



**UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
REGION III
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852**

SUBJECT: Long-Term Stewardship Assessment
Chevron MolyCorp Washington Remediation Project
EPA ID: PAD030068282
300 Caldwell Avenue,
Washington, PA 15301

DATE: September 25, 2023

TO: Alizabeth Olhasso, RCRA Corrective Action South Section Manager
Long Term Stewardship File for Former MolyCorp Facility
RCRA Corrective Action

FROM: Andrew Clibanoff, Remedial Project Manager

Remedy Assessment Summary:

The Chevron MolyCorp Washington Remediation Project (MolyCorp or Facility) has been owned by the Chevron Mining Company since 2005. Figure 1 provides a Site Location Map. From 2006 through 2011, Chevron oversaw an extensive remediation effort as described in the Facility Background section below. The remedy contains engineering controls including capped areas of contaminated soils and a sheet-pile jet grout wall designed to prevent coal tar from seeping onto the property from a neighboring former manufactured gas plant (MGP). Several activity and use limitations (AULs) including a site-wide restriction of groundwater use, restriction of activities that could increase groundwater or surficial flow to Chartiers Creek, non-residential only development in the former process area and certain parcels to the south/southwest, and requirements to protect the integrity of the engineered barriers, have been in force since an environmental covenant for the Facility was recorded in September 2011. The engineering and institutional controls in place as required by the December 2012 Final Decision continue to be protective of human health and the environment.

Introduction:

Long-term stewardship (LTS) refers to the activities necessary to ensure that engineering controls (ECs) are maintained and that institutional controls (ICs) continue to be enforced. The purpose of the EPA Region 3 LTS program is to periodically assess the efficacy of the implemented remedies (i.e., ECs and ICs) and to update the community on the status of the RCRA Corrective Action facilities. The assessment is conducted in twofold, which consists of a record review and a field inspection, to ensure that the remedies are implemented and maintained in accordance with the final decision.

Facility Background:

Molycorp operated at this 73-acre Facility as a manufacturer of ferroalloys and molybdenum products from the 1920s through 1991. Molycorp produced a ferrocolumbium alloy in the 1960s from an ore containing naturally radioactive thorium. The presence of the thorium required Molycorp to obtain a Source Materials License from the Nuclear Regulatory Commission (NRC). Processing of the ore resulted in the generation of a radioactive thorium bearing slag that was used as fill material at the Facility. In 1976, Molycorp purchased land to the south and southwest of its process area that was formerly owned by the Hazel Atlas Glass Company (HAG). HAG historically operated a manufactured gas plant, a by-product of which was coal tar. Much of the coal tar produced by HAG was disposed of on the property purchased by Molycorp in 1976. The Facility has been owned by the Chevron Mining Company since 2005 and underwent extensive remediation for both the radiological and non-radiological contamination from 2006 through 2011. The radiological cleanup was overseen by the NRC and the Pennsylvania Department of Environmental Protection's (PADEP's) Bureau of Radiation Protection (BRP). The non-radiological cleanup was overseen by PADEP's Land Recycling Program and EPA's Corrective Action Program.

In 1972, much of the thorium-contaminated slag used as fill material was consolidated into a clay-capped pile south of Caldwell Ave. near Chartiers Creek. In the mid-1980s, coal tar contaminated soils from the North Tar Pond area were consolidated into the South Tar Pond. Eight surface impoundments in the former process area near Chartiers Creek were closed in 1995. Thorium bearing slags were removed in 1996 from the Findlay Refractory Area, located along the northern portion of the process area. All plant buildings and structures were demolished and removed from the property in 2002.

Chevron's Cleanup Plan submitted under PADEP's Land Recycling Program (Act 2) was approved in January 2006. For the investigation phase of the project the Facility property was divided into 10 areas as depicted on Figure 2 and described in Table 1. Approximately 104,000 cubic yards of radiologic material from Areas 1A, 1B, 2, 3 and 10A and 71,000 cubic yards of soils impacted by coal tar from Areas 5A thru 5E, 7A, 7B-E and portions of Chartiers Creek were shipped off-site for disposal from 2006-2009 and replaced with an engineered barrier of clean fill. A transshipment pad constructed in Areas 1A and 1B remains in place as an engineered barrier as well. More than 31,000,000 gallons of water were treated at a built on-site water treatment plant during the remediation. A sheet-pile jet grout wall was installed to prevent coal tar beneath Interstate I-70 from seeping onto the property. A state-owned storm sewer was repaired and relocated in 2011. The Source Materials License for the Facility was terminated by PADEP's Bureau of Radiation Protection in December 2010 and Molycorp received approval of its PADEP Act 2 Final Report in August 2011. EPA's Final Decision, which relied upon the engineering and institutional controls already in place per the Act 2 Final Report was issued in December 2012.

Remaining soils still contain contaminants, principally molybdenum, but also lead, arsenic, thallium and other metals above PADEP's non-residential MSCs but the caps in place serve to eliminate the direct contact pathway and groundwater use restrictions are in place to prevent exposures to groundwater in the affected areas. Groundwater has also been demonstrated to not negatively impact Chartiers Creek. The Environmental Covenant for the Facility, recorded in September 2011, includes several AULs including a site-wide restriction of groundwater use, restriction of activities that could increase groundwater flow to Chartiers Creek, non-residential only development in the former process area and certain parcels to the south/southwest, and requirements to protect the integrity of the engineered barriers.

Current Site Status:

The site remains unchanged from the time of EPA's Final Decision almost 11 years ago. Chevron Mining Company has been actively seeking to sell the property, but it remains vacant at the present time. All engineering controls and AULs remain effective and protective of human health and the environment. No contact information for Chevron Mining Company is currently listed in the RCRA Info. Database which made finding an individual knowledgeable about the Facility somewhat difficult. A link containing the forms required to add contact information was provided to Chevron and its consultant subsequent to the inspection.

Long-term Stewardship Site Visit:

On September 14, 2023, the United States Environmental Protection Agency's (USEPA) Land, Chemicals, and Redevelopment Division (LCRD) representative, Andrew Clibanoff, conducted a long-term stewardship assessment site visit of the Chevron MolyCorp Washington Remediation Project (Facility) in Washington, PA. The purpose of the LTS site visit was to assess the status of the implemented remedies at the Facility.

The attendees were:

Name	Organization	Email Address
Andrew Clibanoff	US EPA Region 3	clibanoff.andrew@epa.gov
Tom Buchan	PADEP Southwest Region	tbuchan@pa.gov
Bob Weaver	Trihydro Corp.	bweaver@trihydro.com

After a brief health and safety tailgate meeting and discussion of EPA's LTS program and the reason for the site visit, the attendees entered the former North Process Area (Areas 1A, 1B and 2) portion of the Facility through a gate along Green Street that Mr. Weaver had access to at about 9:00 a.m. Photographs 1 and 2 in the Photolog contained in Attachment 1 of this report show pictures of the former North Process Area including the transshipment pad that serves as a cap. A few trees were observed to be growing on the capped area. These trees do not appear to be present in aerial photos taken around the time of EPA's Final Decision but are clearly seen in a Google Earth aerial photo taken in September 2015. While EPA would prefer to not see trees growing through capped areas, in this instance the trees are not impacting the protectiveness of the cap from preventing direct exposures to contaminated soils below and are not creating a pathway that would increase groundwater flow to Chartiers Creek. Therefore, their presence is

not impacting the effectiveness of the engineering and institutional controls in place in the North Process Area. It's recommended that future tree growth be prohibited on capped areas.

The inspection continued across Caldwell Avenue where the inspection team entered through an insufficiently locked gate on Area 10A. While Mr. Weaver did not have access to the lock on the gate, he and Mr. Clibanoff were able to slide through an opening that allowed access. Photo 3 was taken on Area 5C looking southwest toward the location of the former South Tar Pond and Photo 4 is a view of Area 3 looking northwest from Area 5C. No signs of stressed vegetation or coal tar seeps were observed on the accessible portions of the former Southeast Low Lying Area of the Facility (Areas 3, 5A thru 5E and 10A).

The final area visited during the LTS inspection was the portion of the property to the rear of the Canton Township Volunteer Fire Department (VFD) located on Caldwell Ave. west of Chartiers Creek. Photo No. 5 shows an as found open gate portion of the fence that separates the VFD from the Facility (Area 7B-C, an area with no known site-related impacts). Inside the fence line to the west, a tree stand was observed (see Photo No. 6) in either Area 7B-C or 7B-W, neither of which are known to have any site-related impacts. Inside the fence line to the southeast, a vertical metal pipe (See Photo No. 7) was noted in a heavily vegetated area believed to be within Area 5E. On the way back towards our vehicles, Chartiers Creek was observed from the Caldwell Avenue bridge (See Photo No. 8). No site related impacts to the creek were noted.

Implementation Mechanism(s):

The Implementation Mechanism is the method for implementing IC and ECs required as a condition of the Statement of Basis and Final Decision. The summary of implementation mechanisms are described in Attachment 2.

Financial Assurance:

EPA's Final Decision determined that no financial assurance is required it did not require any further engineering actions to remediate soil, groundwater or indoor air contamination and given that the costs of implementing institutional controls and maintaining engineering controls at the Facility are de minimis.

Reporting Requirements/Compliance:

The September 2011 Environmental Covenant required written documentation that the AULs within the covenant were being abided by to be submitted to PADEP every January for a period of five years after the covenant was recorded, and every third January thereafter. In addition, written documentation of noncompliance with the AULs, transfer of the Property, changes in use of the Property, filing of applications for building permits for the Property, and proposals for any site work that would affect the contamination on the Property was required to be submitted to PADEP within one month of the event.

Chevron has not been adhering to these reporting requirements. During preparation for the LTS inspection, only one compliance report completed by Trlhydro, Inc. on behalf of Chevron Mining, Inc. dated January 28, 2022 was discovered. The compliance report was based on a May 2021 inspection of the Facility and confirmed that the AULs were being abided by.

Mapping:

All areas of concern have been geospatially mapped and are available on the Facility's EPA Factsheet. A copy of the geospatial map for the Facility is included as Figure 3.

Conclusions and Recommendations:

The September 14, 2023 site visit confirmed that the engineering and institutional controls in place as required by the December 2012 Final Decision continue to be protective of human health and the environment. A few recommendations regarding the Facility include:

1. Chevron Mining Company needs to update contact information in the RCRA Info. Database. Links to the forms and instructions needed to complete this update were provided to Chevron and its consultant, Trihydro, Inc. in an email message dated September 18, 2023.
2. Tree growth through capped areas was observed during the site visit. While this doesn't impact the remedy, future tree growth in capped areas should be minimized.
3. The access gate from Caldwell Avenue onto Area 10A needs to be kept locked in such a way that it prevents access onto the Facility property.
4. The gate located in the rear portion of the Canton Township Volunteer Fire Department that provides entrance to Area 7B-C was unlocked and wide open at the time of the site visit. It is unknown whether Chevron or the Canton Township VFD is the owner of that portion of the fence/gate. Chevron should make this determination and the responsible party should ensure the gate is locked when not in use.
5. The presence of a hunting tree stand in Area 7B-C or 7B-W indicates that trespassers are finding their way onto the Facility Property. While this area has no known site-related impacts, once inside the fence line behind the Canton Township VFD access to impacted site area can be easily gained. More deterrence to trespassers, such as ensuring all gates remain locked and posting signage, is recommended.
6. The presence of the vertical metal pipe observed from a distance within Area 5E should be further investigated by Chevron. If there is no reason for it to be there, it should be removed.
7. Chevron has not been adhering to the compliance reporting requirements as specified in the September 2011 Environmental Covenant. A total of seven such reports documenting compliance with the covenant AULs for each area should have been submitted to PADEP and EPA from 2012 through the present. Only one such compliance report was submitted, dated January 28, 2022. Since the site remains today in the same condition it was at the time of EPA's Final Decision, it is likely that the Facility has been abiding by the AULs during this time frame. Chevron must commit to complete the required compliance reporting or face possible enforcement action.

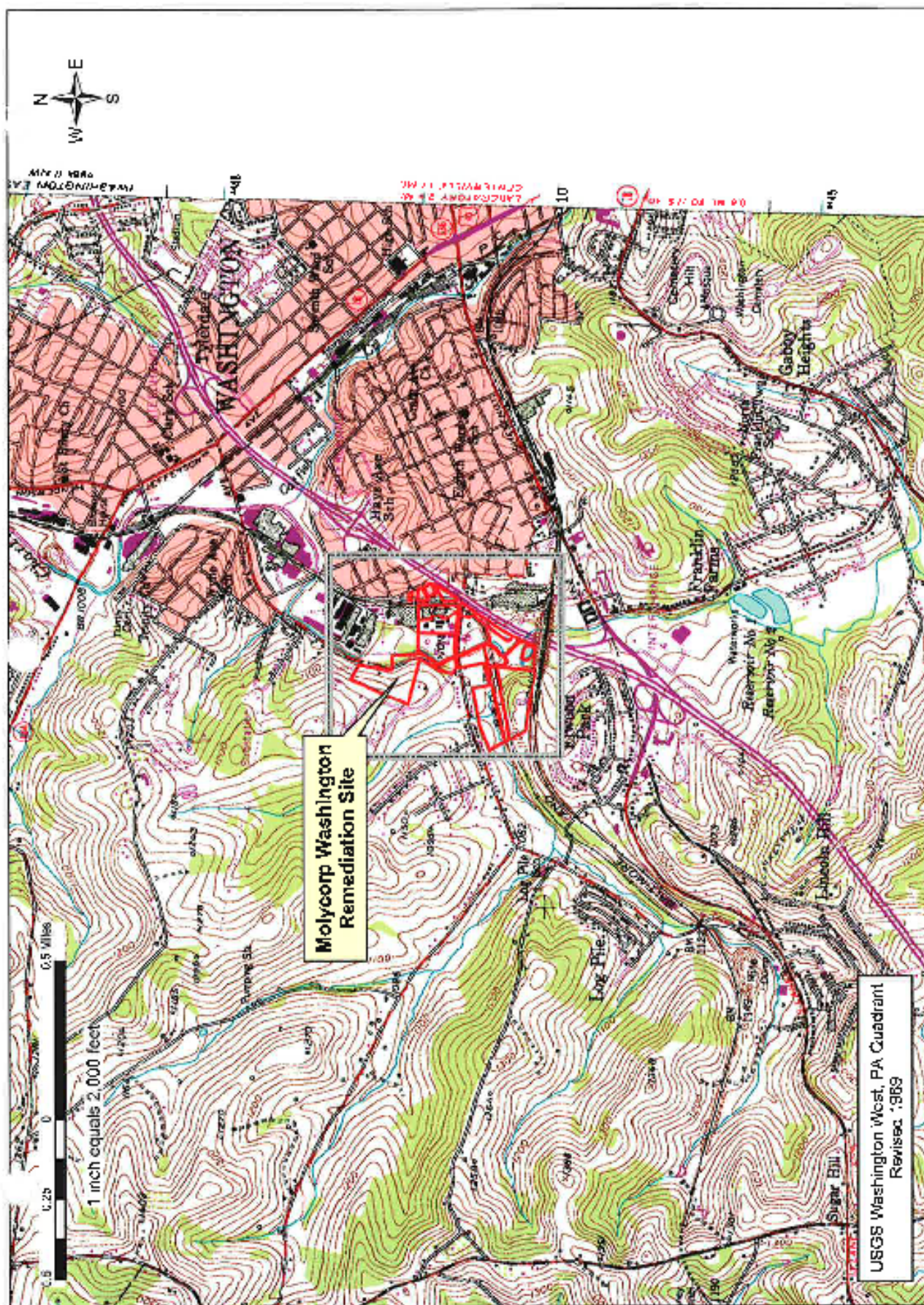
Files Reviewed:

December 2012 Final Decision and Response to Comments for Former MolyCorp Facility
September 2011 Environmental Covenant
December 2011 Migration of Contaminated Groundwater Under Control EI Determination
November 2003 Human Exposers Controlled EI Determination

Enc.:

Attachments

Figures



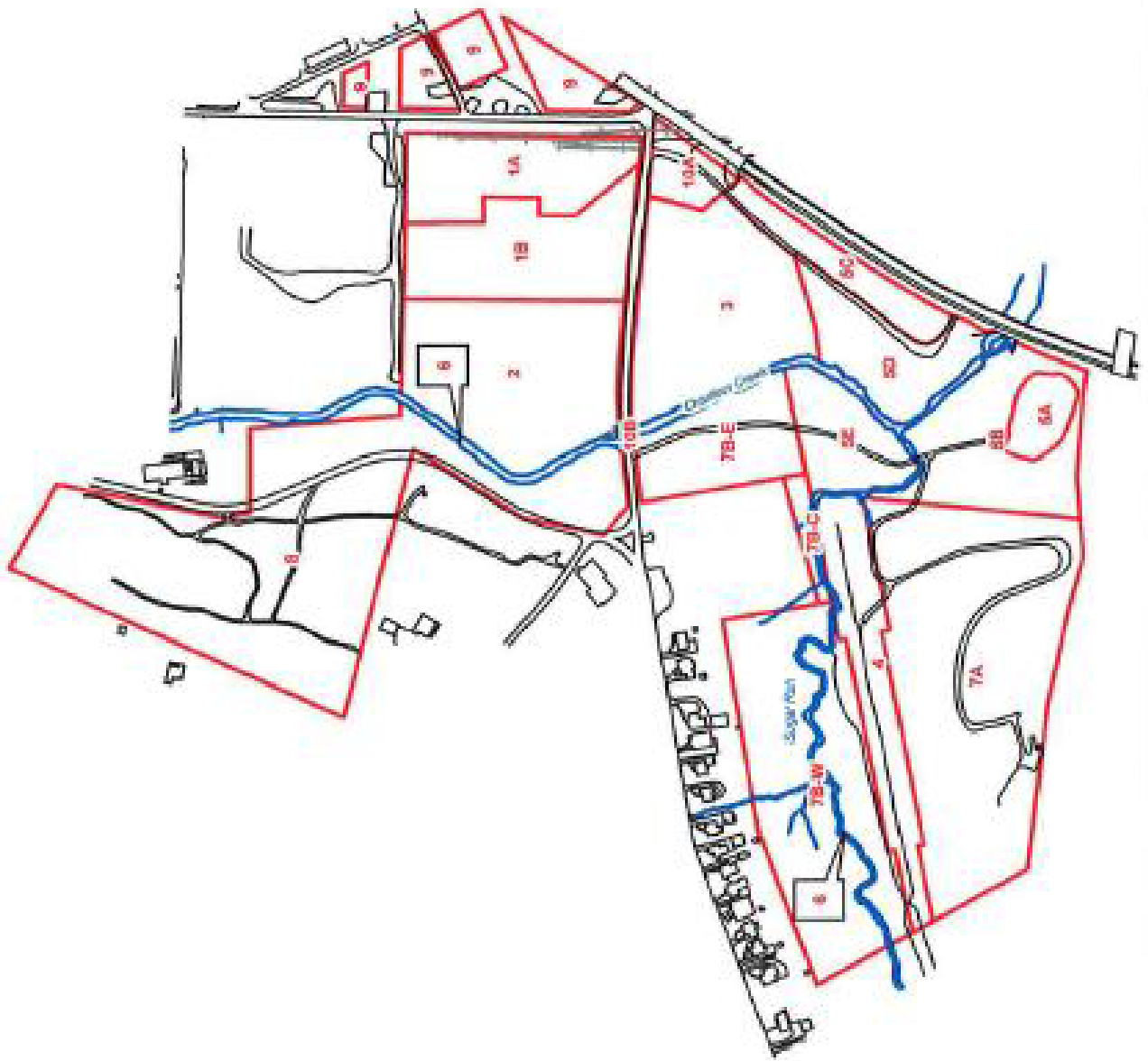


Figure 2
Area Designations

Tables

Table 1

SUMMARY OF AREAS OF INTEREST MOLYCORP INC., WASHINGTON, PA FACILITY		
Area Number	Designation	Reason for Designation
Area 1	Process Plant (Subdivided into 1A and 1B)	Location of original manufacturing operations.
Area 2	North Slag Area	Lowlands west of Facility that contained various ponds, impoundments and slag fill.
Area 3	South Slag Area	Area containing slag fill and a former pond containing ball mill slag.
Area 4	Tylerdale Connecting Railroad	Former railroad right-of-way
Area 5	MGP Tar Pond Area (Subdivided into 5A – 5E)	Area containing the South Tar Pond (5A) and area north of the South Tar Pond (5B), North Tar Pond (5C and 5D) and adjacent area (5E)
Area 6	Streams	Chartiers Creek and Sugar Run bisect the Site. Tar noted along banks and in bottom of Chartiers Creek at a few locations
Area 7	Hill Area (Subdivided into 7A and 7B)	Hill area that contains an old foundation with MGP tar (7A) and a former farm area west of Chartiers Creek and north of Sugar Run (7B). Area 7B-E is adjacent to Chartiers Creek, while 7B-C and 7B-W were never used by MolyCorp
Area 8	Cox Plus	Primarily undeveloped land. No known impacts by Site operations.
Area 9	Green Street	Former residential area. No known impacts by Site operations.
Area 10	Offsite Areas (Subdivided into 10A and 10B)	Offsite areas investigated for radiological constituents because of their location near impacted areas. They include: -The area located adjacent to the northeast corner of Area 3 where a temporary rail line was located in the 1979-1981 period (10A) -Vicinity of the abutment of the small bridge on Caldwell Avenue over Chartiers Creek near the southwest corner of Area 2 (10B) -Caldwell Avenue between Areas 1 and 2, and Area 3 (also 10B)

Attachment 1.

September 14, 2023
Long Term Stewardship Inspection
Photolog



Molycorp Photolog

Long Term Stewardship Inspection

Washington, PA

9/14/2023

Long Term Stewardship Inspection Photolog

Location: Washington, PA
Date Photos Taken: 09/14/23

EPA ID No: PAD030068282
Photographer: A Clibanoff

Molycorp, Inc.

Camera: OnePlus 6T
Compiler: A. Clibanoff



Photo No. 1 (091305): View looking north at transshipment pad located in Area 1. Green Street is beyond the railroad tracks on the right. Note tree growth within the capped area north of the pad.



Photo No. 2 (091313): View looking west at transshipment pad located in Area 1. Caldwell Ave. is to the left of the property fence. Note tree growth within the capped area west of the pad.



Photo No. 3 (094212): View looking southwest at former coal tar impacted Area 5. The fenced in capped former radiologically contaminated Area 3 is located to the right.



Photo No. 4 (094331): View looking northwest at Area 3 from outside the fence in Area 3's southeastern corner.

Long Term Stewardship Inspection Photolog

Location: Washington, PA
Date Photos Taken: 09/14/23

EPA ID No: PAD030068282
Photographer: A Clibanoff

Molycorp, Inc.

Camera: OnePlus 6T
Compiler: A. Clibanoff



Photo No. 5 (095848): View looking west from rear of Canton Township VFC at gate left open onto Area 7B-C of the Molycorp Facility. Area 7B-C has no known site-related impacts but it is in close proximity to formerly coal tar impacted Areas 5E and 7B-E. Mr. Weaver from Trihydro, Inc. closed the gate upon leaving the property.

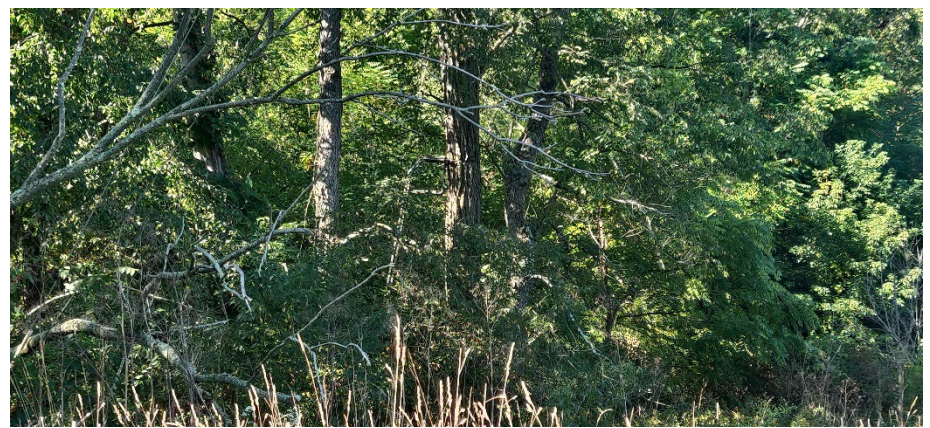


Photo No. 6 (100005): View of a tree hunting stand installed in Area 7-BW near the Canton Township VFC property line. Area 7B-W has no known site-related impacts



Photo No. 7 (100235): View looking at metal pipe standing vertically in Area 5E. Vegetation in the area prevented a closer inspection of the pipe. Area 5E had been historically impacted by coal tar contamination.



Photo No. 8 (100658): View looking north at Chartiers Creek from the Caldwell Avenue Bridge.

Attachment 2: Remedial EC/IC Summary Table.

Facility Name	Molycorp Washington Remediation Project			
Address	300 Caldwell Avenue, Washington PA 15301			
EPA ID#	PAD030068282			
Are there restrictions or controls that address:	Yes	No	Area(s)	Description of restrictions, controls, and mechanisms
Groundwater Use	X		Facility Wide	September 2011 Environmental Covenant includes a Facility-wide Groundwater Use Restriction for potable/commercial/industrial/agricultural purposes
Residential Use	X		1, 2, 3, 5, 7B-E, & 10	September 2011 Environmental Covenant requires that these areas remain non-residential in accordance with PADEP regulations.
Excavation	X		Facility Wide	September 2011 Environmental Covenant requires no disturbance of engineered cap in Areas 1, 2, 3, 5C & 5D. Facility wide, no excavation that may increase groundwater flow to Chartiers Creek is permitted without prior PADEP approval.
Vapor Intrusion		X		
Capped Area(s)	X		1, 2, 3, & 10	Transshipment pad in Area 1 and 2 feet of clean soil in remaining parts of Area 1 as well as Areas 2, 3, and 10 are to be maintained per the September 2011 Environmental Covenant.
Other Engineering Controls	X		5C & 5D	Sheet Pile Jet Grout Wall in place to prevent coal tar seepage onto Facility Property
Other Restrictions		X		

Attachment 3: Remedial Review Questionnaire

LTS Checklist Template

<u>IC Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Have the ICs specified in the remedy been fully implemented? Implementation mechanism in place?	X		
• Do the ICs provide control for the entire extent of contamination (entire site or a specific portion)?	X		
• Are the ICs eliminating or reducing exposure of all potential receptors to known contamination?	X		
• Are the ICs effective and reliable for the activities (current and future) at the property to which the controls are applied?	X		
• Have the risk of potential pathway exposures addressed under Corrective Action changed based on updated screening levels and new technologies?		X	
• Are modifications to the IC implementation mechanism needed? (i.e. UECA Covenant, Permit or Order)		X	
• Are there plans to develop or sell the property?	X		Chevron has listed the property for sale for several years.
• Have all reporting requirements been met?		X	Beginning in January 2012, reports documenting whether AULs are being abided by were to be submitted every year for the first five years and every three years thereafter. No records of any such reports with the exception of a report completed by Trihydro, Inc. on behalf of Chevron dated January 28, 2022 have been located.

<u>Groundwater Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Is groundwater onsite used for potable purposes?		X	
• Is the Facility connected to a public water supply?	X		There are currently no buildings on the property

			but access to public water is available for future development.
• Have any new wells been installed at the facility?		X	All monitoring wells at the Facility have been decommissioned.
• Are the current groundwater flow rate and direction similar as mentioned in the previous studies?	X		Groundwater is no longer being monitored at the Facility.
• Groundwater contaminants stable or decreasing in concentration?	X		
• Are groundwater monitoring wells still in place (# wells)?		X	All monitoring wells at the Facility have been decommissioned.
• Any evidence or reason to re-evaluate the number and location of monitoring points and/or monitoring frequency?		X	
• For wells where groundwater monitoring is no longer required, have the wells be decommissioned?	X		
• Is there evidence of monitored natural attenuation occurring in groundwater?			Metals in groundwater were demonstrated to not impact surface water receptors.
• Has (active remediation system) been maintained as necessary?			NA
• Is the (groundwater containment system) effectively containing COCs and protecting potential receptors (surface water body and/or groundwater resource) via hydraulic control?	X		
• Have notification letters been sent to the local POTW, County Department of Health, and Planning and Zoning Department regarding groundwater use restrictions?	X		

<u>Surface and Subsurface Soil Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Is the facility being used for residential purposes?		X	

• Have there been recent construction or earth-moving activities or plans for such?		X	
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<u>Engineered Cap or Cover Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Have geosynthetic/vegetative landfill caps (name) been properly maintained?	X		Tree growth observed in areas capped with a minimum of two feet of clean soil. The presence of the trees does not impact the remedy but should be minimized.
• Have any repairs been necessary? (i.e. regrading, filling, root removal)		X	Certain areas are mowed regularly.
• Is the leachate collection system operating and effectively preventing groundwater contamination?			NA

<u>Vapor Intrusion Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Have there been construction of new structures within the vapor intrusion restriction zone(s)?			No vapor intrusion concerns at the Facility.
• Is the vapor intrusion mitigation system radius of influence effective for the structure in which its installed?			

<u>Miscellaneous Review and Assessment Questions:</u>	<u>Yes</u>	<u>No</u>	<u>Notes</u>
• Is the security fence intact?	X		One gate was observed to be open and another gate was locked but loose enough for individuals to gain access to the property
• Is the appropriate signage posted?			NA