



BROWNFIELDS PROGRAM PROJECT FACT SHEET

Dodd/Beals Fire Academy Reno, Washoe County

SITE BACKGROUND

The Dodd/Beals Firefighting Academy was located on 77 acres of land donated to the University of Nevada, Reno (UNR) by the Stead Air Force Base, and operated from the early 1970s to the mid 1990s. 42 acres were used for administrative buildings and firefighting training facilities, including mock buildings on concrete pads that were ignited and extinguished for practice. The 42-acre portion of the property includes an Upper Site (14 acres) and a Lower Site (28 acres). UNR decommissioned the facility and removed all buildings.

UNR applied and was accepted for Nevada Brownfields Program (NBP) funding for Phase I Environmental Site Assessments (ESAs) to provide an initial assessment of site conditions and history.

FUNDING

Activity	NBP Funding	Date
Phase I ESAs	\$2,000	1999

Activity	UNR Funding	Date
Phase II ESAs	\$86,000	2000
Remedial Action Plans	Unknown	2001/2
Cleanup	\$780,000	2003-2008

SITE LOCATION

- 4501 to 4669 Echo Avenue, Reno, Washoe County
- APN: 086-154-04, 086-130-04, 086-143-05
- 77 acres



INVESTIGATIONS

Phase I ESAs were conducted on the sites and found that soil and groundwater were contaminated with petroleum hydrocarbons, primarily through leaching from retention ponds and the diesel and gas mixture used to fuel fires.

VOLUNTARY CLEANUP PROGRAM

Following the Phase I ESAs, UNR applied for and was accepted to move the project to the Voluntary Cleanup Program (VCP). Under this program, property owners conduct site investigation and cleanup under oversight of NDEP staff, with the site remediated to State cleanup standards until the State determines that no further action is required. As part of this process, UNR submitted its Remedial Action Plans (also called Remedial Agreement) to NDEP for review and approval. The public also had the opportunity to provide input before the remediation plan was approved and implemented.

Property owners that successfully complete the VCP receive a notification of "Clean Closure" releasing them from future liability for contamination found on the site related to the discovery of an actionable release.

In accordance with the Nevada VCP standards, NDEP fulfilled the role of the Certified Environmental Manager (CEM) and lead environmental contractor, and UNR was billed for NDEP staff time.

As part of the VCP process, Phase II Environmental Site Assessments and Remedial Action Plans (RAPs) were generated, and remediation activities were conducted in accordance with the RAPs.

Phase II Environmental Site Assessments

Cost to UNR: \$86,000

Phase II ESAs were conducted to analyze soil and groundwater. As part of this analysis, 52 test trench locations were chosen based on their proximity to known petroleum usage. The locations were excavated and soil samples were collected and analyzed. Groundwater wells were also installed, and groundwater analyzed. This data was used to inform the Remedial Action Plans (RAPs).

Remedial Action Plans

Cost to UNR: Unknown

RAPs were prepared for both the Upper Site and the Lower Site. The objectives of the RAPs were to develop remedial strategies to (1) mitigate risks to human health and the environment from the petroleum hydrocarbon soil contamination, and (2) evaluate dissolved petroleum product constituents in groundwater relative to potential impacts to the environment. The RAPs for the sites used a risk-based cleanup approach to target areas of particular concern to human health or the environment based on factors like the mobility and toxicity of the contaminants, the proposed use of the site, and the physical properties of the soil and groundwater. The recommended remedial approaches for the sites are summarized as follows:

Lower Site

- **Soil Remediation:** Soils exceeding 1200 mg/kg total petroleum hydrocarbon (TPH) concentrations within the identified areas (approx. 11,000 cubic yards) excavated up to 8 feet in depth and treated.
- **Groundwater Remediation:** Natural attenuation for benzene and MTBE groundwater plume.

Upper Site

- **Soil Remediation:** Install and operate vacuum extraction (VE) system for 12 - 18 months in the areas exceeding 1000 mg/kg TPH.
- **Groundwater Remediation:** Install an in-situ VE and air sparging (AS) system for approximately 18 months.

Cost to UNR: Unknown

As part of UNR's involvement with the State's VCP, NDEP reviewed all remediation activities and results and verified they met all established, site-specific remediation goals.

Lower Site

In mid-2005, the excavation of petroleum hydrocarbon impacted soils along with confirmation sampling of excavation walls and bottoms was undertaken as part of the Remedial Action Plan. Excavated soils were stockpiled and subject to bio-remediation on site.

Soil and groundwater sampling and monitoring took place from January 2000 until February 2007, at which time the State recognized that remediation goals had been met for the lower site and no further action was necessary.

A Certificate of Completion for the Voluntary Cleanup Program was issued for the lower site in October 2007..

Upper Site

An AS/VE system was installed to remediate benzene concentrations and was in place from 2003 until 2008. After the AS/VE system was removed, one year of quarterly monitoring was conducted to ensure limited rebound of benzene concentrations. Groundwater at the upper site was monitored quarterly from late 2002 until December 2008.

Soil contamination remains in place, but the sources of contaminant loading to groundwater were addressed through vapor extraction.

A Certificate of Completion of the Voluntary Cleanup Program was issued for the upper site in June 2009.

CURRENT STATUS

The lower site was remediated consistent with unrestricted industrial or commercial use. The upper site was remediated consistent with residential use. The sites remain undeveloped and under UNR ownership.

RESOURCES

To learn more about the Nevada Brownfields Program, visit:

<https://ndep.nv.gov/environmental-cleanup/brownfields>

