

Third Party Supplemental Environmental Project (SEP) Final Report

Enforcement Action Information	Ouray Silver Mines Inc. Enforcement Case No.: IO-160913-1		
Third Party SEP Contact Information	Jason Willis, P.E. Trout Unlimited Inc. 128 East 1 st Street, Suite 203 Salida, CO 81201 719-221-0411 jason.willis@tu.org		
Project Title	Atlas Mine Site Tailings Reclamation		
Geographical Area Served	Upper Uncompahgre River Basin – Ouray, CO		
Project Summary	<p>While it was not an initial goal of the project, the finalization of an administrative order on consent (AOC) was one of the first of its kinds between a 3rd party Good Samaritan organization like TU and the US Forest Service (USFS). Refining this agreement and process will hopefully make projects like this easier to implement in the future.</p> <p>The goals of stabilizing contaminated mine wastes and tailings, along with improving the environmental quality of the site footprint surrounding the Atlas Mill were achieved through construction activities that took place during October 2020. The stream health of Sneffels Creek was also improved by removal of contaminated sediments along formerly exposed streambanks. These actions allowed TU to amend consolidated tailings and mine wastes that will help establish native vegetation over time. In total, approximately 4.2 acres of mine wastes/tailings were consolidated and reclaimed, 1,689 linear feet of run-on/run-off channels were installed, and 200 linear feet of Sneffels Creek was restored aligning with or exceeding original project objectives. To accomplish this scope of work, the final cost of the project totaled approximately \$392,380.60, which includes SEP funds, OSMI match, and TU matching funds.</p>		
Summary of Completed SEP Activities	Activity	Description	Date Completed
	Project Start Date	Begin work on project after initiation of SEP	9/18/18
	EE/CA Prepared	Generate Draft-final version of EE/CA for agency review	3/15/18
	Request for Proposal (RFP) Developed	Draft of RFP developed outlining construction work	4/1/19
	1 st Status Report to CDPHE	Complete this status report documenting work taking place since signing of SEP agreement	5/1/19

	Request for Proposal (RFP) development and submission	RFP was successfully developed by TU in late September and distributed to a pre-qualified list of contractors on Friday October 11 th . The corresponding Pre-bid meeting is scheduled for Friday October 18 th .	10/11/19
	Construction Pre-bid Meeting	Although this activity is late per the revised SEP schedule, it has been officially scheduled and will take place on 10/18/19. Several contractors have already RSVP'd a spot on the bid walk.	10/18/19
	2 nd Status Report to CDPHE	Update of activities that have taken place since 5/2/19	10/17/19
	Construction Bids due	7 bids from prequalified contractors were received as part of this RFP process.	11/15/19
	Selection of construction contractor	Technical review committee conducted evaluation and ranking of seven bids and formally selected Reams Construction as the winning bid.	12/2/19
	Signed and executed contract with Reams Construction	TU worked with Reams construction to establish a contract associated with bid and costs provided during the bidding process.	1/2/2020
	Draft Final EE/CA released for 30-day public comment	Worked with OSMI, USFS and EPA to get EE/CA into a draft-final version for public comment.	3/5/2020
	Draft Final EE/CA 30-day public comment ended	Little to no public comment received as part of this process. Meeting was scheduled on March 17 th but cancelled due to COVID-19 guidance.	4/4/2020
	3 rd Status report due to CDPHE	Update of activities completed since 2 nd SEP report on 10/15/2019.	4/15/2020
	Draft Work Plan and ownership maps developed	Developed a draft work plan for upcoming construction activities planned at the Atlas site. This was accompanied by an ownership map delineating % of contaminated material/land owner	5/15/2020
	Reviewed first version of AOC	Worked with outside legal counsel to comment and review AOC draft from USFS	6/15/2020
	Revised work plan per AOC comments	Revised work plan per comments generated during the AOC review process. This was added to the AOC as a revised iteration.	7/15/2020
	Received Final AOC for internal signatures	Final version of AOC sent to TU CEO for signatures followed by USFS Director of Engineering signatures the following week.	8/14/2020
	Final AOC published in Federal Register	AOC published in Federal Register by DOJ staff.	9/11/20
	Re-scheduled construction activities based on Fed Register notice	Worked with project partners to reschedule construction work at Atlas to begin on 10/13/20. This schedule is based on knowledge of the area, but still runs the risk of being wintered out during work.	9/15/2020

	4 th SEP Report due to CDPHE	Conducted call with SEP project manager and submitted subsequent SEP report after providing a verbal update.	9/23/2020
	AOC 30-day public comment completed	After publishing AOC in Federal Register, only one public comment was received and deemed N/A thus successfully completing this step.	10/12/2020
	Notice to proceed issued from USFS	Following public comment period, USFS issued a notice to proceed to TU and its contractor to begin construction activities on 10/13/20. TU completed pre-con walk through on 10/12 and mobilized equipment on 10/13 to start work.	10/13/2020
	Final walkthrough conducted with USFS and OSMI.	Construction to accomplish the three main tasks took 3 weeks from beginning to completion date on 11/3/20. TU performed a final walk through with USFS, OSMI, and Contractor on 11/3/20 before demobilizing equipment.	11/3/2020
	Final Report Issued to CDPHE	Final summary report was drafted in early December and submitted to CDPHE on 12/15/20 rendering the project complete.	12/15/2020

Project Description

Project Background:

Mining operations in the Uncompahgre watershed began in 1874 near Poughkeepsie Gulch and increased in 1875 with the influx of miners moving into the region down the Uncompahgre River and Bear Creek drainages to the Ouray area. That year discoveries were made in what is presently called “Box Canyon.” These discoveries included the Fisherman and Trout lodes and the Mineral Farm Mine located near the confluence of Canyon Creek and the Uncompahgre River. Additional discoveries in 1875 included finds in both Imogene and Yankee Boy basins near the top of the Canyon Creek watershed along with discoveries at the Camp Bird Mine in 1896 in the Sneffels District.

A gold rush to the Ouray area ensued the following spring and facilitated the surveying and incorporation of the town of Ouray on September 2, 1876. Since there was no rail service to the area, ore was transported by mule train to Silverton for processing. This limitation made it impractical to transport anything but the highest-grade ores. Initially, the richest discoveries were made in the Sneffels District, located immediately southwest of the Camp Bird mine. The Sneffels District included the mines situated in the Imogene, Governor, and Yankee Boy Basins inclusive of all mining activities in and around the town of Sneffels. The principal ore bearing deposits were discovered in the Sneffels District between 1875 and 1881, which aligned with the establishment of the Atlas Mine in 1876. Situated at the foot of Sidney Basin near Ouray, CO and almost equidistant between Ouray and Telluride was the Atlas Mine (Figure 1).

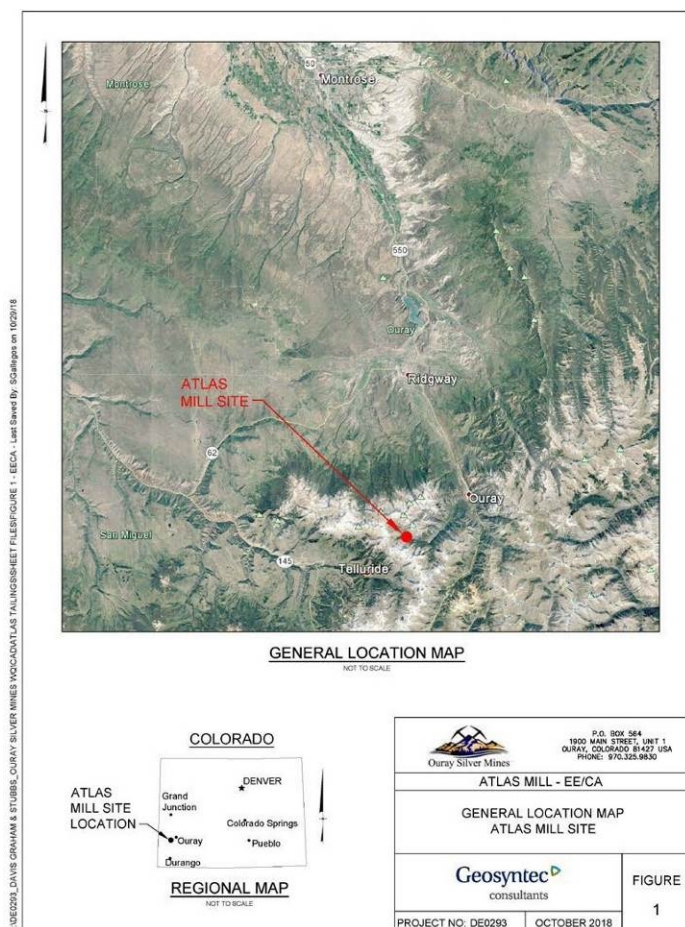


Figure 1: General location of Atlas Mine and Mill Site with respect to Ouray and Telluride, as well as proximity within State of Colorado.

Instead of carrying the ore to Silverton for processing, the Atlas Mine transported its ore via an aerial tram to the Atlas Mill approximately 500 vertical feet below the mine opening (Figure 2).



Figure 2: Historic photo of the Atlas mill building showing main mill building that received ore trammed from Atlas Mine workings 500 feet upslope.

During this time (1875-1891) production caused the town of Sneffels to pop up adjacent to the mill site housing almost 2,000 people. Although the original mining claim was established in 1876, most of the ore processing likely occurred in the early 1900s.

The Atlas Mill site features remnants of the historic mill structure on the hillside, an adjacent pile of coarse-grained waste rock, and fine-grained tailings on the floodplain adjacent to the western side of Sneffels Creek. Part of the Mill and adjacent waste rock are eligible for the National Historic Register. The total site footprint is approximately 8.8 acres and is largely devoid of vegetation. Of the approximate 8.8-acre footprint, 5.08 acres is USFS property and 3.71 acres are on patented claims owned by Ouray Silver Mines Incorporated (OSMI). The USFS parcels that are part of the project were re-acquired patented claims that were part of a land action/acquisition in 2001 from the Trust of Public Lands. This action made these claims National Forest System managed lands, and no longer privately owned. Within the 8.8-acre site footprint, 4.168 acres of contamination is present in areas delineated as Yellow and Gray tailings. A further breakdown of ownership, map, and estimated cost per ownership is discussed in the next section.

The tailings (Yellow and Gray) are partly located within the riparian wetland associated with Sneffels Creek. Ten seeps and springs were identified during the wetland delineation process, five of which exit from the bedrock below the mill adjacent to the waste rock pile, one from the floodplain at the northwest edge of the site, and four from the hillslope above the upper portion of the grey tailings. Runoff from the yellow and grey waste rock/tailings

continues to be a problem for the surrounding environment near the Site. Mobilization of these materials off-site during rainfall or snowmelt events is the primary risk driver work cleanup work associated with this SEP project.

Prior to 2016, Sneffels Creek was actively eroding the Atlas Mill tailings in a braided section of the creek near the upstream portion of the Atlas Mill Site and creating a small wetland area along the braided channel. A bank stabilization project was completed in July 2016 to reduce the interaction between the creek and tailings. Partners in this project included the U.S. Forest Service (USFS), Division of Reclamation Mining and Safety (DRMS), OSMI, Western Stream Works, and Uncompahgre Watershed Partnership (UWP). The stabilization project directed flow through a single thread channel and minimized braiding on the upstream portion of the site. In October 2016, staff planted willow transplants and seeded within the riparian corridor. The stream work and subsequent vegetation plantings through this section have reduced overbank erosion in recent years, which has helped stabilize the upper portion of the site area allowing for work to be completed adjacent to the mill building.

History of Project Development:

OSMI began initial discussions back in late 2015 with USFS District Ranger regarding a potential cleanup project and partnership at the Site, which included the USFS Canadian Boy claim. A subsequent site visit was conducted in the summer of 2016 at the Atlas Mine/Mill and sites in Governor's Basin with OSMI and USFS staff that included various USFS and DRMS-AML staff. During this meeting, the subject was again broached to USFS staff about potential partnership and environmental cleanup at the Site. In Spring of 2018, UWP, USFS, OSMI, Geosyntec, and other parties met to discuss potential for utilizing State Supplemental Environmental Project (SEP) funds at the Site, and how best to do so. It was during this discussion that USFS staff suggested the best method for implementation would be a non-time critical removal action under CERCLA. This methodology was thought to be best approach since a historic 2001 EE/CA had already been written for the site during the initial land transfer and acquisition of several, former patented mining claims back into USFS ownership. Based on this discussion, OSMI and Geosyntec began writing an EE/CA for the site in anticipation of working with USFS on the project. During this process, OSMI reached a final agreement with the state to settle a 2016 notice of violation (NOV), which included a monetary penalty. Instead of paying the penalty to the State general fund, OSMI agreed to direct the penalty to a Supplemental Environmental Project (SEP) at the suggestion of CDPHE. The SEP program is a state-wide program that allows penalties to be used to fund community-based projects that have an environmental benefit. This would mean that environmental cleanup could occur at a site in the watershed and provide benefit to that surrounding ecosystem, rather than a general fund payment. The Atlas Project is an example of the first time CDPHE has allowed 100% of the fine amount to be put towards a reclamation project as part of a SEP. This is mainly due to the additional investment committed to the project by OSMI over and above the penalty amount as matching funds. During the initial phases of the SEP, Trout Unlimited (TU) was selected as the 3rd party recipient of the SEP funds to ensure implementation of the project. Acting as main point of contact and project manager since initiation of the SEP in late 2018, TU has been effective in communicating between partners and agencies regarding the proposed removal action at the Site.

Ownership:

As mentioned above, the total Site footprint where disturbance or work will occur is 8.8 acres and is comprised of several USFS and private OSMI claims. Per the EE/CA, approximately 5.08 (58%) acres are on USFS and 3.71 (42%) acres are on OSMI property. The following description breaks down the proposed reclamation work to occur on USFS system lands vs. private claims. The main USFS claims involved in the project will be MS2470 Dobson Lode, MS2471 Gilpin County Lode, and MS13281 Canadian Boy Lode while the OSMI private claims will involve access to MS7248B Lincoln Millsite, MS7248 Grant Lode, MS16053 Egypt Placer, and MS1823 Valley View Lode (Figure 3). The proposed footprint of the yellow and gray reclamation areas was pulled from the approved removal action goal (Alternative 3) of the EE/CA.

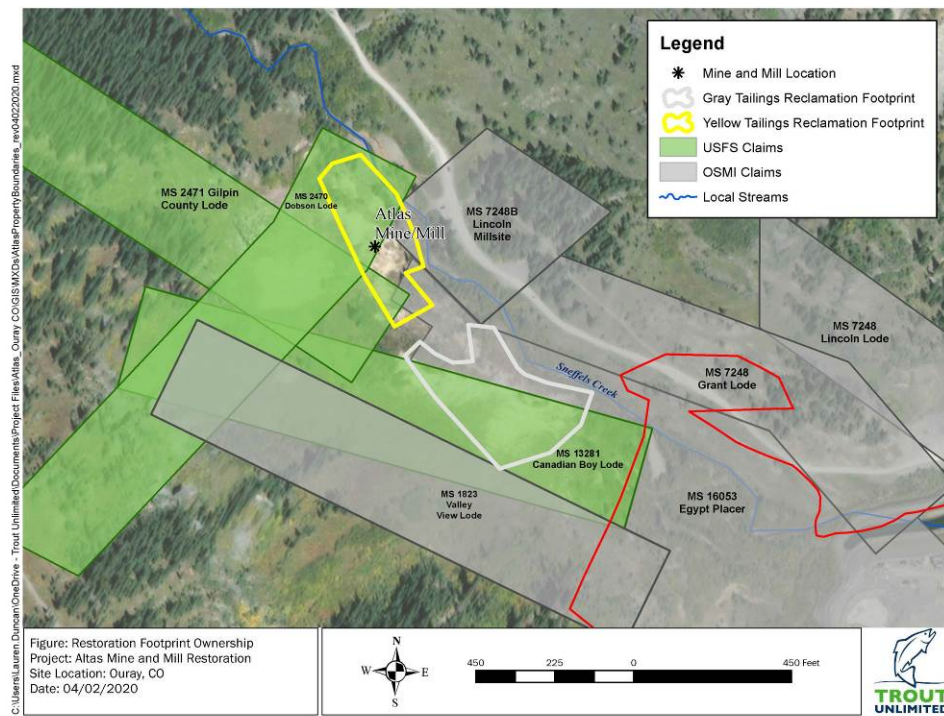


Figure 3: Estimated footprint of Yellow and Gray waste rock and tailings areas with respect to underlying USFS and OSMI parcel boundaries. Approximately 66% of the Yellow tailings are on USFS claims while 67% of the Gray tailings are on USFS claims.

Per the recommended removal action goal of in-situ phytostabilization; all wastes and tailings will remain either in place or consolidated within the area if original ownership. Contaminated materials will remain within original ownership area or adjacent claims owned by the original owner. Beginning at the northern boundary of the Site, and adjacent to the Atlas Mill are the Yellow tailings. These materials represent a 1.745 acre footprint of the Site with 1.151 acres being contained within the USFS Dobson and Gilpin County parcels (Table 1). The remaining 0.301 acres are on private claims owned by OSMI. The USFS ownership correlates to approximately 66% of the Yellow tailings area.

Reclamation Footprint	Area (Ac)	Area (SqFt)
Total Yellow Tailings Reclamation Footprint	1.745	75,992.4
Total Area without Claims	0.293	12,759.23
Total Area Within USFS Claims	1.151	50,146.92
Total within Dobson	0.961	41,877.12
Total within Gilpin County	0.190	8,269.81
Total Area Within OSMI Claims	0.301	13,099.64
Total within Egypt Placer	0.156	6,793.35
Total within Lincoln Millsite	0.145	6,306.30

The Gray tailings are south of the Yellow tailings area and make up an aerial footprint of 2.423 acres with 1.622 acres residing on the USFS Canadian Boy parcel. The remaining 0.801 acres of Gray tailings are comprised of the three OSMI claims (Egypt Placer, Grant Lode, and Valley View). The USFS owns approximately 67% of the Gray tailings contamination. Of the 4.168 total contaminated acres, the USFS owns approximately 67% of the aerial footprint, or 2.77 acres.

Reclamation Footprint	Area (Ac)	Area (SqFt)
Total Gray Tailings Reclamation Footprint	2.423	105,535.15
Total Area Within USFS Claims	1.622	70,637.000
Total within Canadian Boy	2.175	94,732.95
Total Area Within OSMI Claims	0.801	34,898.15
Total within Egypt	0.800	34,858.58
Total within Valley View	0.000	13.28
Total within Grant Lode	0.001	26.30

It should be noted that the survey data used to create Figure 3 includes the most up to date land status layers and parcel boundaries. These property boundaries produced during the 2017 survey referenced original field notes, patent plat maps, and patents from the BLM. Previous maps of the area referenced ties to other claims and corners that were stated in “error” in the old survey notes. Using these notes and found monuments of other surveys helped to correct past discrepancies on paper via this survey data. Therefore, to verify ownership, certain corners and property boundaries will need to be verified in the field prior to construction in 2020.

Objectives:

As is common with all Removal Actions (RAs), a need and subsequent action is determined based on eight factors listed in the National Contingency Plan (NCP) under 40 CFR Subpart E 300.415 (b)(2). These factors specifically focus on controlling source areas of contamination at hazardous sites abating, preventing, minimizing, stabilizing, mitigating, or eliminating the potential release of hazardous substances. The specific removal factors that pertain to this project and scope of work are IV and V which are:

- IV – High levels of hazardous substances, pollutants, or contaminants in surface soils that may migrate.
- V – Weather conditions (avalanches) may cause hazardous substance or pollutants/contaminants to migrate or be released.

By completing removal actions that focus on the above factors, partners anticipate the following added benefits while preventing contaminants from migrating off-site.

- Stabilization of contaminated material on-site while reducing ability of that material to migrate or be mobilized off-site;
- reduce potential risks to the environment (ecological and aquatic receptors) from exposure to mill tailings and other mine wastes at the Site;
- control runoff from mine waste and minimize erosion of historic mill tailings; and
- stabilize the streambank along appropriate reaches of Sneffels Creek to prevent erosion of tailings during high flow conditions.

The Site consists of several dispersed waste rock piles and two distinct tailings deposits, which have the potential to contribute metals loading to Sneffels Creek. The EE/CA identified five potential removal actions for reducing migration of contaminated material off-site by stormwater, snow melt, or avalanches coming into contact with the historical tailings and waste rock prior to entering Sneffels Creek.

Required Tasks:

Of the five removal action alternatives identified in the EE/CA, Alternative 3, which focuses on in-situ phytostabilization of mine tailings/waste, surface water controls, amendments, and streambank stabilization, was chosen as the recommended alternative. A general layout of the removal action alternative, in-situ phytostabilization of tailings/waste, grading and revegetation, surface water controls, and stream bank stabilization is shown below in Figure 4. As part of this approach, TU will stabilize contaminated material on-site while also reducing the likelihood of mobilization of material off-site. To accomplish this reclamation the work will be broken up into three Tasks plus mobilization and demobilization to/from the Site.

1. The first Task will involve the installation of run-on/run-off drainage controls with drainage fans;
2. Task two will focus on Sneffels Creek stabilization (Reach 1) work and;
3. Task three will be a bulk of the work pertaining to grading, consolidation, revegetation of yellow and gray waste rock and tailings areas (Figure 4).

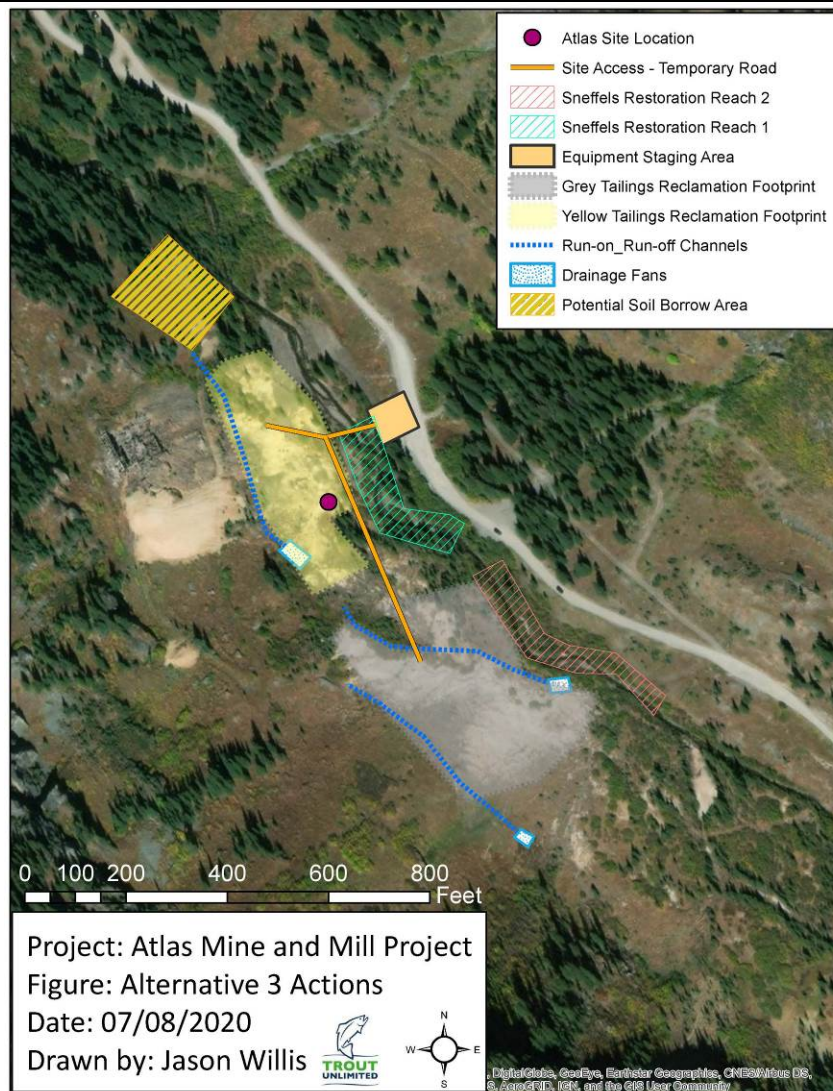


Figure 4: Recommended removal action alternative 3 and associated construction phases. Map shows construction staging areas and routes of access, as well as potential borrow source if needed for clean-fill generation. Estimated footprints of yellow and grey tailings areas are 4.168 acres. Swale locations and drainage fans are approximate and depend on final grading established in the field.

Agency Approval Process:

Taking place concurrently to project planning and EE/CA finalization in January 2020, TU began discussions with USFS about developing an Administrative Order on Consent (AOC) with the USFS as a Good Samaritan. A Good Samaritan is defined as a person/entity who, with respect to historic mine waste:

- Is not a past or current owner or operator of any portion of the site impacted by releases of hazardous substances.
- Had no role in causing the release of hazardous substances at the site or affiliation with someone who did; and
- Is not potentially liable under any Federal, State, Tribal or local law for the remediation, treatment, or control of historic mine wastes.

An AOC is one of two Good Samaritan tools that allows for completion of clean-up and environmental remediation associated with CERCLA projects. They are standard practice between agencies and potentially responsible parties (PRPs), but are less common between agencies and a Good Samaritan or third party. When negotiated with EPA, these documents can

typically take 8-12 months to complete but a timetable was uncertain for this project since USFS did not have much experience establishing an AOC with a Good Sam. The AOC developed over the course of this SEP agreement was the first of its kind (that we know of) between USFS and a Good Sam, such as TU. This is a major accomplishment in, and of itself for the project.

Work Plan development began in February 2020 that would outline steps TU would need to take to complete work at Atlas. Several iterations of this along with beginning drafts of the AOC started to circulate between USFS, EPA, DOJ, and TU in May and June 2020. About four months of negotiations took place to fully finalize details of the AOC, which was completed and approved by all parties on 9/11/20. Following approval, the AOC was subsequently published to the Federal Register for a 30-day public comment that ended on 10/12/20. Due to the Federal Holiday on 10/12, a notice to proceed with construction activities was issued to TU and Contractor, John Reams Construction on 10/13/20, thus permitting work associated with the AOC to begin. Given the uncertainties of the AOC process along with an underlying pandemic, TU and Agency partners can chalk the completion of the AOC up as a major win. The AOC itself was almost a project within a project.

Construction Summary:

As described above in Figure 4, TU was responsible via the AOC and SEP agreement to carry out the following three Tasks during construction.

1. The first Task will involve the installation of run-on/run-off drainage controls with drainage fans;
2. Task two will focus on Sneffels Creek stabilization (Reach 1) work and;
3. Task three will be a bulk of the work pertaining to grading, consolidation, revegetation of yellow and gray waste rock and tailings areas.

TU staff had already procured a contractor during a competitive bidding process in October 2019 so work was able to begin immediately following the notice to proceed on October 13th, 2020. John Reams Construction out of Naturita, CO was the selected contractor and able to complete the project in exactly 3 weeks with oversight and assistance from TU staff along the way. The crux of the project was figuring out how to stagger each Task while also reclaiming out of the site. Work immediately began on the run-on controls for the yellow and grey tailings areas (Figures 5 and 6).



Figure 5: Conditions at grey tailings preconstruction showing toe of slope (left) and after construction (right) showing run-off channel and reclaimed slope.

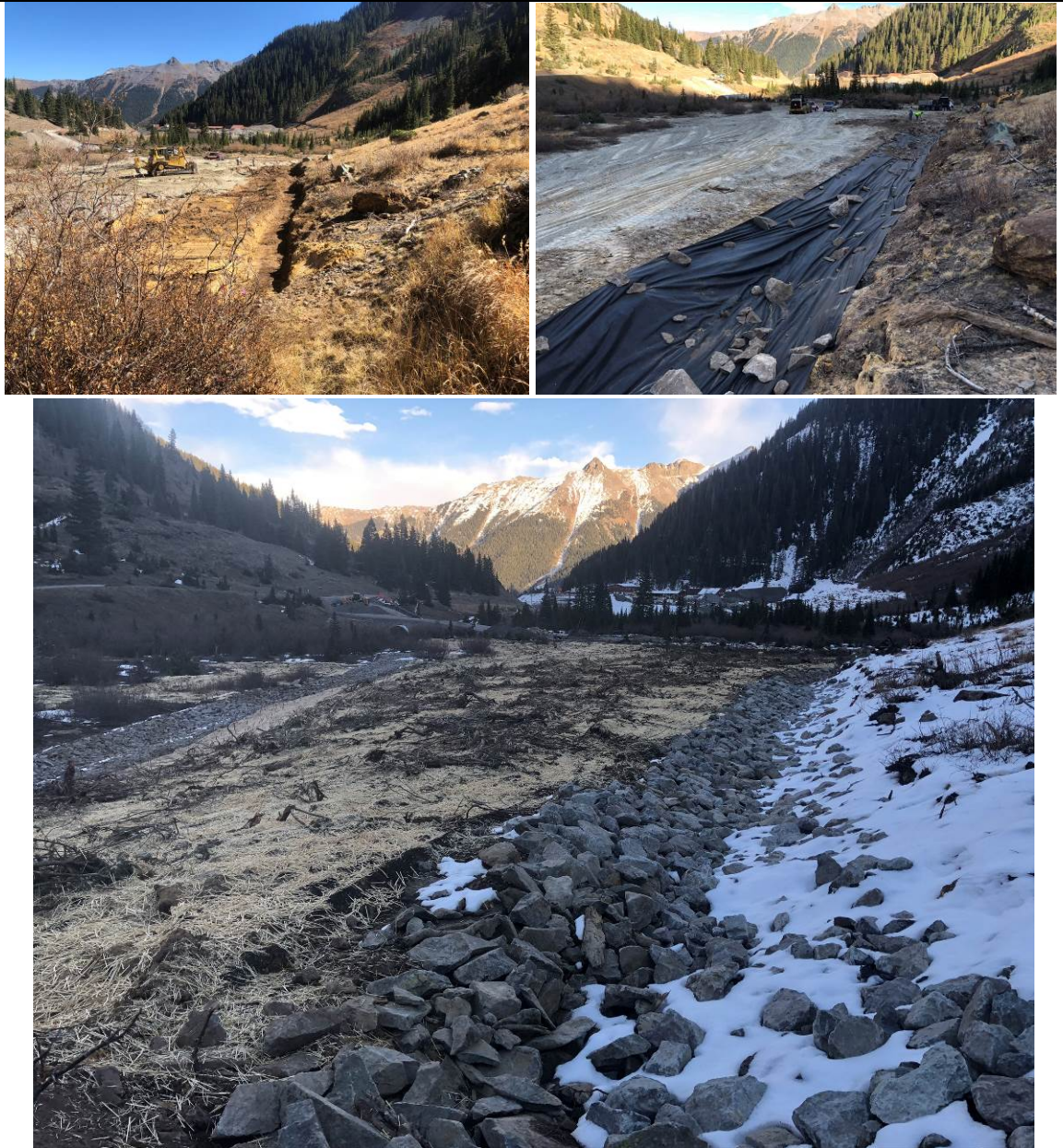


Figure 6: Upper left photo showing start of construction on grey tailings area and beginning layout of run-on channel. Upper right photo depicts during conditions of run-on channel with geotextile liner laid out along channel profile. After conditions of rock-lined run-on and run-off channels both in view in bottom-center photo.

Installing these channels first allowed the contractor to set an upper grade point for each consolidation area. While the channels will provide long-term erosion resistance and conveyance, they also acted as a buffer for any surface flows that might've been generated from a freak storm or snowmelt during the construction phase. Once the run-on channels were established the crew split



duties to focus on Sneffels Creek stabilization work and the beginning stages of tailings and waste consolidation.

Task 2 stream work mainly targeted the left bank of Sneffels Creek adjacent to the yellow tailings area where exposed lenses of fluvial tailings were present. This material was removed down to native soil elevations and consolidated into the yellow area (Figure 7). Various depths and volumes of tailings were encountered during bank excavation.

Figure 7: Exposed lenses of fluvial tailings along Sneffels Creek during reclamation process.

The excavator bucket was flipped during this work to minimize the amount of material lost into the creek. TU worked with the contractor on this portion of the project to capture as much contaminated material as possible. This process involved several excavation pits to ensure adequate removal depth was being maintained throughout the bank. Following excavation and removal of fluvial tailings, the previously over-steepened banks were graded to an accessible bankfull bench throughout the reach. Willow clump transplants were added throughout this graded bank along with hundreds of live cuttings harvested from the site area (Figure 8). Once all Task 2 activities were completed, soil borrow was generated and screened for placement along the edge of the site where additional fluvial tailings were removed. This clean fill will act as an essential buffer between the stream corridor and the consolidated yellow tailings area. Approximately 20-30 willow clumps were transplanted throughout the Sneffels Creek riparian area and edge of the yellow tailings area further protecting against future overbank events.



Figure 8: Before (left) and after (right) photos looking upstream at Sneffels Creek reach adjacent to Atlas Mill. The cut-bank shown in Figure 7 can be seen on the right side of the frame in the before photo. Once contaminated material was removed, banks were graded and willows installed along bankfull elevation to provide erosion resistance during periods of high flow.

As previously stated, the bulk of the work fell to Task 3, which focused on the 4.2 acres of in-situ mine reclamation that involved excavation, grading, and consolidation of contaminated mine wastes up out of the 100 year floodplain. Following completion of Task 2 and after a late-October snowstorm, full attention was placed on Task 3 actions to ensure the project was completed before winter. By grading and consolidating wastes throughout the project, well-defined footprints were already in place to spread and incorporate specific amounts of amendments. This process involved first spreading lime and limestone into graded surfaces to depths of 18-24 inches followed by slight incorporation (<6 inches) of fertilizers and compost. Once the graded tailings/wastes were fully amended available slash was tracked into surfaces followed by seed, straw, and woodstraw (Figure 9).



Figure 9: Before conditions (upper left) showing 4.2 acres of yellow and grey barren areas. During construction photo (upper right) showing a partially reclaimed grey area and a graded and consolidated yellow area. After conditions (bottom center) photo showing fully graded, consolidated, and revegetated site with constructed drainage controls along the margins of each area.

Task 3 actions will ideally help to establish native vegetation across a previously barren site, thus reducing the likelihood of contaminated material migrating off-site during future storm events. The last parts of the project involved completing the last segment of the run-off channel at the toe of the gray tailings area and final revegetation of the gray area adjacent to the staging zone. On November 3rd, TU staff conducted a final site walk through with USFS, OSMI, and Reams Construction to ensure all project deliverables were met. This marked the successful completion of SEP construction activities at the Atlas Mill.

Next Steps:

TU will work with UWP and other partners to monitor for effectiveness at this site over the next several years. Post-project water quality monitoring will take place at two historic sites upstream and downstream of the site, while TU will also evaluate soil chemistry conditions with USFS. While working on this project, TU furthered the relationship with UWP and Ouray Silver Mines Inc (OSMI), which has led to the development of the Governor Basin project higher up in the watershed. TU is planning to complete design work on this project over the 2020/21 winter that will drive subsequent reclamation at the site in fall of 2021. The learning experience of agency processes will bode well for TU staff since final approval and oversight for Governor Basin will go through EPA and USFS.

<p>Remaining SEP Activities</p>	<p>Remaining SEP activities would include post-project monitoring of water and soil chemistry. These were originally written into the SEP, but given the late completion of construction work they will be performed in 2021 and/or 2022. Typically, standard practice for water quality sampling takes place two years after completion of a project. A flush of metals or sediment is sometimes noted after the first year until things stabilize at the site. Relying on a first year dataset following project completion can skew data results and interpretation. TU will work with OSMI, UWP, and USFS to conduct water quality sampling at the up and downstream sites in 2021 and 2022 to evaluate any fluctuations in data trends. Soil chemistry will be compared to pre-project levels taken by the State of Colorado to show any measurable improvements. The USFS and TU have already discussed the idea of vegetation monitoring over the first three years to document % coverage of native species and reduction in bare ground compared to pre-project conditions. While an operation, maintenance & monitoring (OMM) plan was initially specified in the original SEP, partners have decided to pursue a less formal approach that will ultimately meet the intent of the OMM. The reasoning behind this approach is to ensure proper monitoring of certain aspects are taken into account given the late completion of the project, as well as adequate time for post-construction site conditions to equilibrate. Monitoring that will meet the initial goals of the OMM will be carried out in subsequent years by project partners.</p> <p>In addition to sampling and effectiveness monitoring, TU is planning to work with OSMI, UWP, USFS, and local historical groups to create signage for interpretation of the Atlas Mill site. Development of this sign would hopefully take place over with winter of 2020/21 with installation slated for Fall of 2021 near the site. This aspect was not part of the original SEP proposal and has been the recent idea between TU and project partners.</p> <p>These activities will take place after the expiration of this SEP and will be funded by a combination of project partners.</p>
<p>Barriers/ Problems Encountered</p>	<p>As commonly described during SEP Update reports, the AOC process was a first of its kind between a Good Sam and USFS. While TU has completed these documents with EPA in the past, this was the first with the USFS, and will hopefully pave the way for future cleanups using this tool. Because this is a new and un-utilized process by USFS, it proved to be very slow. Not only did TU, USFS, EPA, and DOJ all need to agree on language, the 30-day public comment period extended this critical timeline. These long delays are why construction was delayed several times over the course of the SEP. Given TU's experience working on AML projects, TU staff saw these delays coming, which is why as much of the contracting and planning was done up front. This was all TU could do to try and maintain the schedule in the revised SEP.</p> <p>Not only did TU run into AOC and legal challenges throughout, we also battled a global COVID-19 pandemic and a government shutdown over the life of the project. Both factors had significant effects on the SEP timeline with the government shutdown likely creating the need for the SEP extension in 2019. The effects of the pandemic should not be overlooked when referencing the timeline of this project. State issued orders banning non-essential travel and work were imposed by the Governor during the early stages of March and April with uncertainties following throughout the summer season. The USFS had also initially delegated approval of all related construction work during the 2020 season to Forest Supervisors. Approval of work similar to this project at one point depended on the decision of GMUG Forest Supervisor. While this never became an issue, approvals were uncertain for most of the months leading up to the project. TU is fortunate to have a good group of agency and private partners that are dedicated to getting work done on the ground. Without their continued support through a shutdown and pandemic, this project would had never become a reality.</p>

<p>Environmental and Public Health Measures/ Results</p>	<p>In association with SEP funds, no environmental measures have been performed at the site. Historical WQ and soil data has been gathered by OSMI and UWP and will be compared to post-project data as described in the Remaining SEP Activities section above. The post-project data will be gathered by UWP, TU and other project partners beginning in 2021 at up and down stream historic sampling locations.</p> <p>Most of the quantifiable outcomes associated with this project will focus on the re-vegetative success and mitigation of migration of contaminated material offsite per the removal factors listed in the Work Plan and AOC. As listed above in Remaining SEP Activities, TU plans to work with USFS to develop a monitoring strategy that looks at pre vs. post soil chemistry of yellow and grey tailings areas, as well as native vegetation establishment and percent-cover. It is undetermined what the threshold of success will be, but initial thoughts are 40-50% vegetation coverage across the site after three years post-reclamation. This would mean that bare ground, which was initially 100% in some areas would be reduced by 50-60%. It is likely that monitoring plots and photo points will be established during the first growing season.</p>				
<p>SEP Expenditures</p>	<p>[Include a table summarizing the total, actual itemized expenses. Documentation of the expenses <u>MUST</u> be included as an appendix to the completion report. Documentation may include: copies of purchase orders and receipts, invoices marked paid or with a zero balance or canceled checks.]</p> <table border="1" data-bbox="332 1461 1497 1589"> <tr> <td data-bbox="332 1461 1034 1528"></td><td data-bbox="1034 1461 1497 1528"></td></tr> <tr> <td data-bbox="332 1528 1034 1589"></td><td data-bbox="1034 1528 1497 1589"></td></tr> </table>				

<p>Budget Discussion</p>	
<p>Other Relevant Information</p>	
<p>Certification Statement by:</p> <p>Jason Willis, P.E.</p> <p>CO AML Program Manager</p> <p>Trout Unlimited Inc.</p>	<p>I certify that the SEP was fully implemented pursuant to the provisions of the SEP Agreement and that to the best of my knowledge, all information included in this report is accurate and true.</p> <hr/> <p style="text-align: right;">12/14/2020</p> <hr/> <p style="text-align: center;">Signature</p> <p style="text-align: right;">Date</p>

Appendices and Attachments