

YUMA ARMY PROVING GROUND (YAPG)  
Yuma, Arizona, Yuma County  
Project Background

Agency Contacts

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Site Description

YPG is located 32 miles northeast of Yuma, Arizona, and occupies 838,174 acres in Yuma and La Paz Counties. Its western edge is adjacent to the Colorado River. The facility consists of Typical Sonoran desert vegetation and wildlife. Summer daytime temperatures average 100-115 degrees Fahrenheit, while winter temperatures range from 32 to 85 degrees Fahrenheit.

The former Lead Arsenate Burial Site is located approximately one mile northwest of the Laguna Army Airfield within the YPG. This is in the NW 1/4, SW 1/4, Section 33, Township 6 South, Range 21 West, Gila and Salt River Meridian of the state of Arizona. The site is in open terrain on a small bluff that is twenty (20) feet above and fifty (50) feet laterally from a dry stream bed. The burial pit was an augured hole approximately twenty (20) feet in depth and twenty-four (24) inches in diameter into which the pesticide drums were vertically stacked. The removed material appeared to be a mixture of pesticide and other unknown elements.

The former fire training pit at the Fire Fighting Training Facility is a shallow, circular, earth-bermed basin, approximately ninety-five (95) feet in diameter. It is located approximately 1/4 mile west of the Laguna Army Airfield. The site is approximately five hundred (500) feet from the nearest building.

The former fuel bladder test area is located approximately 3/4 mile west of US 95 and 1/4 mile north of Laguna Dam Road. Access to this site is gained from the YPG Material Test Area, traveling east approximately 3/4 mile on Sanchez Road. The fuel bladder test area is part of the Desert Region of the Basin and Range Physiographic Province. The fuel bladder test area was used from 1965 to 1975 to test collapsible storage tanks. The majority of the tests were conducted on a 15 - 20 acre area which is referred to as the POL Test Area. During the course of these tests, at least 200,000 gallons of MOGAS escaped into the soil.

Site History

YPG started as a desert tank training area during WWII and has since evolved into a major Army facility for the development and testing of a wide range of ammunition. YPG is also a target range for aerial bombing, a former chemical warfare development area, and a future site for production ammunition testing (scheduled to occur through 1996).

The lead arsenate pesticide was buried in the mid-1970's as a means of disposal. When the pesticide was later banned, the site where it was buried was made a SWMU. The pesticide was removed for permanent disposal.

The Fire Fighting Training Facility Pit was actively used for fire fighting training from the mid-1960's to 1987. Preliminary sampling of the Fire Training Pit was conducted in October, 1992. Data from the sampling activities was received and reviewed by ADEQ and was found to be inconclusive. A formal report was not submitted by the Army.

In 1965, the US Army YPG began testing a variety of collapsible fuel storage bladders and filter/separator systems. The majority of the tests were confined to a small area referred to as the POL Test Area. The fuel bladder was placed within a bermed pit and filled with regular grade gasoline and water, and was then monitored for a period of time. Often, the tanks were repeatedly drained and filled to simulate actual use. On several occasions, the fuel bladders failed and large quantities of gasoline escaped; at least 200,000 gallons of MOGAS are known to have escaped. Testing at the Fuel Bladder Test Area was discontinued in 1975. Preliminary soil sampling at the Fuel Bladder Test Area was conducted in September, 1992. Three monitoring wells and five soil borings were installed and samples were taken for initial Phase 1.0 investigation. ADEQ received the formal report concerning the investigation of the Fuel Bladder Test Area on April 8, 1993. During Phase 2.0 Event Number 1, Well #04 at the Fuel Bladder Test Area was abandoned on June 24, 1993 due to improper installation of the well. Another well (Well #05) was installed on June 28, 1993 between Wells #02 and #03 in order to determine if they must also be abandoned. During Phase 2.0 Event Number 2 fieldwork, which took place from December 1994 to the end of February 1995, two additional monitoring wells and seven additional soil borings were installed. Plans for Event Number 3 include two additional monitoring wells and five additional soil borings. Event Number 3 is scheduled to be conducted from the third week of May through the beginning of July, 1995.

#### Project Summary of Events and Schedule

Phase 2.0, Event Number 2 fieldwork began the first week of December 1994, and was completed the last week of February 1995. Seven soil borings and two groundwater monitoring wells were completed during the event. The project manager and hydrologist performed a site visit to observe fieldwork on February 1, 1995. A project managers meeting was held on May 8, 1995 to discuss results from the analyses of 126 soil samples and twenty groundwater samples collected during the Phase 2.0 Event Number 2 fieldwork as well as plans for additional sampling at the site. Phase 2.0 Event Number 3 fieldwork began the third week of May 1995. Event Number 3 fieldwork is scheduled to continue through the beginning of July, 1995. The project manager performed a site visit

on May 18, 1995 to observe the fieldwork. The project hydrologist performed a site visit on May 30, 1995 and collected three split samples during groundwater sampling activities.

Approximately one hundred fifty (150) pounds of buried lead arsenate pesticide in powder form was excavated in July, 1992. A report was issued to ADEQ in October, 1992. ADEQ reviewed and commented on the final report on the lead arsenate removal from YPG. Comments were sent to YPG on January 8, 1993. ADEQ received a response from YPG to ADEQ's letter of August 17, 1993 asking them to respond to our comments on January 27, 1994.

During fire extinguishing training, the Fire Fighting Training Pit was filled with water and various fuels and solvents which floated on the water's surface. The contents of the pit were ignited and then put out during the extinguishing training. Residual fuels were allowed to completely burn and the water was allowed to infiltrate the soil of the pit. On-site work at the Fire Fighting Training Facility began on October 6, 1992. The plan of drilling three borings (150 feet total) was altered to two because the contamination was deeper than expected. The first boring extended 80 feet deep, with non-detect reached at 70 feet. The second boring was drilled to the remaining 70 feet. Non-detect was not reached. Data from the laboratory analyses of the soil samples were received by ADEQ from YPG. A formal report summarizing the data was not written. YPG plans to conduct further investigation of the Fire Fighting Training Facility to define the extent of contamination. A formal report will then be submitted.

The Fuel Bladder Test Area was designated for immediate investigation by the base due to the determination that fuel in the amount of approximately 200,000 gallons may have been released at the site between 1965 and 1975. Analyses of groundwater samples from monitoring wells installed during ongoing investigation of the site have shown evidence of petroleum and petroleum by-products. Three monitoring wells and five soil borings were installed during the Phase 1.0 fieldwork event and samples were taken for initial investigation. ADEQ received the formal report concerning the investigation of the Fuel Bladder Test Area on April 8, 1993. During the Phase 2.0 Event Number 1 fieldwork, Well #04 at the Fuel Bladder Test Area abandoned (June 24, 1993) due to improper installation of the well. Another well (Well #05) was installed on June 28, 1993 between Wells #02 and #03 in order to determine if they must also be abandoned. During Phase 2.0 Event Number 2 fieldwork, which took place from December 1994 to the end of February 1995, two additional monitoring wells and seven additional soil borings were installed. Event Number 3 was conducted in mid 1995, and included two additional monitoring wells and five additional soil borings. The draft Preliminary Assessment for the Fuel Bladder Test Area is to be ready by mid-1996.