National Park Service
U.S. Department of the Interior

ARCHES NATIONAL PARK
P.O. Box 907
Moab, Utah

Finding of No Significant Impact
Williams Northwest Pipeline Maintenance
Environmental Assessment/ Assessment of Effect

In compliance with the National Environmental Policy Act, the National Park Service (NPS) prepared an Environmental Assessment/ Assessment of Effect (EA/AEF) to analyze the effects of maintaining the natural gas pipeline in Arches National Park. Currently, Williams Company owns and maintains the 7.2 miles of the Northwest Pipeline that passes through the park. The NPS will issue a Special Use Permit (SUP) to the Williams Company for the purpose of performing this pipeline maintenance within the park. This EA/AEF addresses the planned pipeline maintenance activities during the next five to ten years and the impact of those activities on the natural and cultural resources of the park.

Proposed maintenance activities include surveys of the pipeline by foot, by air, and possibly by vehicle; erosion control; potential recoating or replacing sections of the pipeline; repair of the cathodic protection system on the pipeline and conducting pig runs. Most of these activities can result in minor to moderate adverse impacts on park resources. Moving heavy equipment along the pipeline and digging up sections of pipe for recoating or replacement can create significant adverse impacts to park resources, visitor experience, and park values.

The EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 et seq.), the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations 1500 through 1508) for implementing NEPA, and the NPS NEPA compliance guidance handbook (Director's Order (DO)-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*). An Assessment of Effect (AEF) in conjunction with this EA was developed to meet its obligations for NEPA and §106 compliance, in accordance with the Advisory Council on Historic Preservation's regulations implementing §106 (36 CFR 800.8, Coordination with the National Environmental Policy Act).

DESCRIPTION OF ALTERNATIVES

A total of four alternatives were considered for this project, including two that are analyzed in the EA/AEF and two that were dismissed prior to analyzing them in the EA/AEF. Alternative C and D were dismissed from further analysis. Alternative C was not to issue a special use permit to the Williams Company but this alternative was eliminated from detailed study because not issuing a SUP to maintain the Williams Northwest Pipeline would not be feasible at this time. If the pipeline is not maintained, this alternative would have a conflict with park policy to provide for visitor and staff safety. Not maintaining the

pipeline would cause significant safety issues and too great an environmental impact within the park. Alternative D was to reroute the pipeline around Arches National Park. Although this alternative is the NPS's preferred alternative, this alternative was eliminated from detailed study because the various pipeline companies have relied on the permit to maintain the structure for fifty-four years in Arches National Park. According to the Williams Company it is also financially infeasible to move the pipeline out of the park at this time. A table top estimate to reroute the pipeline outside of the park boundaries would require 44 miles of pipeline to be rerouted and would cost an estimated $131million.

Alternative A (No-Action) described the continued current management of the pipeline. Currently there is no proactive evaluation of impacts on park resources regarding anticipated pipeline maintenance. Evaluations are only done as a project or activity arises. Alternative B (Action) would consider anticipated potential pipeline maintenance needs over the next five to ten years and would evaluate the impacts of this maintenance on park resources to develop mitigation measures.

Under Alternative B, the park will analyze the impacts to park resources from proposed activities and will establish mitigation measures that will be followed by Williams to reduce the intensity of effects on park resources. This alternative will have all formal environmental compliance completed prior to a maintenance activity being conducted. The following maintenance work is an estimate of activities to be completed for approximately the next ten years.

Survey Work along Pipeline:

Leak Detection Survey

This survey conducted during the driest time of year and consists of one individual walking the pipeline with a laser gas detector to determine if leaks are present in the pipeline. If a leak is detected it is considered to be an emergency and requires immediate repair. Upon notifying park personnel, the work will begin immediately. Leak repair will require vehicle access and some, all or equivalent of the following equipment: 2 large tracked excavators, 1 side boom used to remove and replace the pipe, 2 welding trucks, 2 air compressors/sandblasters, 3 vehicles capable of transporting safely approximately 12 individuals, 1 tool trailer, and 2 bulldozers, if crossing Salt Wash Canyon.

Close Interval Survey

This survey is conducted when the soils are wet, most likely during springtime. Two individuals walk the pipeline right of way with equipment designed to detect the loss of a low voltage current sent through the pipeline wall. If loss of current is detected a project will be created to excavate and recoat the pipeline. Recoating may require excavation with some, all or equivalent of the following equipment: 1 large tracked excavator, 1 air compressors/sandblaster, 2 vehicles capable of transporting safely approximately 8 individuals, 1 tool trailer and 2 bulldozers, if crossing Salt Wash Canyon.

Low Level Flight Survey

This survey is conducted typically during the third week in May. A helicopter is flown approximately forty feet above the pipeline corridor. The purpose is to look for erosion, exposed pipe, slides, leaks, encroachments, and any other activity along the right of way that could possibly cause damage to the pipeline. Upon completion of the flight, a plan of action is created to correct any noted problems.

Run Internal Inspection Tool (PIG)
Every 5-7 years Williams is required by the DOT to run a PIG. This only requires tracking the tool within the pipe through the park. Location detection will be set up at the intersections of existing roads and the pipeline. A surveying crew consisting of two individuals and one vehicle will be required. This tool detects defects (anomalies) in the pipeline wall and provides the location of such.

Erosion Control Efforts:
Erosion is detected by walking or during a low level flight survey. Corrective action is required within a couple of weeks to avoid pipeline exposure. If the pipeline is exposed the corrective action is required within a week of discovery. The work is accomplished by hand-shoveling or installing flow control devices in the wash or stream that consist of: gabion baskets, bendway weirs, upstream flow control device, etc. The proposed equipment required includes some, all or equivalent of the following: shovels, 1 backhoe or small track excavator, 1 vehicle capable of safely transporting approximately four individuals and the required equipment and materials.

Anomaly Investigations:
If an anomaly is detected during a pig run, the extent of the detected damage and required response time will be required to be reported to the Park Superintendent or her next-in-command in a timely manner defined in the SUP. The scope of work will also be reported as soon as practical. The required response time for anomaly investigations are categorized as such: Emergency digs (wall loss of 70% or greater) to be completed within five days, Immediate Digs (wall loss of 50-69%) to be completed within 12 months after discovered, Normal Investigation (wall loss of 25-49%) to be completed within eighteen months after discovered. Follow-up investigations can be required after the inspection tool has been verified through initial investigation; these anomalies are usually completed the following year, unless deemed otherwise. Under the regulations of the DOT, Williams is required to complete these investigations as noted. The pipeline can be repaired by replacement, a weld on repair sleeve, or a composite sleeve, depending on the severity of the anomaly. All of these repairs require excavation and some, all or equivalent of the following equipment: 2 large tracked excavators, 1 side boom used to remove and replace the pipe, 2 welding trucks, 2 air compressors/sandblasters, 3 vehicles capable of transporting safely approximately 12 individuals, 1 tool trailer and 2 bulldozers to aid in moving other vehicles on steep slopes. Sometimes the first crews into the anomaly site walk in from the nearest pipeline access point and dig by hand to locate the anomaly and assess the extent of pipeline damage, but this isn't practical if the pipeline is deeply buried at the anomaly location

Recalibration Anomaly Investigation:
Upon completion of anomaly repairs, the inspection tools' calibration is compared to the actual data collected during the repairs. The information is then reevaluated for possible errors or missed anomalies. If new anomalies are discovered they are repaired as follows: Emergency digs (wall loss of 70% or greater) to be completed within five days, Immediate Digs (wall loss of 51-70%) to be completed within the calendar year, Normal Investigation (wall loss of 71% or less)to be completed within eighteen months after discovered. The pipeline can be repaired by replacement, a weld on repair sleeve, or a composite sleeve, depending on the severity of the anomaly. All of these require excavation and some, all or equivalent of the following equipment: 2 large tracked excavators, 1 side boom used to remove and replace the pipe, 2 welding trucks, 2 air compressors/sandblasters, 3 vehicles

capable of transporting safely approximately 12 individuals, 1 tool trailer and 2 bulldozers to aid in moving other vehicles on steep slopes.

Recoating Sections of Pipeline:

Recoating in Salt Valley Wash

Recoating of the pipeline may be required in Salt Valley Wash and various smaller nearby dry washes. The potential work to be completed in Salt Valley Wash is at the point where the dirt road crosses the pipeline. During the maintenance operation the Salt Valley Wash road will be required to be closed, due to safety concerns. The area will require excavation and recoating. Upon complete of the excavation, a concrete protection pad will be poured to protect the pipeline from traffic and any further erosion. The equipment proposed is as some, all or equivalent of the following: 1 large tracked excavators, 1large front end loader, concrete trucks, 1 air compressors/sandblasters, 3 vehicles capable of transporting safely approximately 12 individuals, and 1 tool trailer.

Recoating in Various Dry Washes

Recoating may be required in dry washes between various mileposts, due to age and possible erosion damage. This may require excavations using some, all or equivalent of the following equipment: 1 large tracked excavator, 1 air compressors/sandblaster, 2 vehicles capable of transporting safely approximately 8 individuals, and 1 tool trailer.

Replace Underground Conduit from Cathodic Generator:

The underground conduit and wire from the generator site may need to be replaced due to age. This will require shallow excavation with the following equipment: 1 backhoe and 1 vehicle to transport personnel and equipment.

Potential Access Routes to Anticipated Maintenance Areas:

Access routes along the pipeline or near the pipeline will be evaluated by the NPS prior to maintenance being conducted.

MITIGATION MEASURES

The following mitigation measures were developed to minimize the degree and/or severity of adverse effects to the park's natural and cultural resources.

General

- All pipeline workers will be at pre-work meetings that will include a briefing of sensitive resources and work restrictions within the park. At least one NPS staff member will be at the initial meeting to explain relevant aspects of NPS work stipulations. A biological monitor contracted by Williams and approved by the NPS, will be at each day's pre-work meeting and will ensure that any new workers are apprised of park regulations and expectations, and will also brief any visiting inspectors of NPS regulations.
- Only the minimum equipment necessary will be allowed for each repair project. This will be assessed based on the nature of each repair project and access to the site(s).
- Before any equipment is driven to a repair site, anomaly/repair site locations will be verified using walk-in crews with shovels. Exceptions will only be made if a sincere attempt at hand-digging fails (due to, for example, segments of pipe unusually deep or placed in a cut through solid rock). No vehicles of any kind will leave designated park roads before either: 1) the anomaly has been located, or 2) the NPS has agreed to an exemption following a failed hand-digging attempt.

- Access routes to project sites will be analyzed and approved prior to heavy equipment and vehicles being brought in to the work site.
- Vehicles and tools must be cleaned thoroughly before entering the park to avoid the possibility of bringing exotic plant seed or material into the park.
- Vehicles parked along the park main road or gravel roads must be parked in a wide place with good visibility or within a pullout without enlarging the pullout and tires must remain on the roadway. Tires will not be placed on plants or undisturbed soils. Flagging or cones should be placed so that oncoming traffic is warned of the parked vehicles.
- Larger vehicles, including heavy equipment and tool transports, must be mounted on tracks if they must leave designated park roads to traverse pipeline access routes within the park. Rubber tracked vehicles should be used where long runs over slickrock are necessary. Heavy equipment must remain at the site of the project during the period of time necessary to do repair work. It must not be driven out at night and back the next day. Tool-transport vehicle trips must be kept to a minimum; tool needs should be carefully planned to avoid extra trips.
- Smaller UTVs, with low-pressure tires may be used in some instances. If the worksite is 0.25 mile or less from a road, they may not be used. If between 0.25 and 1 to 1.5 miles from a road, workers must walk to site but one UTV may be driven in on the first day of a project and driven out on the last day, and used if needed for emergency transport. If distances are greater than 1.0 to 1.5 miles from a road (depending on terrain and steepness), UTVs may be used to transport work crews and inspectors. Trips using UTVs or tool transports should be kept to a minimum. UTVs must be driven slowly and carefully, so that no additional plants or undisturbed soils are run over after the first trip in. If these guidelines are not followed or if the number of trips is causing unacceptable damage to resources, personnel will be required to walk to the worksite.
- No ATVs are allowed per memo (A7619 IMDE-OSH) from the Regional Director of the Intermountain Region.
- Oil spill kits must be available for immediate use in the event of a ruptured line or spills from other sources.
- A portable backcountry toilet (type used by river runners) may be made available at the worksite and a privacy screen may be erected. A commercial type port-a-potty may only be used if parked on an existing park road pullout or parking area, and approved by the NPS.
- Open trenches left overnight must be barricaded so that safety of visitors and wildlife in the area is maximized.
- During operations one crew member will be tasked with watching for hikers in the area. If seen, the hiker(s) will be advised of a safe route around the work zone. Industry standard and company safety measures must be adhered to.
- All garbage from any pipeline project will be hauled out as the equipment leaves the worksite on the last day.

Geological and Paleontological Resources

- A contract paleontologist approved by the NPS must conduct a spot inspection prior to pipeline work to identify any potential fossiliferous bedrock (if any is present) within the proposed workspace for a dig site and the access route along pipeline corridor to dig site. This will be conducted when crossing higher-potential areas for fossils.
- A contract paleontologist approved by the NPS must also be onsite for the digging work to inspect any dirt moved for paleontological resources identified in the Paleontological Resources Analysis letter written by Erathem-Vanir Geological PLLC dated January 13, 2009. Any significant paleontologic material found must be set aside in a safe place, documented in writing, and the park Superintendent notified of the uncovered material. Williams is responsible for the cost of paleontological services.
- If any fossils of significance are discovered at any time, the NPS will be notified immediately. A letter of findings will be submitted to the NPS upon completion of the project.
- Measures will be taken to minimize marring slickrock with tracked vehicles or other heavy equipment.

Soils and Vegetation

- A contract restoration specialist and a biological monitor will be hired by Williams and approved by the NPS. They must consult with the NPS Resource Management Division regarding the plant salvage and re-vegetation plan at dig sites and along access paths. Depending on the scope of work proposed the NPS will use adaptive management techniques to decide if and when plants will be salvaged and/or if herbaceous native seeds will be used where appropriate.
- The environmental monitor must be familiar with the plants of the Arches National Park area (high desert, Colorado Plateau) and must accompany vehicles being driven in or out of the anomaly site to assist the driver in avoiding trees, shrubs, plants and soil crusts wherever possible. This monitor must be onsite throughout all of the pipeline work to ensure worker compliance with stipulations, and assist with restoration work.
- The contract restoration specialist will accompany the crews and instruct/help with salvaging small shrubs and plants that can't be missed when driving equipment in and before digging up the pipeline. A restoration company crew member must be present while driving equipment in the first day of the project and before any digging begins as well as on the last day(s) of the project when salvaged plants are replanted.
- If work site is within 1 to 1.5 miles of a road, workers must access site on foot. Only heavy equipment and tool transports will be allowed off road, unless pre-work meetings with NPS staff identify an acceptable UTV route.
- Only tracked vehicles or tracked trailers are allowed on the pipeline access route within the park except for UTV's with low pressure tires in some instances as described in the General section above.
- Soil conditions must be frozen or dry, not muddy when vehicles are driven in. If soil conditions become muddy to a degree that park resources or the access route will be impacted during the project, then work must shut down. Work may resume when conditions dry out.

- Equipment and transport vehicles will be kept to a minimum and will proceed so as to keep plant damage to a minimum, as described in the General section above.
- Vehicles will minimize running over plants in general, as described earlier. Shrubs may be straddled by the allowed high clearance vehicles.
- Wherever tracks or tires displace soil or sand, whether on a steep hill or elsewhere, progress will be slow and deliberately monitored so that heavy equipment or other responsible equipment can be stopped quickly when soil is being churned up, and salvaging can occur before more progress is made.
- On steep slopes, if equipment starts impacting soils, herbaceous plants including grasses may be salvaged from the vehicle route ahead of the vehicles for restoration purposes. This decision will be made by the NPS personnel or restoration specialist on site.
- To salvage topsoil: separate the top 3-8 inches of soil from underlying soils, then replace on top of surface when worksite is rehabilitated.
- To salvage soil crusts: Separate the top inch or two of soil from underlying soils, remove in sheets as large as possible, and store right-side up on cardboard or something similar and out of harm's way until work is complete. At work's completion, replace crusts right-side-up with their tops at the level of surrounding soils. The replaced crusts should be scattered through the disturbed area to facilitate soil crust regrowth throughout the area.
- As the NPS Resource Management Division learns more about plant salvaging success among various shrub species from 2009 pipeline repair and restoration efforts, certain shrub species will be selected for salvage. Any of these species in the path of tracks or tires will be salvaged, set aside and replanted during the restoration phase.
- Some shrubs and trees will be flagged by NPS staff or restoration specialist and these are to be avoided by the vehicles.
- To salvage plants: With the heavy equipment, carefully excavate shrub with rootball intact, and move to a low-impact nearby location,. Protect the rootball with burlap or other suitable material (if necessary), and keep moist. Salvaged plants will be replanted as the equipment is removed from the site when work is complete. Water will be carried in on the equipment to water plants well one time after transplanting.
- Certain suitable plant species (herbaceous, grasses, shrubs and trees) will be tracked or rolled over when they cannot be avoided by the equipment or are not flagged for salvage, to keep roots intact. Many of these will grow from their bases, depending on other variables.
- When entering and leaving work sites, vehicles as well as walking workers must follow the same vehicle tracks during each trip to minimize the extent of impact on vegetation and soils. Pipeline workers will avoid stepping on or crushing soil crusts not within treads on access routes or within immediate work areas.
- Pipeline crews will minimize the extent of extra workspace used at project dig sites especially where slopes may cause erosional issues.
- On steep access ramps, appropriate soil stabilization matting may be used especially on steep access ramps to help stabilize soil on the slopes, if approved by NPS Resource

Management staff. This decision will be based in part on assessment of success of matting used in 2009 repairs within Salt Wash Canyon.

- Tracks will be raked out as equipment leaves the work site, limiting raking to actual tracks only. Hand rakes will used. Thin soils on slickrock will only be lightly raked by hand to remove vehicle tracks.
- Restoration must include follow-up monitoring for three years or until restoration goals are met and should include monitoring components before the area is disturbed as well as immediately following initial restoration work. Additional planting or seeding may be necessary after initial restoration efforts

Water Resources including Floodplains and Wetlands

- Vehicles and equipment will not be driven up or down stream or wash channels. The number of vehicles will also be minimized as described earlier.
- Care must be taken to avoid any rutting caused by vehicles or equipment.
- Measures must be employed to prevent or control spills of fuels, lubricants, or other contaminants from entering water sources.
- A bridge must be used when crossing Salt Wash.
- Appropriate erosion and siltation controls must be maintained during construction, and all exposed soil or fill material must be permanently stabilized after equipment leaves the work site and access routes.
- Heavy equipment use in wetlands must be avoided if at all possible. Heavy equipment used in wetlands must be placed on mats, or other measures must be taken to minimize soil and plant root disturbance and to preconstruction elevations.
- Whenever possible, excavated material must be placed on an upland site. However, when this is not feasible, temporary stockpiling of excavated material in wetlands must be placed on filter cloth, mats or some other semi-permeable surface, or comparable measures must be taken to ensure that underlying wetland habitat is protected. The material must be stabilized with straw bales, filter cloth, or other appropriate means to prevent reentry into the waterway or wetland. If using straw bales, they should not contain any seed.
- Temporary stockpiles in wetlands must be removed in their entirety as soon as practicable. Wetland areas temporarily disturbed by stockpiling or other activities during construction must be returned to their pre-existing elevations, and soil, hydrology, and native vegetation communities must be restored as soon as practicable.

Threatened, Endangered and Species of Special Concern

- Prior to maintenance activities, areas that are potential habitat for listed wildlife species or species of concern will be resurveyed. If listed species are found in the vicinity of work sites, activities will be limited to ones that are unobtrusive or to times of the year when the listed species are not present or less affected by disturbance.
- Maintenance activities will maintain a spatial buffer of one mile from occupied Mexican spotted owl nesting sites, if found in the vicinity of work sites, and a seasonal buffer from March 1 through August 31 will be maintained to protect breeding and nesting owls.

- Maintenance activities will maintain a seasonal buffer from early May through mid September to protect nesting and fledgling Southwestern willow flycatchers, if occupied nests found within one quarter mile of work sites.
- Maintenance activities will maintain a spatial buffer of half a mile or ¼ mile if not in "line-of-site", if occupied raptor nesting sites are found in the vicinity of work sites. Seasonal buffers are species specific and will be maintained as well.

Cultural Resources

- A contract Archeologist who qualifies under the Secretary of the Interior's Standards must be onsite during all work periods and especially to observe any digging to inspect any dirt moved looking for archeological material that was not discovered during previous survey's. Archeological material that can provide occupational and/or temporal information (i.e. projectile points, ceramics, features, etc.) must be collected, their description and location documented with photographs and/or in writing, and the park Superintendent notified of the uncovered material. All maintenance activities will be halted until the materials can be analyzed and recovered. The state historic preservation officer and the Advisory Council on Historic Preservation, will be consulted as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. If needed, formal §106 compliance will be conducted prior to resuming construction. The material, along with related data, will be given to the park archeologist at the completion of the project. Williams Company is responsible for the cost of archeological services.
- In the event that human remains are discovered during maintenance activities, all work on the project must stop and the park archeologist contacted immediately. As required by law, the coroner will be notified first. All provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- Pipeline workers will refrain from taking archaeological artifacts, rocks, plants or other natural or cultural objects.
- Vehicles and equipment should remain along the pipeline corridor and/or surveyed access routes driving in and out of project sites to diminish damage to archeological resources that are found outside of the pipeline corridor and in unsurveyed areas.
- If any anomalies are determined to be located within the Purple sage patch, an ethnobotanical resource, the Ute tribe will be consulted, as will SHPO.
- A Memorandum of Agreement will be developed in coordination with SHPO to establish protocols of conducting maintenance within or near known archeological sites.

Wilderness

- The Minimum Requirement Decision Guide will be used to determine whether the action is first necessary, then to determines the alternatives (equipment, tools, vehicles) for how to accomplish the action that will achieve both Wilderness and resource objectives.
- Vehicle tracks from UTVs and heavy equipment will be mitigated immediately after maintenance activities. Tracks will be raked out as equipment leaves the work site, as described in the Soils and Vegetation section.

- Revegetation efforts will use adaptive management techniques and monitoring coordinated with the NPS. Restoration may occur immediately as equipment leaves the work site and access routes, at a later time, or most likely, both.

Visitor Use and Experience

- Maintenance activities should be timed to coincide with low visitor use periods, typically November through March. These correspond roughly with the most favorable time for plant restoration work, except when frozen ground limits plant salvaging.
- Visitor access may be restricted from some areas during maintenance activities.
- The park will disseminate information on pipeline maintenance activities to the park staff and visiting public.

Visual Resources

- Revegetation efforts will use adaptive management techniques and monitoring coordinated with the NPS. Restoration may occur immediately as equipment leaves the work site and access routes, at a later time, or most likely, both.
- When entering and leaving work sites, vehicles as well as walking pipeline workers and inspectors must follow the same vehicle tracks during each trip. All persons on site will avoid stepping on or crushing undisturbed soil crusts on access routes or within work areas.
- Large accumulations of old lumps of pipeline coating, along with any other trash encountered along the pipeline and known to be less than 50 years old, will be either carried out by walkers or hauled out with equipment, but no extra vehicle trips will be used for this purpose.

SELECTION OF THE PREFERRED ALTERNATIVE

Alternative B is the National Park Service preferred alternative because it best meets the purpose and need of the project as well as the project objectives to 1) facilitate the maintenance of the Williams Northwest Pipeline facility that meets current safety standards and structural requirements, 2) analyze the past, present, and anticipated effects of pipeline maintenance on park resources, and 3) establish mitigation measures for anticipated pipeline maintenance.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

Alternative B is the environmentally preferred alternative. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that, "The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's § 101:

> 1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
>
> 2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
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> 3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;

4. Preserve important historic, cultural, and natural aspects to our national heritage and maintain, wherever possible, an environment that supports diversity and a variety of individual choice;

5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and

6. Enhance the quality of renewable resources and approach the maximum attainable recycling of renewable resources."

Alternative B is the environmentally preferred alternative because it best addresses the evaluation factors by first fulfilling the responsibilities of this generation to ensure that proposed maintenance activities are in compliance with the National Environmental Protection Act. This alternative also assures for all generations that the pipeline will be maintained to keep the public safe and to try and keep the park's surroundings aesthetically and culturally pleasing if the proposed mitigations are adhered to. Alternative B, with the proposed mitigation, also tries to preserve important historic, cultural and natural aspects of our natural heritage.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal Agency believes the balance of the effect will be beneficial.
Implementation of the preferred alternative will result in some adverse impacts; however, the overall benefits of maintaining the pipeline, particularly to the safety of the park resources and its visitors outweigh these negative effects.

Adverse effects are expected to all impact topics: geological resources, paleontological resources, soils, biological soil crusts, native vegetation, non-native species, water resources, floodplains and wetlands, archeological resources, ethnographic resources, threatened and endangered species, wilderness, natural soundscape, visual resources, visitor use and experience and park operations. Geologic impacts will be long term, site-specific and moderate when bedrock needs to be cut into to access the buried pipeline. These impacts are the same for paleontological resources. Soils including biological soil crusts will have negligible to minor short and long term impacts when heavy equipment tracks over soil in accessing work sites and when digging into the soil surface to expose the buried pipeline. Native vegetation will have minor to moderate short and long term impacts when vegetation is tracked over by heavy equipment accessing work sites and when vegetation is removed/salvaged from work sites. Maintenance activities may also promote non-native species with work sites which will have short and long term minor impacts. Ground disturbing activities will have a direct, site-specific, long-term, minor to moderate impacts to water resources and water quality as well as to floodplain and wetland values. Heavy equipment leaking fluids can have an indirect impact on water quality. Impacts to threatened and endangered species are direct and indirect, negligible to minor, site-specific, short-term, as spatial and seasonal buffers will be adhered to. Heavy equipment and ground-disturbing activities could have site-specific adverse impacts on ground nesting birds or burrowing animals. Use of heavy equipment and ground-disturbing techniques will have a direct, negligible to moderate, site-specific, short and

long impacts to archeological and ethnographic resources. Conducting maintenance activities within the pipeline corridor adjacent to wilderness has negligible to moderate short and long-term impacts to the wilderness and its character. Mechanized and motorized equipment such as vehicles, heavy equipment and helicopters, will cause a certain level of noise when used within the park, thereby compromising the preservation of natural conditions (including the lack of manmade noises). Impacts will have moderate, site-specific and localized, short and long-term impacts. Visual resources will be impacted directly and indirectly and have negligible to moderate, site-specific and localized, short to long-term impacts. Moderate visual effects will occur in areas where large areas of vegetation have been physically removed by heavy equipment. The visual and audio intrusion of heavy equipment, vehicles and helicopters will have direct and indirect, adverse, negligible to minor, site-specific and localized impacts to park visitors. Impacts to park operations will be direct, negligible to minor, site-specific and localized, short and long-term.

Although each impact topic will have adverse impacts from the preferred alternative there will also be some beneficial impacts. Under the preferred alternative a Vegetation Monitoring Plan will be implemented and will ensure that any work sites that have soils, biological soil crusts and native vegetation will be restored and the plan will ensure a higher success rate of impacted vegetation and soils. By promoting native vegetation and soils, other impacted resources will benefit as well such as water resources including floodplains and wetlands, threatened and endangered species, and wilderness.

Degree of effect on public health or safety:
NPS *Management Policies* (2006) advocate a safe work environment for employees, special use permittees and a safe experience for park visitors. The continued maintenance of the pipeline will ensure that the natural gas pipeline will remain safe and adhere to U.S. Department of Transportation (DOT) regulations. DOT requires that Williams Company maintain the integrity and safety of the pipeline for the public. The equipment proposed for use: hand tools, backhoes, trackhoes, sandblasting equipment are all standard devices with established safety protocols. There will be site-specific and localized, short and long term, negligible to minor direct and indirect impacts to visitors in the park. However, the majority of impacts will be relatively infrequent and short-term.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:
Archeological resources, ethnographic resources, floodplains and wetlands and wilderness will be affected by the implementation of the Preferred Alternative. These will be long-term, moderate adverse impacts due to ground disturbing work with large heavy equipment. Mitigation measures will be followed to ensure that these unique characteristics are preserved. A Memorandum of Agreement will be developed in coordination with SHPO to establish protocols of conducting maintenance within or near known archeological sites.

Degree to which effects on the quality of the human environment are likely to be highly controversial:
There were no highly controversial effects identified during either preparation of the environmental assessment or the public review period.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks:
There were no highly uncertain, unique, or unknown risks identified during either preparation of the environmental assessment or the pubic review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:
Not maintaining the natural gas pipeline threatens to violate Department of Transportation (DOT) regulations codified in 49 CFR Parts 191 and 192. The maintenance of the pipeline coincides with the Williams Company and NPS regulations and does not establish a precedent for future actions or represent a decision in principle about future consideration.

The activities proposed in Alternative B will not result in significant adverse effects on the natural or human environment.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:
Cumulative effects were determined by combining the effects of the alternative with other past, present, and reasonably foreseeable future actions at each park unit. A number of past, ongoing, or reasonably foreseeable future actions within the park and in the surrounding region of the park unit was identified and analyzed in the environmental assessment. Cumulative impacts vary by resource; however, cumulative impacts are not expected to be greater than minor in intensity. The relative adverse contributions of the Preferred Alternative to the overall cumulative impacts are predicted to be minor.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical places:
Arches National Park developed an Assessment of Effect in conjunction with this EA to meet its obligations for NEPA and under §106 of the National Historic Preservation Act, in accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing §106 (36 CFR 800.8, Coordination With the National Environmental Policy Act). Consultation and comment were solicited from the Utah State Historic Preservation Officers (SHPO) and ACHP. As discussed in the EA/AEF, archaeological resources, and ethnographic resources will be affected by implementation of the Preferred Alternative.

After applying the Advisory Council on Historic Preservation’s criteria of adverse effects (36 CFR Part 800.5, *Assessment of Adverse Effects*), the NPS concludes that implementation of the Preferred Alternative will have *an adverse effect* on archeological resources and ethnographic resources within Arches National Park. Arches National Park sent a letter stating such to the Utah SHPO office on April 22, 2010 requesting concurrence with this finding.

Concurrence with this determination was received from the Utah SHPO on May 3, 2010.

A Memorandum of Agreement is currently being developed to establish protocols to conduct maintenance within or near known archeological sites. On April 22, 2010, a site consultation was conducted with the Ute Indian Tribe with regard to potential impacts to the ethnobotanical resource Purple Sage (*Poliomintha incana).* The consultation resulted in

the decision that the Ute Indian Tribe will be contacted if maintenance of the pipeline needs to take place within the area of the Purple sage so they can collect plant material. They felt comfortable that there were plenty of plants adjacent to the pipeline that wouldn't be impacted by any maintenance activities and that the bulk of the stand would remain intact even if maintenance took place.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

The biological assessment of federally threatened, endangered and candidate species was developed within the EA/AEF and describes six species that occur or potentially occur within Arches National Park. In accordance with the Endangered Species Act, §7, consultation with the U.S. Fish and Wildlife Service (USFWS) concerning impacts to threatened and endangered species was initiated during the initial drafting of this EA. In August of 2009, public scoping letters describing the proposed action were sent to the Utah Ecological Service Office of the USFWS. Response to the public scoping letter, including threatened, endangered, and candidate species lists, was received from Utah USFWS in September 10, 2009. A biological assessment was then included within the EA/AEF that included determination of effect for each of the six species to be *"may effect but not likely to adversely affect"*. Additional conservations measures for the six species can be found in the EA/AEF.

Concurrence with the above determinations was received from Utah USFWS office on April 28, 2010.

Whether the action threatens a violation of federal, state, or local environmental protection law:

These actions will not violate any federal, state, or local environmental laws

APPROPRIATE USE, UNACCEPTABLE, IMPAIRMENTS

Sections 1.5 and 8.12 of NPS *Management Polices* underscore the fact that not all uses are allowable or appropriate in units of the National Park System. The proposed use was screened to determine consistency with applicable laws, executive orders, regulations and policies; consistency with existing plans for public use and resource management; actual and potential effects to park resources; total costs to the Park Service; and whether that public interest will be served. This plan is an appropriate use according to Arches General Management Plan, Arches Transportation Implementation Plan, and with the goals objectives of the *2006 National Park Service Management Policies* (NPS 2006) that state that define special park uses (section 8.6.1).

Therefore, the Park Service finds that the preferred alternative is an appropriate use. Because the application of mitigating measures is expected to be successful in ensuring that no major adverse impacts will occur and that satisfactory pipeline maintenance activities are is expected to be achievable, implementation of the preferred alternative will not result in any unacceptable impacts.

Yet, it is important to note that with regard to both alternatives, the intensity of overall adverse impacts to resources may increase when considered in total and in the time frame of more than ten years. The continued maintenance of this pipeline with the repeated survey trips, erosional control measures, and recoating issues may eventually result in significant impacts to park resources. Soils and vegetation would not have sufficient amount of time to become established and flourish and the cumulative effects of

continued maintenance of the pipeline would impede the attainment of a park's desired future conditions for natural and cultural resources. During the last 60 years, the majority of the work along the pipeline has been fairly minimal in dealing with erosional control efforts and occasional recoating issues. Still, the life of the pipeline is diminishing and maintaining the pipeline would become more extensive and the impacts of continually maintaining this pipeline would potentially become more significant. If it is determined by the NPS that pipeline maintenance is starting to significantly impact park resources after ten years, then alternatives to maintaining the Williams Northwest Pipeline in place would need to be considered, including rerouting outside of Arches National Park.

In analyzing impairments in the NEPA analysis for this project the NPS takes into an account the fact that if an impairment were likely to occur, such impacts will be considered to be major or significant under CEQ regulations. This is because the context and intensity of the impact will be sufficient to render what will normally be a minor and major or significant. Taking this into consideration, NPS guidance documents note that "Not all major or significant impact under a NEPA analysis are impairments. However, all impairments to NPS resources and values will constitute a major or significant impact under NEPA. If an impact results in impairment, the action should be modified to lessen the impact level. If the impairment cannot be avoided by modifying the proposed action, that the action cannot be selected for implementation." ("Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources" National Park Service, Natural Resource Program Center, July 2003).

In addition, to reviewing the definition of "significantly" under the NEPA regulations, the NPS has determined that implementation of the preferred alternative will not constitute an impairment to the integrity of Arches National Parks' resources and values as described by NPS Management Policies (NPS 2006 §1.4) This conclusion is based on the NPS's analysis of the environmental impacts of the proposed action as described in the EA/AEF, the public comments by the direction in 2006 NPS Management Policies. The EA/AEF identified less that major adverse impacts on geological resources, paleontological resources, soils, biological soil crusts, native vegetation, non-native species, water resources, floodplains and wetlands, threatened and endangered species, archeological resources, ethnographic resources, wilderness, natural soundscape, visual resources, visitor use and experience and park operations. This conclusion is further based on the Superintendents' professional judgment, as guided and informed by each park's general and resource management plans. Although the plan/project has negative impacts, in all cases these adverse impacts are the result of actions taken to preserve and restore other park resources and values.

PUBLIC INVOLVEMENT

The EA/AEF was made available for public review and comment during a 30-day period ending May 16, 2010. To notify the public of this review period, a press release was mailed to stakeholders, affiliated Native American Tribes, interested parties and newspapers. Copies of the document were sent to the US Fish and Wildlife Service, the Utah State Historic Preservation Office and the Williams Company. Each has concurred with our determinations. The EA/AEF was also made available at the Grand County Library, at the Arches National Park Visitor Center and the Southeast Utah Group Headquarter office in Moab, UT. The EA/AEF plan was posted on NPS Planning, Environment, and Public Comment website (PEPC) at http://parkplanning.nps.gov/arch. One comment was received during this review period. This comment was from the National Parks Conservation Association (NPCA) who stated their support for the preferred alternative. They also

wanted to have on record that the NPCA believes it would be in the best interest of Williams Company and the Park to abandon the existing pipeline and re-route it outside of the Arches boundary.

CONCLUSION

In consideration of the comments received throughout the planning process, careful review of potential resource and visitor impacts, and developing appropriate mitigation to protect resources, the Preferred Alternative best strikes a balance between the widest range of use and enjoyment of Arches National Park degradation of the environment or risk of health or safety.

The Preferred Alternative does not constitute an action that normally requires preparation of an Environmental Impact Statement (EIS). The Preferred Alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are negligible to moderate. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any Federal, State, or local environmental protection law. In addition to reviewing the list of significance criteria, the National Park Service had determined that maintenance of the pipeline will not constitute an impairment to Arches' resources and values. Based on the foregoing, it has been determined that an EIS is not required for this proposed project on NPS lands, and thus, will not be prepared. Implementation may take place immediately after the date of this decision.

Approved: MB Scott 5/21/10

Mary Gibson Scott — Date

Acting Regional Director, NPS Intermountain Region