

Community Fact Sheet

Orphan Mine Site

2011 Soil Investigation

National Park Service
U.S. Department of the Interior

Grand Canyon National Park
August 2011



A SITE HISTORY...

The Orphan Mine Site is located on and below the South Rim in Grand Canyon National Park. The Site is approximately two miles northwest of Grand Canyon Village, between Maricopa Point and the Powell Memorial along the Hermit Road. The South Rim Trail detours around the Orphan Mine Site.

The Orphan Mine Claim was patented in 1906. It contained 20.26 acres extending from approximately 500 feet south of the South Rim to approximately 1,100 feet below the South Rim. In the early 20th century it hosted occasional mining of copper and other metals. In 1951, geologists discovered the presence of high-grade uranium deposits on Site, and by 1956 a private mining company had purchased the Orphan claim to develop a uranium mine. The company built many structures to support its mining activities, including an aerial tram system for hauling ore from the lower mine area to the upper mine area on the South Rim. To increase uranium production, in 1959 the tram was replaced with a hoisting shaft supported by an 80-foot-high steel headframe. Mine production ceased in 1969, and in 1987 all rights associated with the Orphan Mine claim reverted to the federal government.



A SITE LEGACY...

A legacy of thirteen years of uranium mining at the Orphan Mine is the waste present on the upper and lower mine areas and on the steep slope down the canyon, together with the multi-million dollar price tag to clean up the Site. The upper mine area is fenced to protect park visitors from any potential exposure to radiation and other mining-related contaminants. The lower and middle mine areas are inaccessible to park visitors. The original "glory hole" in the lower mine area, though isolated, is clearly visible from Maricopa Point.

ENVIRONMENTAL INVESTIGATIONS...

The National Park Service (NPS) has performed preliminary environmental investigations that identified areas of elevated radiation levels and other hazardous substance contamination associated with historic mining activities at the Site. Further evaluation of the Site pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is underway for the upper mine area --the Engineering Evaluation/Cost Analysis (EE/CA).

The upper mine area EE/CA will analyze the nature and extent of contamination, determine the human and ecological risk from the contamination, and identify and evaluate cleanup alternatives for the area. Once completed, the EE/CA Report (including any cleanup recommendations) and supporting documents will be made available to the public for review and comment, most likely in the latter part of 2012. The EE/CA for the lower and middle mine areas is expected to begin in 2012.

CHANGES ON THE HORIZON ...

The upper mine EE/CA has three phases. Phase I was the Man-Made Features Removal project, completed in June 2009, that consisted of removing concrete, debris, and other mining-related equipment from the upper mine area so that field investigation activities such as soil sampling

could be performed. Phase II of the EE/CA includes a year-long radon monitoring effort that is nearly complete; it also includes a soil investigation scheduled for mid-September through mid-November, 2011, during which the Park will have field teams investigating historic soil contamination. Visitors may notice field sampling teams collecting soil samples in both clean (background) areas as well as in areas potentially impacted by mining activities. The results of the radon and soil investigations will be used to develop a cleanup plan for the Site.

Phase III of the EE/CA will be development of the EE/CA Report, including proposed cleanup plans. This report will be made available for public review and comment.

The history of the mine will be preserved through wayside exhibits, interpretive programs, and the comprehensive cultural resources inventory and data recovery program conducted at the Site that included completion of Historic American Engineering Record (HAER) reports for all man-made features at the upper mine area, documentation of the Civilian Conservation Corps footpath, and development of an interpretive plan for the area. The HAER reports are available for public review in the Site administrative record file, discussed below.



AND NOW FOR YOUR PART...

Community involvement is an important factor in the CERCLA process. In 2009, public meetings were held in the Park and in Flagstaff, AZ to give the public an opportunity to learn about the Man-Made Features Removal Project and the EE/CA process in general. The public will have the opportunity to review and comment on the Orphan Mine Site EE/CA Report and proposed cleanup plans for the upper mine area once the EE/CA Report has been completed in 2012. An administrative record has been established that contains documents upon which the selection of Site cleanup action will be based. This record, which is updated periodically, is available for public review at the following two locations:

Grand Canyon National Park
Museum Collection Office
Corner of Albright Street and Center Road
Grand Canyon, Arizona 86023
Contact: Colleen Hyde
Phone: (928) 638-7769
Mon.-Fri. 8:00 a.m.– 5:00 p.m.

National Park Service
1050 Walnut Street, Suite 220
Boulder, Colorado 80302
Contact: Shawn P. Mulligan
Phone: (303) 415-9014
Mon.-Fri. 9:00 a.m.– 4:00 p.m.

FOR MORE INFORMATION...

If you have questions concerning the information contained in this fact sheet, please contact Maureen Oltrogge, at (928) 638-7779, or Shawn P. Mulligan, at (303) 415-9014.