

# **FINDING OF NO SIGNIFICANT IMPACT**

## **Pipeline Parcel**

### **RICHMOND NATIONAL BATTLEFIELD PARK**

The entrance to the Drewry's Bluff unit of Richmond National Battlefield Park currently contains underground pipelines used to transport sulfuric acid and water across Park property. The pipes are part of a 3.8 mile long pipeline and were installed on this property under a Special Use Permit (SUP) ca. 1980 that has expired. The NPS has no legal authority to renew the SUP. An environmental assessment (EA) was prepared earlier this year in order for the NPS to determine the best way to resolve the problem of unauthorized pipelines across Park lands. The resolution needed to meet three objectives: 1. Protect public health and safety; 2. Protect the Park's natural and cultural resources; and 3. Acceptable by both the NPS and the operating company.

A more complete description of the acid lines can be found in the EA. The lines were engineered to have minimal joints, as these are prone to failure by erosion from particulate matter running through the pipes and by stress of the pressure of turning liquid. The lines are protected and monitored by multiple means, greatly minimizing the risk of a leak. The system was engineered to endure for a minimum of 50 years and has been in the ground for approximately 20 years with no spills, leaks, or problems. The system is at an ideal point in its life as the probability of line failure is greater at the beginning of the life of the pipeline than after it has been in service for a period, and any connection errors have been repaired.

The community where the Drewry's Bluff unit is located is approximately 3 miles in diameter and has a population of 3,700. The nearest housing development from the site is approximately 0.5 mile, and there are no documented drinking water wells or reservoirs in the area. The nearest commuter routes, Interstate 95 and Route 1, are within .5 miles and are heavily traveled. Fort Darling road is the only access to 3 entities: the Drewry's Bluff unit of the Park, and two industries on either side of the Park unit, Central Oil Asphalt Plant and Castle Equipment. Traffic to the unit was 12,136 vehicles for 2004 and 12,882 vehicles for 2003. The unit is forested on approximately 60% of its acreage. Among the non-forested areas is a small lawn area at the unit's entrance (adjacent to I-95), within which area the pipeline is located. This area is currently maintained in turf grass that is mowed every two weeks.

The EA reported on three possible alternatives to provide an opportunity for public comment and as a necessary step in determining the level of impact. Concerns identified during scoping and evaluated in the EA included public health and safety, and air and water quality associated with the presence and possible movement of the pipeline.

### **SELECTED ALTERNATIVE**

The NPS has decided to select Alternative A, described in the EA as the Preferred Alternative, for implementation. This alternative will involve exchanging a parcel of land designated Tract #03-110 (0.32 of an acre) at Drewry's Bluff for a parcel of land at the Beaver Dam Creek battlefield unit designated Tract #01-114 (236 acres). Pursuant to 16 U.S.C. 4601-22(b) the

Secretary of the Interior is authorized to accept title to any non-Federal property within a unit of the National Park system, and in exchange therefore convey to the grantor of such property any Federally-owned property determined to be suitable for exchange or disposal which is located in the same State as the non-Federal property to be acquired. The values of the properties so exchanged either shall be approximately equal, or if they are not approximately equal, the values shall be equalized by the payment of cash as circumstances require. Tract 01-114 contains an additional piece of the Beaver Dam Creek battlefield, along with a buffer from adjacent development. On June 26, 1862, during the Battle of Beaver Dam Creek, this ground was occupied by a portion of the Union Army (the 7th and 9th PA Reserves) who held this ground against Confederate attacks. On the following day, Confederate infantry crossed this land and struck Union forces as they prepared to retreat to the vicinity of Gaines Mill. In accordance with National Park Service guidelines, the values of the properties to be exchanged shall be of equal value or the values must be equalized through a cash payment from the appropriate party. Tract #03-110 will be conveyed together with a right of way across NPS land for access to the parcel. It will also be subject to a right of way for the existing park entrance road and restrictive covenants limiting the use of the property to protect against impacts to adjacent Park land. The pipeline will remain in place, and no above-ground improvements or vegetation changes will be permitted on the Drewry's Bluff parcel. The tract shall not be used for any storage or disposal, such as the storage or disposal of trash, hazardous wastes, vehicles, equipment and/or appliances. In the event that excavation and ground disturbance occurs, DuPont will be required to return the landscape and topography to its pre-excavation condition within 20 calendar days of completion of the underground work. In the event that archeological resources are discovered during said ground disturbing activity, work shall immediately be suspended and the Park Superintendent would be notified. The Superintendent will then have three working days to investigate the discovered resources. Any and all archeological resources discovered shall remain the property of the National Park Service.

In order to assure access to other land owned by the National Park Service by the public and representatives of the National Park Service, its contractors and partners, the NPS shall reserve a right of way across the pipeline parcel (Tract 03-110). Furthermore, the use of the property will be restricted to its current use only.

## **OTHER ALTERNATIVES CONSIDERED**

Other alternatives considered included allowing the pipeline to remain in place through special legislation and relocating the pipeline(s) entirely off NPS lands. The special legislation would be enacted by Congress and would specifically authorize the NPS to allow these pipelines to remain on park land. This would only authorize these lines on Park property if it is passed into law by Congress. Such passage is not certain.

The re-routed pipelines would likely be placed under the Right of Way for Fort Darling road approximately 50-75 feet west of its current location. Fort Darling road and its Right of Way are accessible to the traveling public, whereas the pipeline is now located in areas generally inaccessible to the public. Re-routing the pipelines would require discontinuing production at both the chemical and Kevlar plants and closing Fort Darling Road for 3-4 weeks, completely draining the current lines, blowing them with dry air or Nitrogen to remove as much liquid as possible. Maintenance workers, wearing full acid suits would then break the existing line and

install elbows in the pipes in order to route them around NPS property. As described in the EA, this alternative greatly increases the likelihood of an acid release and therefore the risk to health and human safety, as well air and water quality.

## **THE ENVIRONMENTALLY PREFERRED ALTERNATIVE**

The exchange of real property rights alternative is the environmentally preferred alternative. The environmentally preferred alternative is the alternative that will promote the national environmental policy as expressed by §101 of the National Environmental Policy Act. This includes alternatives that:

- 1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- 2) assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings
- 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 of our national heritage and maintain, wherever possible, an environment that supports diversity and 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 depletable resources.

The “exchange real property rights” alternative (selected alternative) would permit the pipeline to remain in place, thereby alleviating the extreme health and safety concerns associated with moving it (#2 & 3). By disallowing above ground improvements to the site, this alternative preserves aesthetics as well as the cultural landscape (#1, 2 & 4). By conveying a currently un-protected parcel to the NPS, this alternative best helps the NPS to fulfill the responsibilities of each generation as trustee of the environment, and to preserve important historic natural aspects of our national heritage (#1 & 4). Therefore Alternative A, the Selected Alternative is the Environmentally Preferred Alternative.

The “special legislation” alternative would permit the pipeline to remain in place, thereby alleviating the extreme health and safety concerns associated with moving it (#2 & 3). The NPS would still own the parcel, and therefore could prevent above ground improvements, which would in turn preserve the aesthetics as well as the cultural landscape (#1, 2 & 4). However, Alternative B does not result in the protection of a currently un-protected piece of battlefield, and therefore does not fulfill #1 & 4 as well as Alternative A.

The “relocate pipeline” alternative would result in the re-location of the acid lines, with associated health, safety and environmental concerns, therefore failing to fulfill # 1, 2 & 3. The NPS would still own the parcel, and therefore could prevent above ground improvements, which would in turn preserve the aesthetics as well as the cultural landscape. However, this alternative does not result in protection of a currently un-protected piece of battlefield, and therefore does not adequately fulfill #4.

## WHY THE SELECTED 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*

Adverse impacts of the selected alternative are associated with the failure of the acid line and the resulting leak of sulfuric acid into the environment. These could result in minor to moderate impact to air and water quality, negligible to minor impact on health and safety, and minor impact on vegetation and wildlife. However, this risk is greatly minimized by the protection and monitoring measures in place, the absence of joints currently in the lines, and the lack of disturbance to the lines associated with this alternative. Beneficial impacts of the selected alternative are associated with the acquisition of an additional parcel of land at the Beaver Dam Creek battlefield by the NPS.

The additional protection by the NPS of this land and its resources would result in minor impacts to archeological resources, vegetation and wildlife and visitor use/experience and visual resources, and moderate impacts to cultural landscapes.

### *Degree of effect on public health or safety*

As described in the EA, this alternative would have negligible impacts to health and safety. There are safety risks associated with the presence of this acid line. If the line should fail and the liquid leak, sulfuric acid has the ability to create a toxic gas when it hits moisture. Depending on the size and concentration of the cloud, the substance can cause extreme injury or death in the localized area of the cloud. The gas created would gradually naturally be diluted to non-hazardous levels in air, and it would take a relatively sizeable spill to create this gas in any measurable amount. This risk is greatly minimized by the protections currently in place and the regular monitoring of the pipeline.

Any spilled acid in the liquid form would most likely remain underground, and if not contained, enter the groundwater after repeated rain events. However, because there are no documented drinking waters or swimming facilities in the area, there is little to no risk of an accidental spill resulting in human ingestion or dermal contact through water. As the line would remain buried and undisturbed under this alternative, contact with the liquid acid would be restricted to line maintenance workers who would be equipped with the proper PPE to avoid exposure. Therefore, risks associated with contact burns to skin, eyes, etc. are not likely.

The area surrounding Drewry's Bluff is highly industrial, and chemical releases of sulfuric acid and other toxic chemicals have been known to occur. When combined with the risk of such a spill in the surrounding area, the greatly reduced risk of an acid spill from the pipeline may escalate the impact to health and safety slightly. In addition, the park is currently planning to move its visitor parking lot approximately 500 feet closer to the pipeline area in order to correct several resource issues. The combination of these factors may raise the impact to health and safety under this alternative to minor.

*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*

There are no prime farmlands, wetlands or wild and scenic rivers in the proximity of the project. The area around the Drewry's Bluff unit was used as the Confederate Naval Academy and Marine Corps training facility during the Civil war. It contains Fort Darling and the strategic overlook used to protect Richmond from Union gunboats traveling up the river. A Union naval attack on Fort Darling failed in May of 1862 as did a Union army advance in May of 1864. The associated archeological sites likely to exist at the park unit and cultural landscape are approximately 750 feet northeast of the project site. The area in and around the pipeline corridor has been largely disturbed during the construction of the pipelines and unit entrance road. Close examination of historic maps and primary source material reveals that no archeological resources are likely in area of the pipeline, and the conditions of the land exchange agreement would not permit any above ground changes to the pipeline corridor, so this alternative would have no impact to archeological resources or cultural landscapes at the Drewry's Bluff unit.

The Beaver Dam Creek unit, along with tract #01-114, contains a small portion of the battlefield where part of the first major battle of the Seven Days' battles took place. Remnants of the millrace and mill site present at the time of the battle still exist, as well as part of the union defense line. Because the Park would acquire parcel #01-114, this alternative would have a minor to moderate beneficial impact by enhancing the protection of any archeological resources found at parcel #01-114 along with the Beaver Dam Creek cultural landscape through NPS ownership and management.

The James River lies at the northeastern boundary of the Drewry's Bluff unit and is a confirmed Anadromous Fish Use Area containing striped bass, yellow perch, blueback herring, alewife, American shad and hickory shad (Department of Game and Inland Fisheries, 2004). Although any spilled acid could be neutralized to a certain degree by carbonates and other sources of alkalinity, and it would be quite a bit diluted by rain, ground and stream waters by the time it reached the James, it is possible that a large, uncontained spill could result in a fish kill in the James. An uncontained spill could also release sulfates into the water, therefore dropping the pH and degrading the aquatic community on a much larger scale. Therefore this alternative could result in minor to moderate damage to water resources. However, a leak of the size necessary to cause this kind of damage is greatly minimized by the secondary steel sleeve, the cathodic protection system, the presence of minimal joints throughout the line (described above), and the regular pipeline monitoring.

*Degree to which effects on the quality of the human environment are likely to be highly controversial*

Based on the public review of the EA, no controversy was identified or is anticipated as a result of implementing the Selected Alternative. The EA was widely distributed to state and local agencies and park neighbors. It was available online, and in hardcopy at park headquarters, and its availability was advertised for four days in the Richmond Times Dispatch. No comments were received from the public, and state and local agency responses were in favor of the selected alternative.

*Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks*

The impacts described in the EA are based upon published documentation and the advice of many subject experts. They are described, in detail, and are based on the worst case scenario associated with a large acid spill. As described, this risk is greatly minimized in this alternative by the protection and monitoring measures in place along the pipeline, and by allowing the pipeline to remain undisturbed.

*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*

This EA describes the very unique situation associated with an acid pipeline running across NPS property, and is not likely to be repeated. The exchange of property, as described in the preferred alternative, is currently an accepted solution to property issues such as this. For these reasons, this alternative is not likely to establish a precedent for future action.

*Whether the action is related to other actions with individually insignificant but cumulatively significant impacts*

Because the area surrounding this park unit is highly industrial, various chemicals, including sulfuric acid, are released into the environment by many of the local industries. In addition, the southern portion of the Park unit contains a closed county landfill that may be impacting the adjacent park stream. Last, the park is at the early planning stages of moving its visitor parking lot approximately 500 feet closer to the location of the pipeline in an effort to protect natural and cultural park resources. However, the relevant impacts (i.e. health and safety and air and water quality) were analyzed with these factors in mind, and still did not exceed the moderate level.

*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 resources.*

Compliance with §106 of the National Historic Preservation Act was completed with a concurrence with the NPS determination of no effect by the Virginia State Historic Preservation Officer on September 1, 2004.

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

The U.S. Fish and Wildlife Service, Virginia Division of Game and Inland Fisheries and the Virginia Division of Natural Heritage concurred with the determination of no effect on threatened or endangered species.

*Whether the action threatens a violation of Federal, state, or local environmental protection law*

This action violates no federal, state, or local environmental protection laws.

*Impairment*

In addition to reviewing the list of significance criteria, the National Park Service has determined that implementation of the selected alternative will not constitute an impairment to Richmond National Battlefield Park's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, the public comments received, and the professional judgment of the decision-maker guided by the direction in *NPS Management Policies* (December 27, 2000). Although the action has the potential for some negative impacts, this potential is already present at the site, and the action is necessary to correct the current legal issue. Overall, the action minimizes adverse impacts and results in benefits to the park, its resources and values, and opportunities for their enjoyment, and it does not result in their impairment.


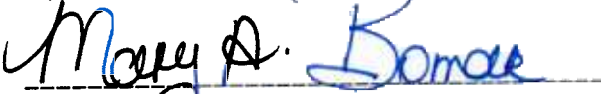
**PUBLIC INVOLVEMENT**

The EA was widely distributed to state and local agencies and park neighbors. It was available online, and in hardcopy at park headquarters, and its availability was advertised for four days in the *Richmond Times Dispatch*. It was made available during a 60-day period ending July 8, 2005. No comments were received from the public. Responses were received from nine state and local agencies. The responses were either in support of, or had no objections to, the preferred alternative. These responses resulted in no changes to the text of the environmental assessment. The availability of the FONSI will be advertised in the *Richmond Times Dispatch*.

**CONCLUSION**

The selected alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The selected alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor or moderate in intensity. There are no significant 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.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended:	 Cynthia MacLeod, Superintendent	<u>7-27-05</u> Date
Approved:	 Mary A. Bomar, Regional Director Northeast Region	<u>9-7-05</u> Date