increasing the chance of visibility. No additional mitigation measures are recommended.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

VISUAL CONTRAST RATING WORKSHEET

Date
09/30/2019

District
Colorado River Valley

Resource Area

Activity (program)
Installation of Gas Pad

SECTION A. PROJECT INFORMATION

1. Project Name RWF 43-9 Pad	4. Location Township 6 S _____ Range 94 W _____ Section 9, 10 _____	5. Location Sketch See Figure 1-1
2. Key Observation Point KOP #2		
3. VRM Class Class II		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Wide, steep, rugged and irregular.	Bold, rough and patchy.	Numerous, short, and rectangular.
LINE	Jagged, complex and irregular.	Bold, hard, broken and irregular.	Hard, simple and straight.
COLOR	Monotone, dull browns, reddish brown, tans and grey.	Uniform, dark greens and browns.	Dull browns, tans, greys and white.
TEXTURE	Patches of rough and smooth, striated.	Uneven/random, medium grain, high density and rough.	Smooth and scattered.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
LINE	No change.	Nearly imperceptible thin horizontal line where proposed vegetation clearing occurs along road alignment.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
COLOR	Cut/fill faces stained dark brown/green in previously vegetated areas to blend with surrounding vegetation.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.
TEXTURE	No change.	No change.	No proposed pad surface equipment is visible due to distance and/or impeded line-of-sight. No change.

SECTION D. CONTRAST RATING **SHORT TERM** **LONG TERM**

1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
	LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
			X				X					X		
				X				X				X		
ELEMENTS	Form											X	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
	Line			X			X					X		
	Color			X					X					X
	Texture			X					X					X
											Evaluator's Names		Date	
											Zach Perdue		09/30/2019	

SECTION D. (Continued)

The objective of VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The photographic simulation of the proposed conditions simulates short-term conditions and incorporates a mitigation technique whereby a colorant is applied to planar slopes to blend with surrounding vegetation color and texture to minimize visual contrast of exposed soils. This approach is a temporary mitigation technique intended to be applied post-construction activities. The applied surface colorant has a lifespan of approximately 12 months before the colorant deteriorates and is replaced by germinating grass seed.

Proposed vegetation clearing and grading resulting from implementation of the proposed RWF 43-9 pad, while technically visible, are nearly imperceptible to viewers looking west from the KOP #5 location onto the proposed project site. While proposed grading activities result in exposed cut/fill walls in excess of 40 feet in areas, application of the Terraflage mitigation technique produces conditions where impacts to vegetation and landforms are largely undetected. Furthermore, the scale of the observed cut/fill walls and vegetation clearing relative to the observer location are indistinct and small as a function of distance from the proposed project site. In addition, no surface operating equipment is visible from the observer location due to line-of-sights to the pad surface being impeded by existing vegetation on the pads eastern edge. Modifications to the landscape that result from implementation of this project may be noticed but will not draw attention to observers.

In summary, potential visual impacts to observers at the KOP #5 location are rated as weak and therefore meet the objectives of the Class II designation.

For all pad sites, it is recommended to first install double net biodegradable Erosion Control Blankets (ECBs) infilled with a bonded fiber matrix product or flexible growth medium for effective erosion control and establishment of vegetation following construction activities. Subsequently, a surface colorant should be hydraulically applied to the ECB surfaces in an irregular pattern utilizing hues that harmonize with the on-site vegetation. Application of the surface colorant should result in conditions where exposed cut and fill slopes appear to blend seamlessly with the surrounding environment. In addition, all proposed surface operating equipment should be painted with a non-reflective darker green color to blend with the surrounding pinyon-juniper cover and be located away from the outer proposed pad surface perimeters above fill faces to avoid the potential for creating a ridgeline effect whereby the operating equipment are silhouetted against the sky at certain viewing angles, increasing the chance of visibility. No additional mitigation measures are recommended.