

**United States Environmental Protection Agency**  
**Region III**  
**POLLUTION REPORT**

**Date:** Monday, December 2, 2013

**From:** Ann DiDonato

**Subject:** 2013 Injection Activities Completed  
Precision National Plating Site  
198 Ackerly Road, Clarks Summit, PA  
Latitude: 41.5105000  
Longitude: -75.7155000

<b>POLREP No.:</b>	68	<b>Site #:</b>	
<b>Reporting Period:</b>	11/9/13 - 11/28/13	<b>D.O. #:</b>	
<b>Start Date:</b>		<b>Response Authority:</b>	CERCLA
<b>Mob Date:</b>		<b>Response Type:</b>	Non-Time-Critical
<b>Demob Date:</b>		<b>NPL Status:</b>	Non NPL
<b>Completion Date:</b>		<b>Incident Category:</b>	Removal Action
<b>CERCLIS ID #:</b>	PAD053676631	<b>Contract #</b>	
<b>RCRIS ID #:</b>			

**Site Description**

The Precision National Plating Site is located at 198 Ackerly Road, Clarks Summit, Pennsylvania, approximately 10 miles north of Scranton, Pennsylvania. The property measures 46 acres, approximately five acres of which were used for site operations and the remainder of which are undeveloped and largely wooded. A 45,000 square foot operations building that was demolished in 2000 was the principal structure on the site. Portions of the concrete slab floor remain and are utilized as a staging area for materials during cleanup.

The site began operation as a chromium electroplating facility for locomotive crankshafts in 1956. This operation continued when Precision bought the facility in 1971. Precision operated an industrial component reconditioning facility on site from 1971 until 1999. Site operations ceased in April 1999.

In September of 2005, EPA approved a Remedial Action Plan, submitted on behalf of Precision National Plating by the Retec Group. The Plan details procedures for use of calcium polysulfide to reduce the hexavalent chromium in the soils and groundwater to trivalent chromium, a less toxic form of chromium, which will precipitate and remain in the soil/bedrock matrix.

In July 2006, Precision injected calcium polysulfide into source areas at the site. The goal of the treatment was to reduce hexavalent chromium levels in soil to below 60 mg/Kg, and hexavalent chromium levels in Ackerly Creek to below 11 ug/L.

In March 2007, Precision began excavation of the basement of the former facility. The purpose of the removal was to mitigate impacts by potentially contaminated soils beneath the basement. Any visually contaminated soil and concrete encountered during the excavation was shipped offsite to an appropriate disposal facility.

Additional site investigation activities were performed in the Fall of 2007 and February/March 2008. The soil boring, rock coring and groundwater sampling activities completed in October 2007 and March 2008 confirmed that residual source contamination remains at the Site in the shallow weathered and competent bedrock (18 - 30 feet below the ground surface).

In August 2008, Precision began using calcium polysulfide in-situ chemical injections to treat these residual areas of contamination in the shallow bedrock. Hexavalent chromium levels have dropped in Ackerly Creek due to chemical injection treatments in July 2006, the basement excavation in March 2007, and subsequent injection activities, however they still remain above the target ecological goal of 11 ug/L.

Precision and EPA signed an Administrative Settlement Agreement and Order on Consent on May 3, 2012. On July 30, 2012, Precision's contractor, Arcadis U.S. Inc, submitted a new Response Action Plan, detailing ongoing activities. Injections of calcium polysulfide were conducted in the Fall 2012. A

total of 100,885 gallons of 1% solution were injected into 57 wells and 25,252 gallons of 2% solution were injected into 34 wells between September 6th, 2012 and November 20th, 2012. Quarterly monitoring of select wells and surface water locations has occurred throughout 2013.

Injections of calcium polysulfide resumed on September 10th, 2013. Additional details regarding the injection activities are documented in the July 2012 Response Action Plan and August 2013 Supplemental Bedrock Injection Plan.

### **Current Activities**

The current round of injections were completed on November 21st, 2013. Precision contractors remained onsite through November 28th to clean up the site from injection activities and to monitor for hydrogen sulfide at select locations on and around the site.

A total of 3,907 gallons of 1% calcium polysulfide solution were injected into 11 points the week of November 11th. On November 14th, Precision contractors decided to increase the percentage of calcium polysulfide in the injection mixture to 2%. During previous years, the percentage of calcium polysulfide in the injection mixture has ranged from 1% to 5%. A total of 4,794 gallons of 2% calcium polysulfide solution were injected into 11 points the week of November 11th. A total of 7,895 gallons of 2% calcium polysulfide solution were injected into 11 points the week of November 18th. Injection activities were completed on November 21st, 2013.

During this round of injections, a total of 103,047 gallons of 1% and 12,689 gallons of 2% calcium polysulfide solution were injected into 62 separate points within the overburden, shallow bedrock, and intermediate bedrock zones. Injection points included areas near the lagoon, in the area of the trolley tracks, along Paper Road, within the former Precision facility area, and along a trail often used as a public hiking area.

As temperatures continued to drop, injection activities were pulled back towards the vicinity of the pad and lagoon areas. This was to limit the amount of injection line between the calcium polysulfide on the pad and the injection point. Each evening lines were cleared of chemical and water used for flushing the lines to avoid any freezing overnight.

In publicly accessible areas, site personnel remained at active injection points at all times. Site personnel also conducted walks of the area to document and repair any leaks or surfacing of calcium polysulfide.

Prior to, and during injection activities each day, hourly air monitoring readings were taken with a Jerome hydrogen sulfide meter along the perimeter of the site fence, along Arch Avenue, and along Paper Road. Air monitoring was also recorded by two 24-hour monitoring stations located along Arch Avenue and at the lagoon. Air monitoring was conducted for one week following completion of injection activities. The maximum concentration of hydrogen sulfide that was detected over the past three weeks was 5 ppm. The hydrogen sulfide site specific action level for nuisance odors is 30 ppm, and the NIOSH recommended exposure limit is 10,000 ppm.

During injection activities, selected wells were monitored for water elevations and water quality readings such as pH and ORP to determine what zones are currently being influenced by calcium polysulfide. Field monitoring was conducted once a day during injection activities. Various monitoring wells documented increased pH as high as 10, showing influence of chemical injection throughout the area.

Sample collection from residential wells and surface water locations is conducted on a bi-weekly schedule during injection activities by Precision contractors. Bi-weekly sampling occurred during the week of November 11th and November 25th. Samples will be collected again during late January 2014 by both EPA and Precision contractors.

### **Planned Removal Actions**

Sampling activities at the site will be conducted by Precision contractors at the site in both January 2014 and April 2014. EPA contractors will conduct split sampling of Ackerly Creek during these sampling activities.

### **Next Steps**

Analytical results from upcoming sampling activities will be used to determine the effectiveness of injection activities and the current status of cleanup. Based upon these conclusions, next steps will be agreed upon between Precision and EPA personnel.

