

Plan-Level – Mining Plan of Operation

For a Mechanical Placer Mining Operation

On **BLM Managed Federal Claims**

White Creek – Valdez Creek Mining District, Alaska



By:

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APMA A 125691

**Highlight Canyon LLC,
by contract with
Clearwater Mountain Mining
White Creek
November 08, 2012**

Overview

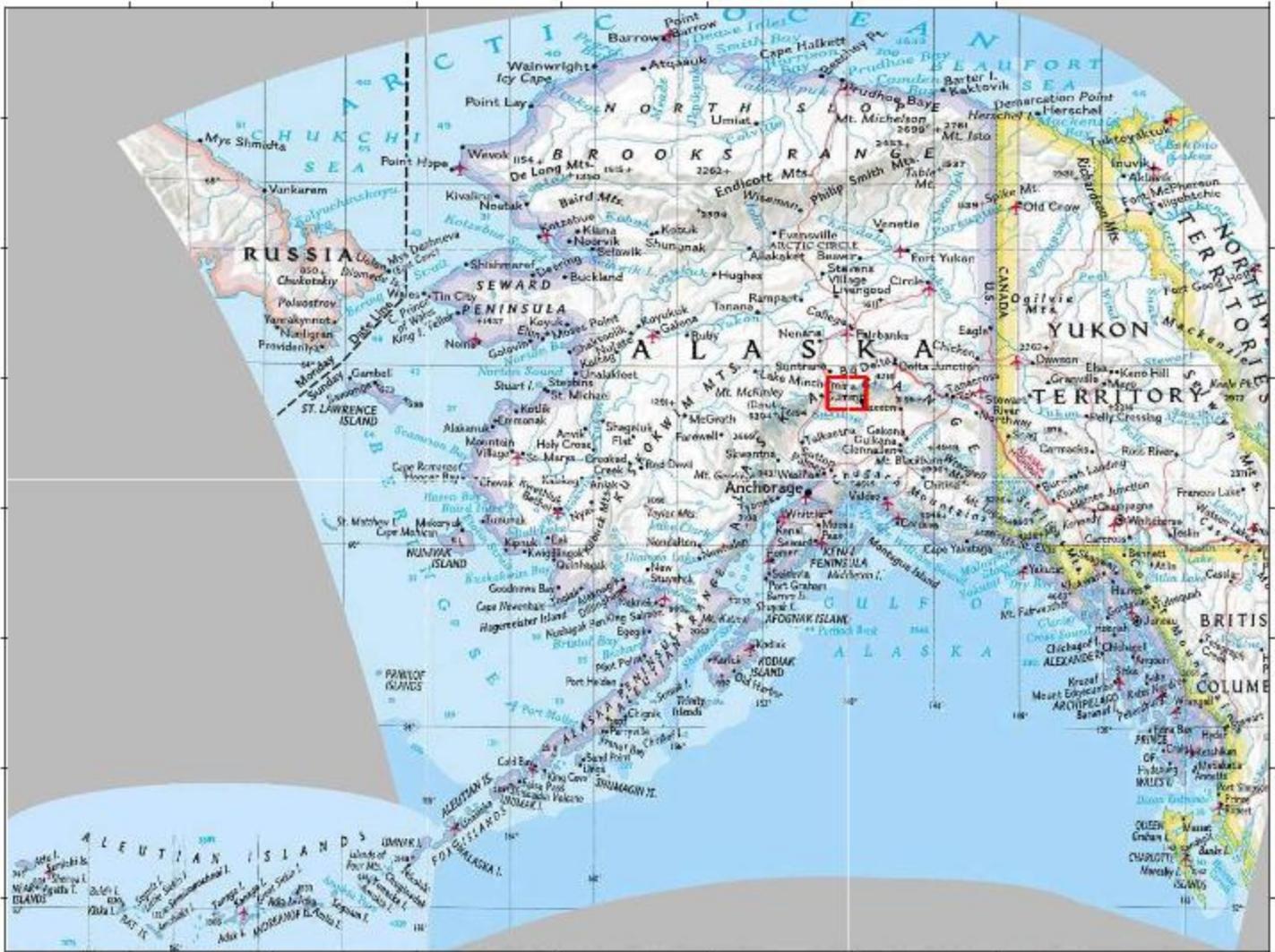
This is the mining and reclamation plan for Highlight Canyon LLC's operations in the White Creek drainage/Gold Hill area within the Valdez Creek Mining District. The purpose of this operation is the safe, economically sound and environmentally compliant, extraction of precious metals from the claims and the completion of acceptable reclamation of the claims. The primary focus of the initial work will be on claims number 1, 2, and 3, most of which is previously disturbed ground by former operators.

Bulk sampling performed during 2010, and the work of previous adjacent operations, prove the existence of economically viable, production grade, pay gravels in this initial area.

After the initial area is placed into production, additional exploration via drilling, bulk sampling and or electronic means is planned for other claims in these holdings, including Rusty Creek, Lucky Gulch and the surrounding areas. Depending on the results of test samples, mining in the initial and subsequent areas may occur concurrently.

It is anticipated that the total area of disturbed soils will be contained within 20 acres at any given time, as reclamation of mined out areas is planned to occur concurrent with mining operations. As additional information, conditions, and test results become available, modifications of this plan may become necessary and appropriate amendments or modifications of the plan will be submitted for approval.

FIGURE 1



Site Location

The proposed initial active mine area is located along White Creek drainage, upstream from and including its natural confluence with Rusty Creek a distance of about 3300 feet.

The site is within the Healy A-1 USGS Quad with a generally central coordinate location of 63deg 11min 33sec North, 147deg 21min 21sec West (NAD 83).

Figure 2 shows the general site location.

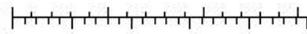
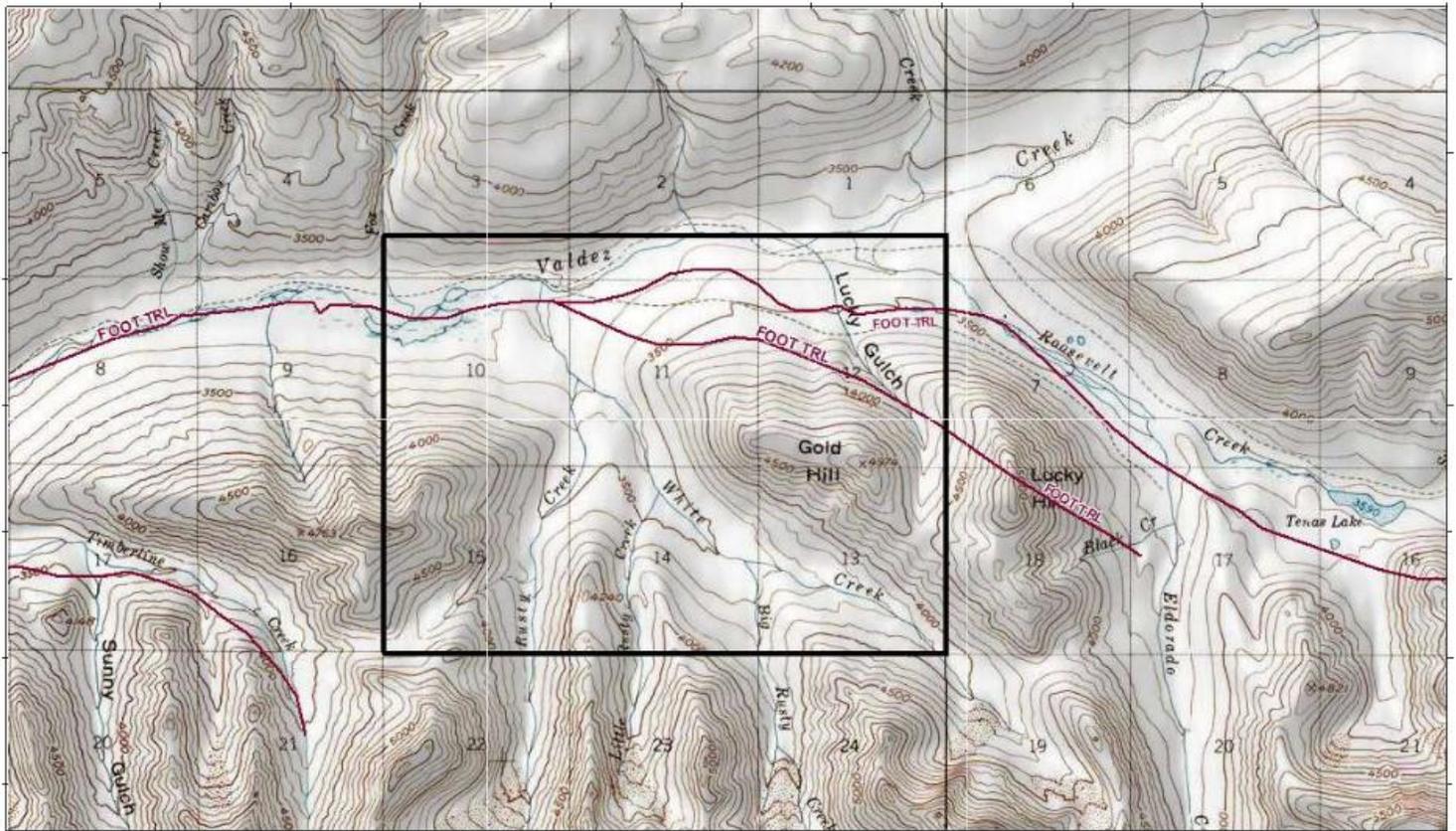


FIGURE 2

The initial active proposed mine area will likely disturb portions of 4 claims of the 27 claims associated with the project (Figure 3). Boundaries of the 4 claims are approximated in Figure 4.

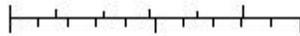
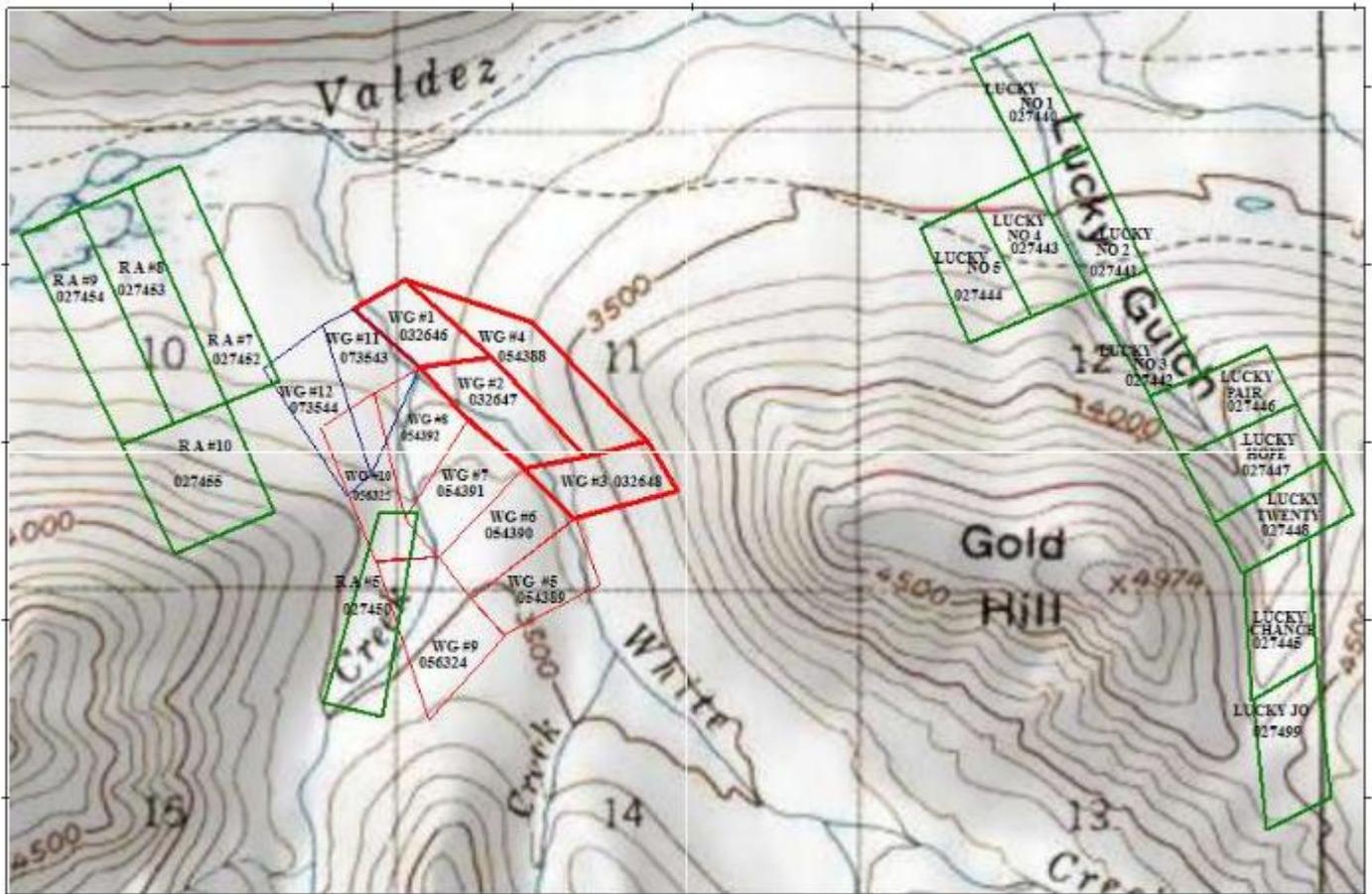
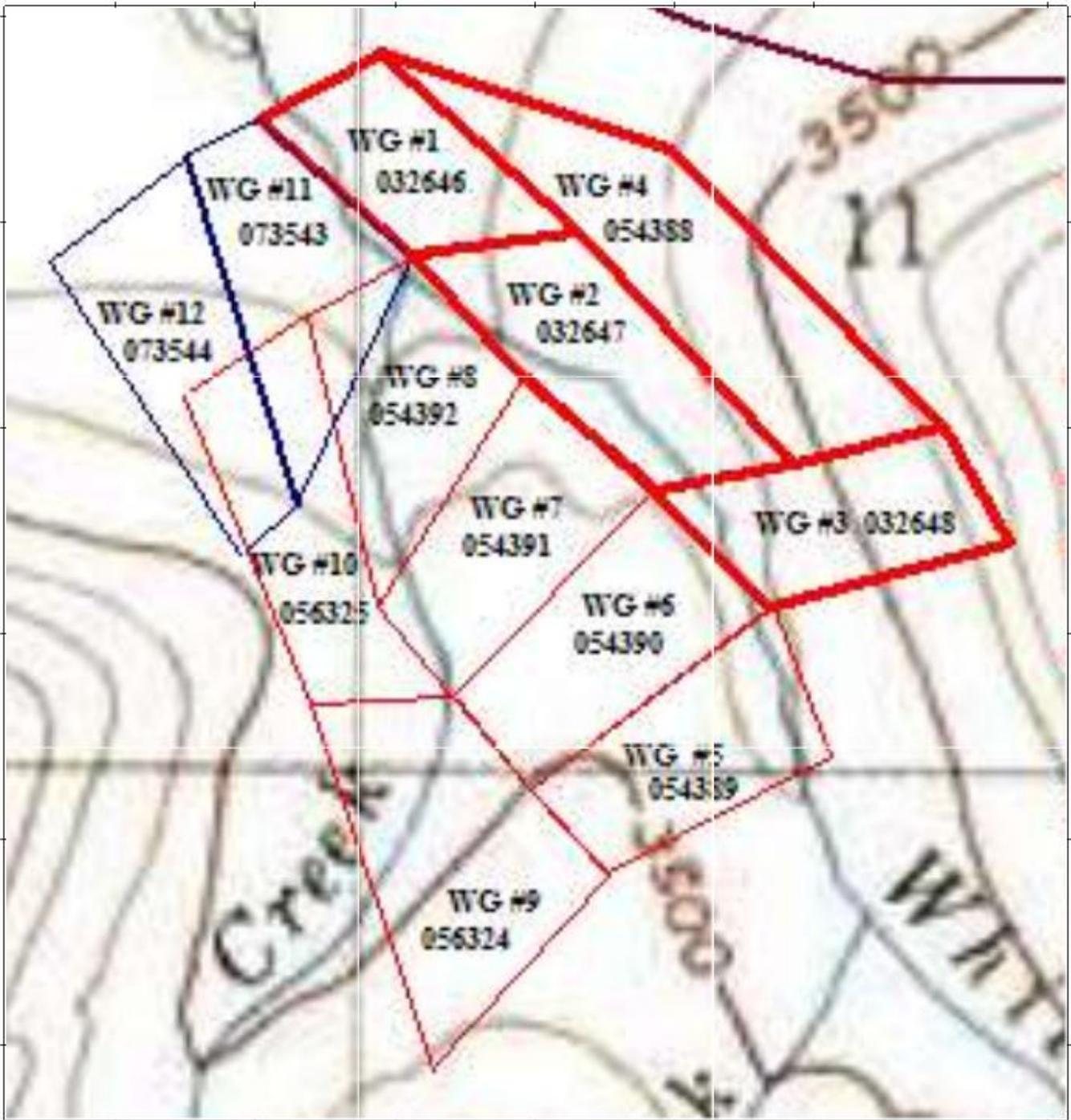


FIGURE 3

This area is within the BLM Glennallen Field Office area, and is managed through the BLM Anchorage District offices. The claims are grandfathered federal claims inside area that is now State of Alaska managed land.



 NATIONAL GEOGRAPHIC

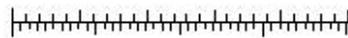


FIGURE 4

Description of Operations

General

The mining and reclamation plans herein are submitted as part of the State of Alaska, APMA placer mining permit and are specifically designed to satisfy BLM Federal Title 43 §CFR 3809.400 requirements for a plan-level plan of operations.

The first objective of the mining plan of this project is to describe the procedure and facilities that are anticipated to be used to recover and process placer gold and precious metal deposits. The second objective is to describe the anticipated procedures and timing of reclamation.

The site is primarily on grandfathered federal claims, within the BLM Glennallen Field Office area, and is managed by the BLM Anchorage District office. Most of the surrounding area has since been transferred to State ownership; however, these claims remain as federally managed lands at this time.

Current plans and strategy anticipate initial disturbances of not more than 20 acres of land. Operations will minimize soil disturbances by removing vegetation and overburden annually in those areas anticipated to be mined during each mining season and by conducting concurrent primary reclamation regularly during mining operations.

Secondary reclamation will occur before the end of each mining season in disturbed areas not requiring disturbance for future operations including drill or sampling sites proving less than production level yields. During the life of the mine, total area of un-reclaimed disturbances should never exceed 20 acres, because, as new mining occurs, new reclamation will keep pace with new disturbances.

An Environmental, Safety and Compliance person will be designated by *Highlight Canyon, LLC* and will be on site during mining operations to monitor and ensure compliance with State and Federal regulations.

Schedule

Detailed reclamation and closure plans are included with this mining plan. The mining season for this project is initially planned to extend from late March or early April to as late as the end of November each year, beginning in 2013. Eventually, as part of this plan, year-round operations may occur. The mining operation will likely employ up to 26 or more persons on-site during peak operations. The number of total persons at the site on a given day will vary widely as specialty operations or visits by agency personnel occur, or the scope of the project expands or contracts. Partial closure will occur at the end of each mining season except when year round operations are carried out.

Maps, figures and documents will be referenced in the text of the individual plan sections and will be included as attachments to the plan. As the project develops, it is likely that amendments to this plan will be submitted to allow expansion or modification of the scope outlined in this application.

Exploratory work and bulk sampling in 2010 through 2012 were conducted under permits in force at the time.

Access to Area – Request to Use Historic Route to Mine Area

Access is by the State maintained Denali Highway; then from mile 79.5 of the Denali Highway via the Valdez Creek Road that leads to the Valdez Creek mining district area. At a point approximately 10 miles up this road, near the confluence of White Creek and Valdez Creek, an existing and established seasonal road leads to the proposed mining area. Request is hereby made that access be allowed to the mining site via the existing roads.

Stream Crossings

Valdez Creek will be crossed at currently established crossings to gain access to the White Creek mining area. The Valdez Creek crossing will be made at the historic location upstream of the confluence of White and Valdez Creeks. This crossing is in common use by several mines in the area as well as recreational users.

In order to limit impact at the Valdez Creek crossing, and reduced damage to equipment and risk to personnel, permission may be sought from appropriate agencies to install adequate culverts or other means to cross over the stream. FIGURE 5 shows the locations of the above mentioned crossings at about mile 10 of Valdez Creek road.



FIGURE 5

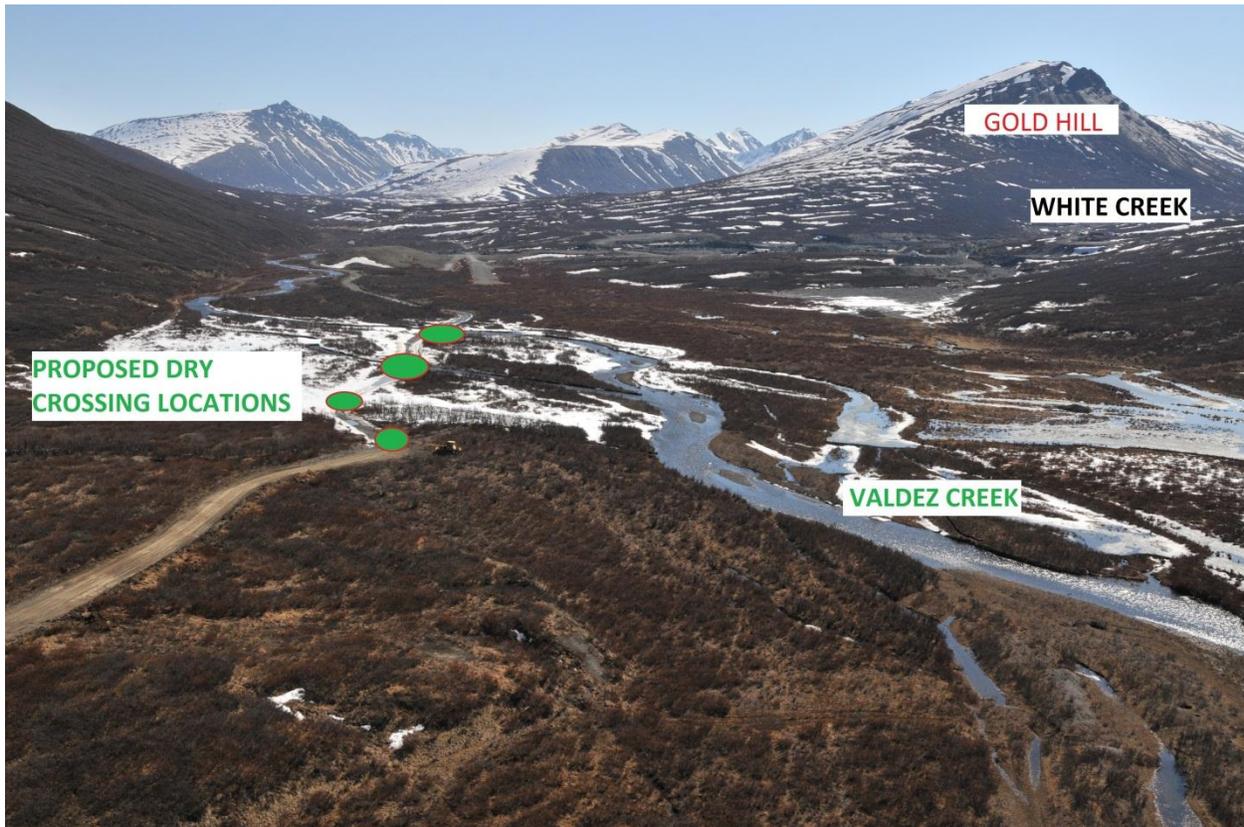


FIGURE 6

FIGURE 6 shows the proximity of the crossings in relation to White Creek and Gold Hill. The crossings are about one mile from the general area of this Plan of Operations.

Description of Past Mining Activities and Current Conditions

Existing Site Conditions

Topography

The general contour of the initial focused area of work (claims one, two, and three) is a generally flat valley floor about 450 feet wide at the down valley, north end and narrowing slightly as it progresses up valley, gaining elevation as it goes.

The claims have experienced sporadic exploration and surface mining since the early 1900s. During the past decade a pit was developed at the north end of claim number one.

The valley floor was the previous location of White Creek but previous operations relocated the Creek to a diversion on the Western shoulder of the Valley. This diversion passes through a deep cut in the shoulder of the point of a protruding hill adjacent to the northwest portion of claim number one and continuing North by Northwest where it spills onto a broad, gravel flat. From there the water filters through several hundred feet of gentle plain with low vegetation comprised of tundra Forbes and scrub Willow. The water flows through the vegetation into at least three old beaver ponds and finally filters from those into Valdez Creek.

Observations of this flow during times of heavy melt-water runoff and turbidity detected no visible turbidity by the time the water entered Valdez Creek.

Plant

A test plant consisting of a small trommel (4 foot diameter by 20 foot long drum) feeding a pair of 2 foot wide sluices is set up on claim number 3, along with settling ponds as per the previously filed 2009 "plan map of operation". Modifications to this test plant may be made as conditions dictate.

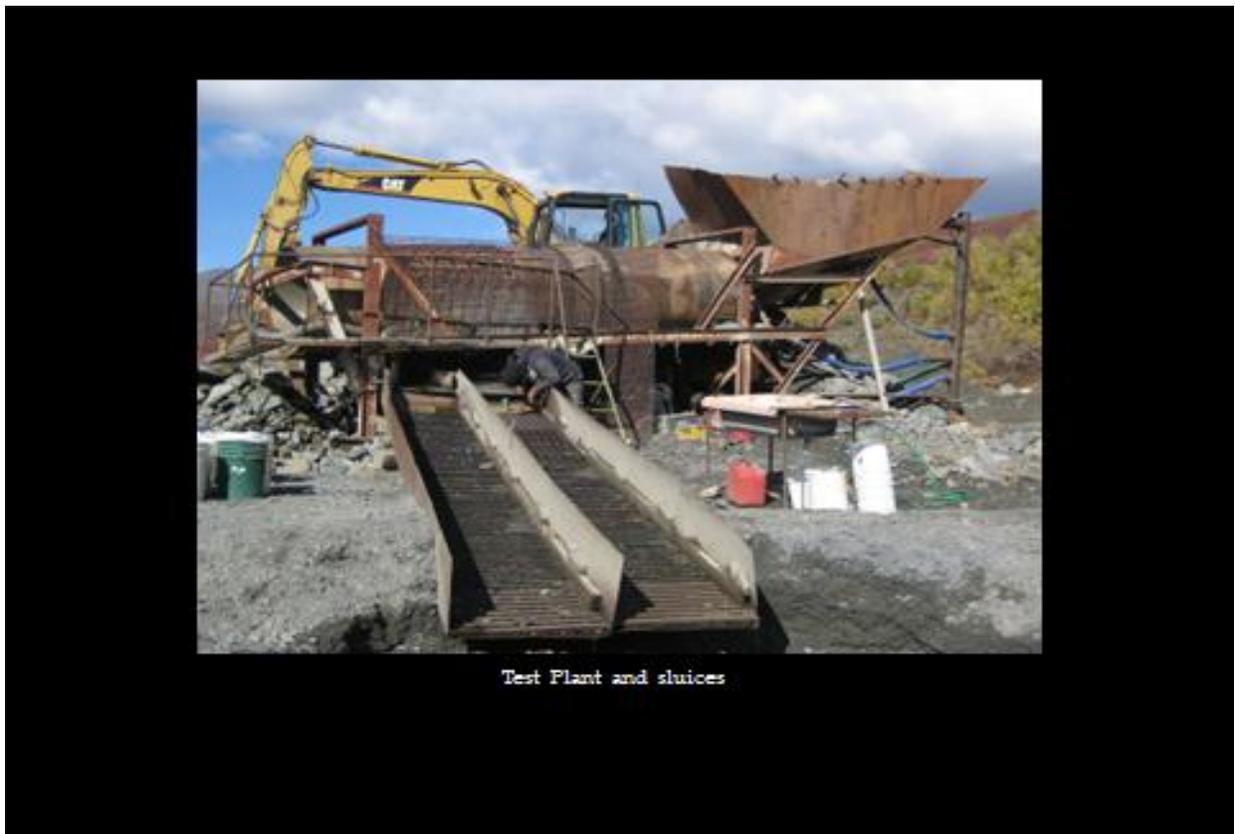


FIGURE 7

Excavation

The main pit at the North end of claim number one has been expanded as per Clear Mountain Mining's 2010 amended plan. The east wall of the pit was terraced back to the east to mitigate the high wall that already existed when Highlight Canyon LLC began work in 2010.

During the 2010 season, the mining operation to the north of our claims overflowed the area immediately north of our main pit. (fig.8)

This overflow with mixed material prevented the ex-filtration by percolation of the sub-grade groundwater in addition to backing up the water in the pit to levels much higher than natural, resulting in the inundation of our pit with excessive volumes and levels of water.

The North wall was terraced back for safety by us in the fall of 2010. Because of the over-fill by the neighboring mine, and its prevention of outflow or ex-filtration of water from the pit during the off-season, the resultant excessive water level caused erosion into the main pit to occur during breakup in the spring of 2011. The flooding and erosion caused by the neighboring mine will result in significant cost to Highlight Canyon LLC, however, because the pit is contained, no degradation of the streams, environment, or other water bodies occurred.

This Plan of Operations anticipates governing agencies requiring the neighboring operation that overflowed and prevented the downstream outflow and exfiltration mitigate its actions, by installing adequate means for exfiltration at natural subsurface elevation, as a condition of their permit to operate.

In the event appropriate agencies fail to motivate adequate mitigation by the neighbor operation, this Plan of Operations calls for us to exercise our right to mitigate the condition by installation of poly drain line at appropriate depth, on the downstream neighboring claim, to drain the water. We will then seek redress for associated costs and damages through any and all administrative and legal means available that we deem appropriate.

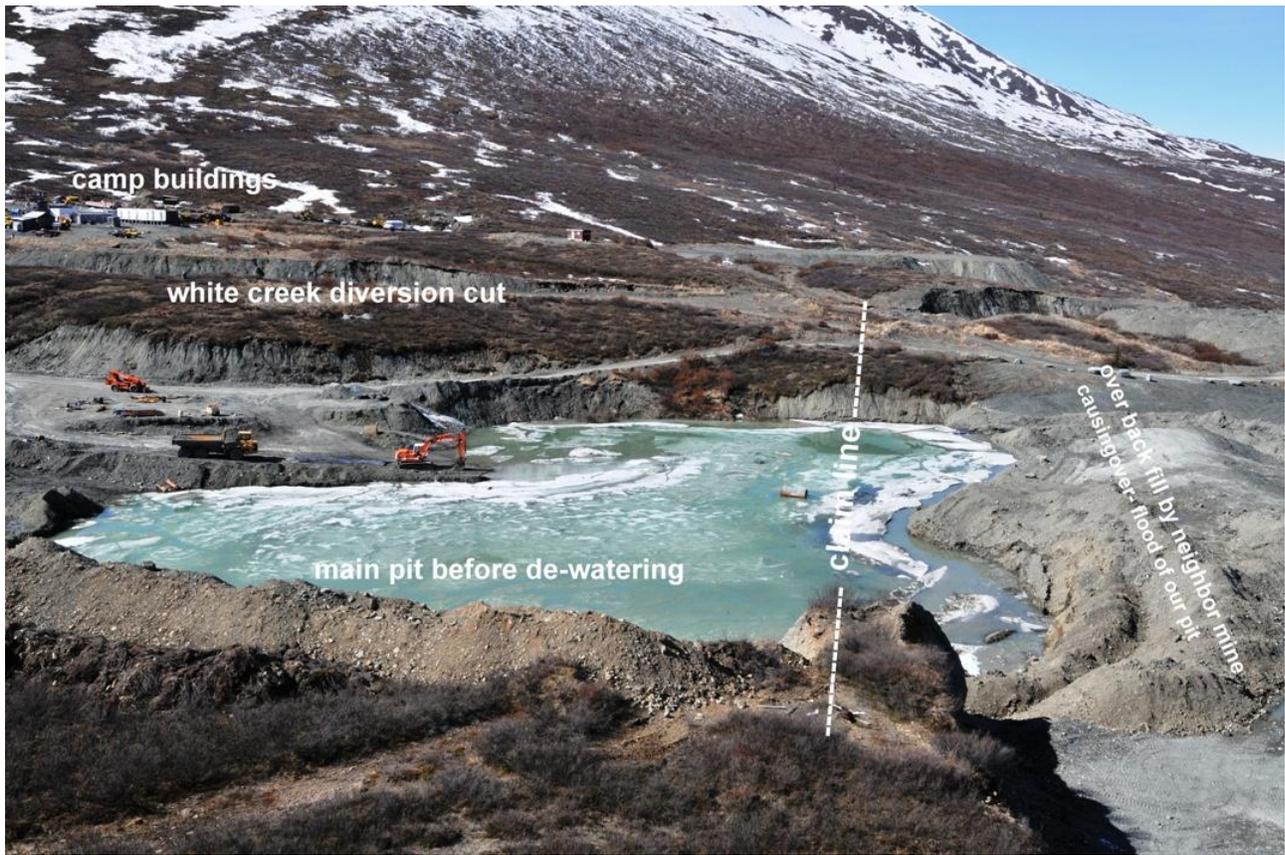


FIGURE 8 go to the index

Vegetation is stock piled at the East limits of the claim in a row with periodic openings in the row to allow foot traffic or animals to pass through. Topsoil is then stock piled in a row similar, adjacent and parallel to the vegetation. Overburden and low grade materials are then stockpiled parallel to the topsoil in descending fashion with the peak of each row in a higher elevation than the toe of the incline of the adjacent row, to help provide an erosion resistant contour. This method has proved successful, as no apparent erosion has occurred amongst the materials stockpiled this way.

This practice will be repeated in similar fashion as we mine up valley to the south. The valley floor will be excavated to bed rock following pay gravels and channels. See FIGURE 9.

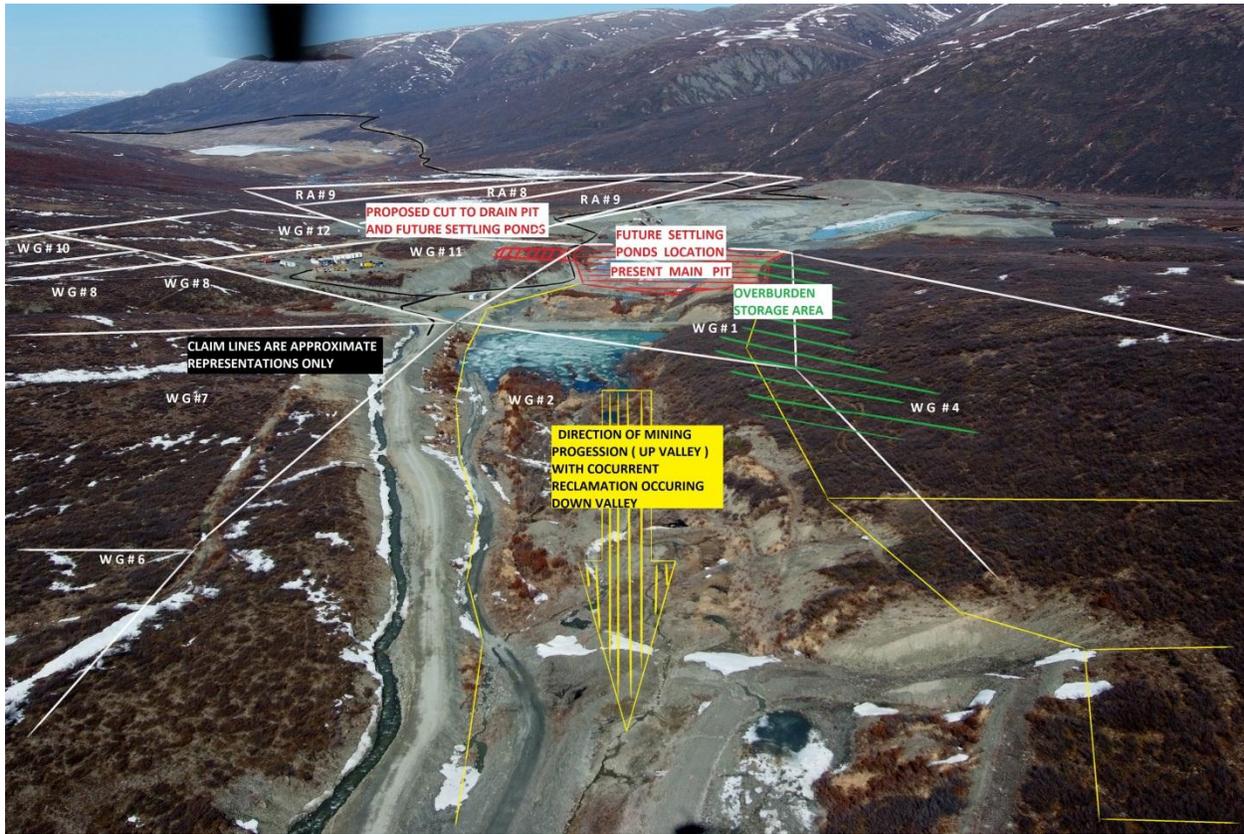


FIGURE 9

Water Management

During 2010, three settling ponds were constructed similar to the sketch submitted in 2010 by Clearwater Mountain Mining and illustrated in the attached aerial photograph. (fig.10) Settling pond #1 serves dual functions as a settling pond as well as a lock to capture, elevate, and redirect surface and groundwater from up valley and redirect it to ponds #2 and #3, then to the White Creek diversion, thus reducing water entering into the excavation. This water captured in pond #1 will be used to supply production water for the wash plant. If this volume proves inadequate, makeup water will be pumped from White Creek diversion.



FIGURE 10

During 2010, the main pit dewater was pumped via three 6 inch water pumps and staging catches to settling pond #1. This involves a head of about 150 feet and the horizontal run of 900 feet.

Our preferred and proposed dewatering method is to make a cut perpendicular to the White Creek diversion cut running eastward from the diversion to the main excavation on claim number one, allowing dewatering of the pit to be pumped, or flow when the pit is full of water, to the diversion (FIG. 11).

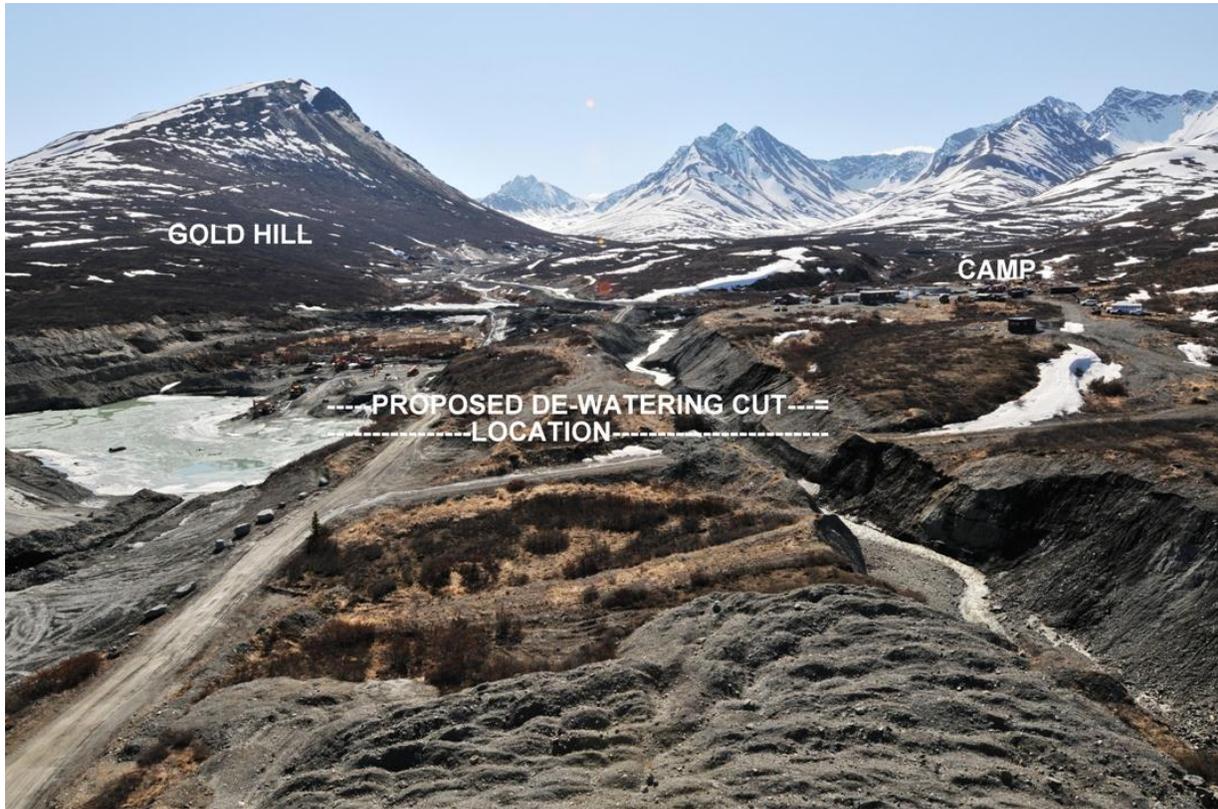


FIGURE 11

During 2011 permission was granted, (attachment 5) and water monitoring protocols established by ADEC (attachments 3&4) for this method, including a 1260 foot mixing zone.

ADF&G habitat also approved the excavated cut referenced above, and the use of downstream settling ponds, and issued a finding of no permit required (attachments 1&2). ADEC determined the length of the mixing zone and also approved the use of the settling ponds (fig.12 - 16). **(Disregard any labels or references to Bio-Filter areas as we are no longer proposing them as part of this plan.)**

The cut has not yet been excavated, but is hereby proposed for the 2013 season and thereafter.



FIGURE 12

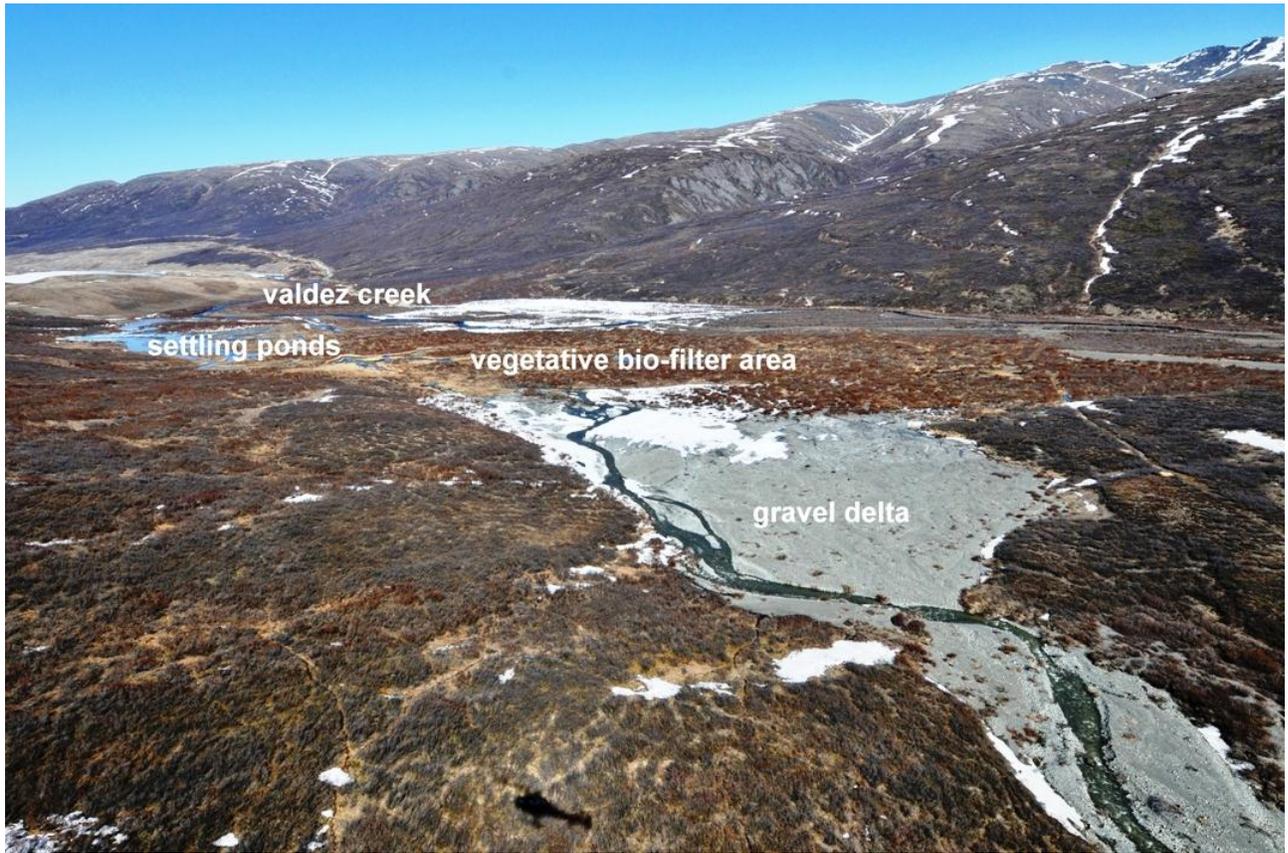


FIGURE 13



FIGURE 14



FIGURE 15



FIGURE 16

ADF&G habitat also requested and authorized downstream detention ponds (FIG. 17) to increase the water's residency. These were constructed during 2011 but are being modified so White Creek runs adjacent to, not through the ponds, and we hereby propose that they be incorporated, after modification, into this mining plan.



Figure 17: Depiction of detention ponds requested by ADFG habitat to increase water residency in the White Creek diversion, Looking North (downstream) across additional natural settling ponds, prior to White Creek seeping into Valdez Creek. (Disregard “vegetative bio-filter area” label)

Adjacent Operations

Historic placer mining operations have existed in the area for many years. In the immediate area there are currently active mining claims on Rusty Creek and on White Creek, north and south of the proposed project area.

Disturbed Area

Currently, less than 20 acres of land is disturbed. Exploratory work and bulk sampling in 2010 and 2011 were conducted according to mining plans in force at the time. Figure 10 includes depictions of the location and extent of currently disturbed areas.

Request for Temporary Structures and Facilities

Currently, the following temporary structures exist on-site.

- 1 Cook shack/mess hall
- 2 Sleeping quarter's trailers
- 1 Laundry/showers trailer
- 1 Gold room
- 3 Tool storage sheds
- 4 Parts storage trailers
- 1 Sauna

We hereby request that these be allowed to remain as is for office, storage, maintenance and housing purposes.

We request that the following additional structures be allowed to be set up on the property:

- Maintenance shop
- Hydroelectric plant
- Wash plant shelter
- Concentrate production shelter
- Additional quarters as needed for personnel

FIGURES 18 & 18a show the location of the existing and proposed facility structures. Claim line representations are approximate.

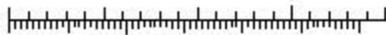
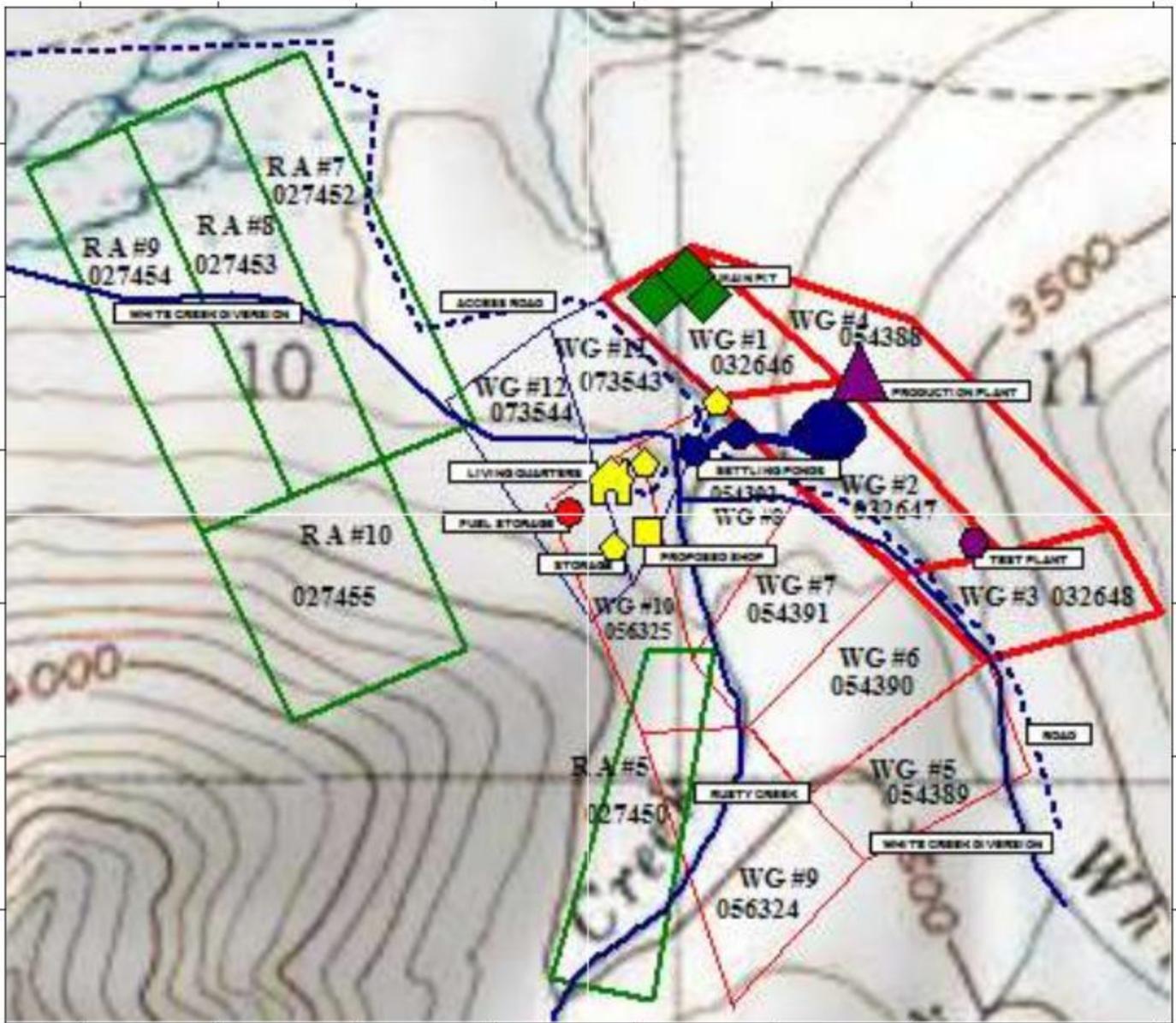
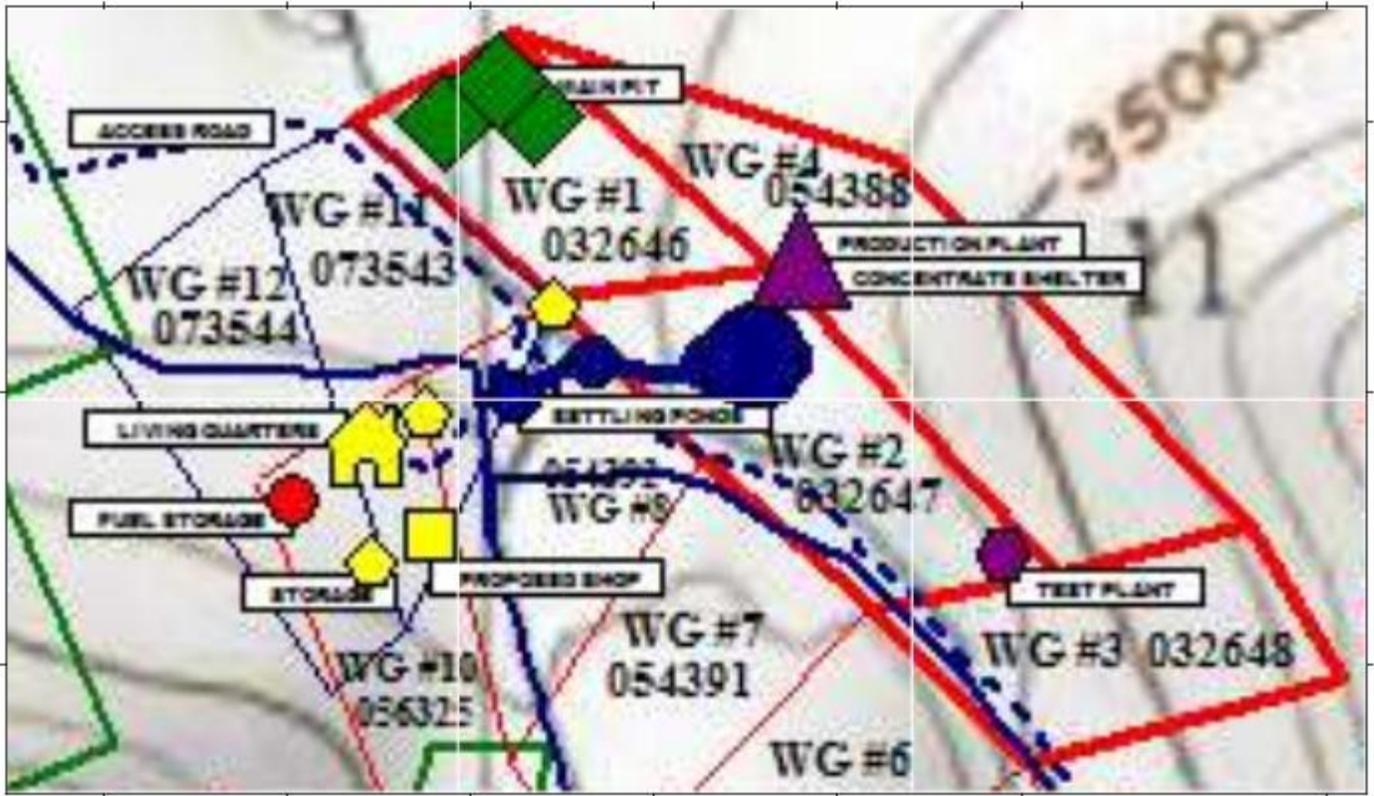


FIGURE 18



NATIONAL GEOGRAPHIC

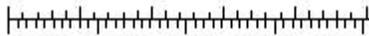


FIGURE 18a (ENLARGED above).

FIGURES 19, 19a (below) Aerial of Buildings





Figure 19a

Drinking Water, Wastewater and Solid Waste

Drinking and domestic water is supplied from a six-inch steel cased well with submersible pump, located about 150 feet from the Camp. A septic system of adequate capacity, function, and distance from the well, was installed previously by the claim holders.

Exploration and Delineation of Resource

Reasonable efforts will be made to define and identify economically viable pay materials as the work progresses. This may involve any of several technologies such as bulk sampling and test drilling. Other testing such as ground penetrating radar or visit the site has other electronic means may also be used. The frequency and duration of drilling or other test work will be determined by the size and quality of the resource identified, production rates, economic viability and other factors. It is anticipated that drilling or other testing will be used frequently as long as economically viable resources continue to be identified.

Test drill locations may be laid out on a line or grid, the distance between lines and spacing between test hole locations will vary depending upon terrain, geology and test results. Because most of the drill cuttings are usually saved for analyzing, broadcasting of the cuttings by the drill rig will likely be minimized.

Various types of drills may be used such as truck or track mounted recirc with cyclone, rock drills, vibratory and or sonic drills.

When drilling or sampling in previously undisturbed soils, vegetation and topsoil will be stockpiled and reused for prompt reclamation if the site is not to be mined during the current season. Berms, ditches, or coirs will be utilized as needed to control water or mud generated by the drilling. Drill locations will be marked with a surveyor's stake or similar means unless already reclaimed. Holes that are preserved and not backfilled will be capped with a large stone or stopped with a tapered post or pipe for safety.

Plugging of test holes will be accomplished by backfilling with native gravel and silt. A vibrator or compactor may be utilized to aid in filling the drill hole. Stockpiled topsoil followed by vegetative matter will then be placed as described in our reclamation plan.

Bulk sample sites yielding less than production grade results in areas that will not be mined during the current season will be backfilled upon completion of testing. They will be contoured to blend to the surrounding terrain and reclaimed in the same manner and timing as described below in the reclamation plan.

Mining Technique, Equipment and Sequence

1. The first step in our mining effort is to remove the standing water that has filled the main pit. This will be accomplished by pumping the water out of the pit and discharging it to the White Creek diversion as per Alaska Department of Environmental Conservation approval issued in 2011(attachments 3,4,5). Water monitoring will occur throughout operations as per the permit requirements.
2. A series of diesel powered and or electric powered water pumps, moving water through hoses or pipes, will be used to drain the main pit. Once the pit is drained, dewatering will occur continuously during operations to mitigate infiltration of groundwater. Eventually a network of HDPE or other pipe material may be established for pumping water, depending upon economic feasibility.
3. As the water level in the main pit decreases, exposed overburden and pay gravels will be tested for precious metals content and excavated by hydraulic track excavators or other means and transported by off road trucks or conveyors. The pit walls will be shaped and terraced according to industry safety standards. Materials that test below production cut off levels will be stockpiled for backfill and reclamation. Production grade materials will be transported to the wash plant for processing and concentration. Bulk test samples are planned to be performed at the test plant, allowing bulk test sampling to occur simultaneous with production runs occurring at the main plant. Test samples may also be conducted at the main plant.
4. The main production wash plant and associated concentrators will initially be set up near settling pond number one. Currently, this plant consists of a feed hopper, a trommel (drum), which is 34 feet long having a 9 foot outer diameter with interstitial grizzly bars running the entire length of the drum. Two sets of screens circumference the latter portion of the drum. Piping carries wash water through the length of the drum, and within the hopper.

5. This configuration allows nearly all of the excavated pay material to be fed through the wash plant without de-rocking in a previous process, allowing for the washing of precious metals from the oversize material. It also allows for the processing of gold bearing clays and silts. The described plant or configuration may be modified, expanded, reduced, relocated, duplicated or replaced, depending on materials or conditions encountered.
6. As the material is washed, the fines pass through screens and are transported to concentrators. Oversize tailings will continue through the plant and exit the tail where they will be transported or stockpiled via loader, truck or conveyor for use to backfill mined out areas and perform reclamation.
7. Wash water from the production plant will flow into settling pond one and on through settling ponds number two and three prior to reentering White Creek diversion. Additional clarification of the water may occur as a result of downstream retention ponds as described previously and illustrated in figures 8 - 16.
8. Fines and water that flow through the wash plant screens will be transported to a series of centrifugal concentrators and/or sluices. Jigs or other devices may also be incorporated into the concentration effort to retrieve as much of the fine gold as economically practical.
9. Final cleaning of the precious metals will be performed by various means, including, but not limited to, high bankers, fine riffles, vibrating tables, panning, smelting, and other procedures.
10. Tailings from the concentrators will be checked for residual gold and other valuable materials. Materials containing production values will be stocked and reprocessed. Concentrator tailings devoid of production values will rejoin the oversize tailings and be utilized during reclamation.
11. After mining begins, and enough material has been removed from the pit that it is economical and practicable to proceed with reclamation, the plan

calls for backfilling the excavated sub-surface cuts on a regular basis, concurrent with the mining and processing of material.

12. As work progresses and backfilling/reclamation is occurring on a regular basis, additional vegetation, topsoil and overburden will be removed and stockpiled or used in reclamation, to progress the mining up valley. This will create a cycle that will occur throughout the life of the project. No more than 20 acres of land is expected to remain un-reclaimed at any time.
13. The discharge water cycling system will operate as follows:
 - a. Overflow process water from Pond 1 will be allowed to drain via a channel conveyance to Pond 2, whose overflow will be channeled to Pond 3.
 - b. Each settling pond is constructed at an elevation slightly below the previous pond. Figures 10 and 20 show the pond locations.
 - c. The process water from one of the settling Ponds will be pumped back to the wash plant.
14. The settling ponds are continually charged due to the influx of surface and groundwater. Any conveyance of make-up water that might be needed will be done via a pipe or ditch from an up-gradient section of White Creek using gravity and or a pump to transfer the water.
15. The settling ponds will be cleaned out periodically and this material will also be used to reclaim the mined areas. If necessary, this material may be temporarily stored in a stockpile depending on the nature and values of the material removed from the ponds.
16. As mining progresses up valley, eventually the wash plant and ponds will be relocated. The settling ponds will be relocated near the area that is now the main pit at the northern portion of claim number one. The wash plant will be relocated and its outflow conveyed to one of the ponds furthest from the outlet to White Creek. Discharge water, makeup water, tailings, and concentrates will all continue to be handled according to the same methods and principles outlined above.

Water Usage

Water usage for the mining process operation is expected to be 12,000 to 20,000 gallons of make-up water per day. The water recycling system is expected to store 1,500,000 cubic feet (12,000,000 gallons) of water and will process the water at a rate of 2800 GPM continuously through the system.

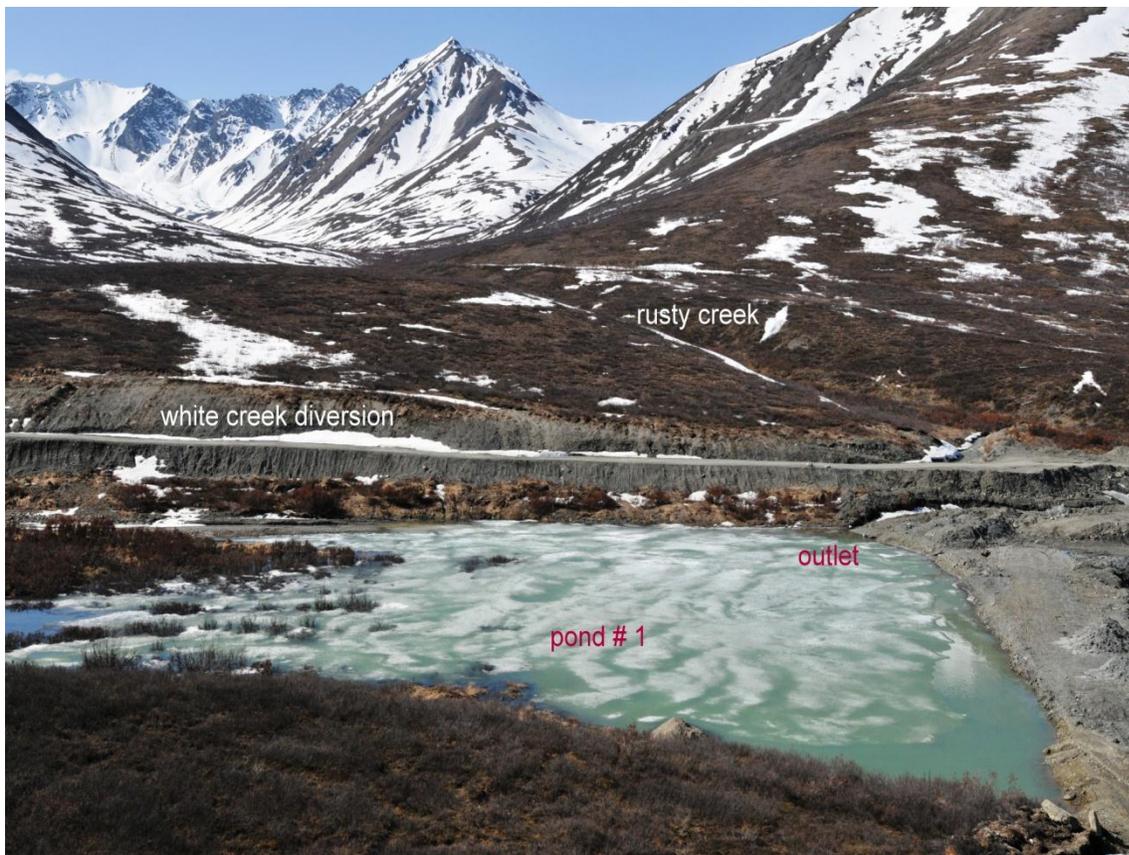


FIGURE 20

Storm Water Pollution Prevention

1. Storm water will be allowed to infiltrate in undisturbed areas
2. Storm water will be allowed to drain into the settling ponds in the immediate area of the process operation which may reduce the volume of makeup water needed.
3. Perimeter berms of vegetation, brush, soil or gravel, or silt fence, as appropriate will be installed around material stockpiles where runoff would be likely to create discharge directly into White Creek or Rusty Creek. Where practicable and economical, stockpiled materials will be located to avoid runoff entering White Creek or Rusty Creek, and situated so that runoff would eventually collect in, and pass through, settling ponds or detention ponds prior to entering creeks.
4. Redundant complexes of settling or detention ponds will add additional protections. Storm water runoff in the production area will pass through production settling ponds prior to entering White Creek diversion.

Air Quality

Site observations by *Highlight Canyon, LLC* personnel in 2010 during exploration and bulk sampling and in 2011 indicated that there is only a small risk of dust release from disturbed soil in the proposed mining area due to the wetness of the subsurface soil and because of the annual rainfall conditions. However, because weather is a variable, and unusually dry seasons may be encountered, *Highlight Canyon, LLC* is prepared to employ a water tanker or sprinklers and water hoses for dust suppression in the event dry or dusty conditions develop. The need for this will be monitored during the mining season

Water Quality Monitoring Required Under NPDES General Permit Number AKG-37-0000 Authorization to Discharge

See **attached addenda #3, 4 & 5**. The practices and standards set forth therein apply to any and each discharge location and are made a part of this Plan of Operation by reference thereto.

A mixing zone 1260 feet in length will be established and marked. A monitoring point at the edge of the mixing zone will be measured and marked.

Turbidity at the downstream edge of the mixing zone may not exceed 5 NTUs above background.

Turbidity samples will be taken at the downstream edge of the mixing zone and upstream of the discharge, as described in Section II of the permit, 3 times per week when discharge is occurring. Process flow may not exceed 4500 GPM and will be controlled as necessary to meet the turbidity limits. All other samples (e.g. Settleable Solids and Arsenic) will be taken at the outfall.

The procedures for inspecting, monitoring, recording and reporting of Settleable Solids, Turbidity, Arsenic and Effluent Flow are detailed in **attachments 4 (pages 56 – 64 of this plan) and 5 (pages 77 – 83 of this plan)** and are not repeated here to save redundancy.

A **LaMatte 2020 turbidimeter** is onsite and will be calibrated as per manufacturer's instructions and used to monitor turbidity. A copy of calibration procedure instructions will be maintained at the mine. The remaining equipment will be as described in attachment 5.

It is anticipated that **Mat-Su Test labs** will be utilized for Arsenic analysis until such time as an approved field monitoring device is procured.

Testing personnel will be field trained in the proper locations, timing, frequency, hygiene, protocol, reporting and response to perform their responsibilities as outlined in the above referenced attachments. Documentation of training will be maintained at the onsite.

A written record will be kept at the mine of water monitoring and testing results. A copy of the record will be sent to the appropriate agencies as required by the permit. A copy of the record will also be available during the season, to the agencies upon request.

Other qualified instruments or labs may be substituted for those listed above when replacement, technological advancement, availability or other sound factors dictate.

If water quality testing demonstrates that limits are exceeded immediate corrective actions will be put into place. Such actions may include extending the residency of the water in settling ponds, increasing the length of ponds, or the numbers of ponds, modified water flow rates, surface skimming drains or gates, mechanical or centrifugal separators, or modified production rates.

Equipment

The following equipment may operate on-site (additional equipment may be added as scope and conditions merit):

<i>Description</i>	<i>count</i>
Rock Trucks	4
Track Excavators	4
750C Dozer	1
D4G Dozer	1
287 B Skid Loader	1
Ext Boom fork Lift	1
Water pumps	5
Processing Plant	1+
Test Plant	1
Camp Generator	1
Maintenance (parts) & Repairs	
Pickup trucks	4
Four wheelers	4
Drill Rigs	1+

Spill Prevention Control & Countermeasures (SPCC) Plan – As per 40 CFR 112

See attached SPCC plan

Fuel Storage Tanks and Secondary Containment Description and Spill Prevention and Control Measures:

See attached SPCC plan

Fuel Re-supply Descriptions and Spill Prevention and Control Measures

1. As per SPCC plan, a fuel truck from Crowley Petroleum or another certified carrier will provide periodic refueling of the diesel fuel tanks. Crowley Petroleum is certified by the US DOT to transport fuel to remote locations. Transfer of fuel to the mine supply tanks will be conducted within the lined and bermed secondary containment area. The actual fuel re-supply truck, however, will not park within this area. This vehicle will conduct stream crossings at the established locations described in the *Stream Crossing* section of this plan.

Habitat Considerations

The mean elevation of the mine site is approximately 3200 feet above mean sea level. The site plan is designed so that water management and reclamation efforts will allow the project to protect adjacent land and waters and eventually revert to habitat that is comparable to its pre-development condition. No wetlands exist in the project area. No known habitats exist on this site for endangered or threatened animals.

The project site is in the White Creek meander which flows into Valdez Creek about one mile downstream from the central area of the project site. White Creek flows into Valdez Creek approximately one mile downstream of the confluence of Rusty and White Creeks. Neither Rusty Creek, nor White Creek, nor Valdez Creek are listed by the State of Alaska Department of Fish and Game as waters that contain populations of anadromous fish.

The project site is within the Mat-Su Coastal Management district, but is well outside the Coastal Management Boundary and therefore does not require permitting from DNR in that regard.

Cultural and Paleontological Resources

No known recorded sites or artifacts are present within the project site. A potential site, the John Babel Rock Cabin is situated on Claim # AKAA 027441 in Lucky Gulch. The Operator agrees to avoid knowingly adversely affecting the structure, or it's supporting substrate to a distance of 83.021 feet (25 meters) from the structure. If at a future time, the location of the structure becomes a hazard or an impedance to the project, or the structure, then work will cease in that area until notification and evaluations have been made within the timeline as outlined in Federal Title 43 §CFR 3809.420(b)(3)(8)(ii).

An Environmental, Safety and Compliance person, designated by Highlight Canyon LLC, will educate personnel as to the Federal Title 43 §CFR 3809.420(b)(3)(8)(ii)(iii) requirements regarding cultural and paleontological resources and will train personnel how to recognize potential resources. A strict policy will be enforced whereas no person shall knowingly disturb, alter, injure or destroy any scientifically important paleontological remains or any historic or archaeological site, structure, building or object within the project area without first complying with all relevant regulation. Should a relevant resource be found, the appropriate Federal and State agencies will be contacted. If the continuation of work endangers such resources, then work will cease in that area until notification and evaluations have been made within the timeline as outlined in Federal Title 43 §CFR 3809.420(b)(3)(8)(ii).

INVASIVE SPECIES MANAGEMENT

1. Invasive` species management, including weed inventory, prevention, monitoring and control, including where appropriate, eradication strategies, will be conducted as follows:

A. Using guidance from the BLM Glennallen Field Office Invasive weed Specialist this plan integrates invasive species prevention, detection and control activities into on-the-ground mining activities involved with the project, particularly in areas of disturbance.

B. This plan utilizes best management practices to mitigate non-native invasive species introduction and spread in the project area by:

- Preventing the introduction of new non-native species in the project area by:
 1. Cleaning heavy equipment of soil or seed bearing material prior to transportation to the mine.
- Prevent the spread of any existing non-native species in the project area by:
 1. Cleaning equipment that has been working in an infested area prior to moving it to an un-infested area.
- Reducing or eradicating any existing non-native species in the project area by:
 1. Collaborating with BLM GFO in educating mine personnel to raise awareness of, and capacity to recognize, non-native invasive species (noxious weeds).
 2. Instructing mine personnel to watch for and report the sighted occurrence of noxious weeds.

3. Providing to BLM GFO records of sightings of invasive species for data base inclusion and/or other action steps.
 4. Instructing mine personnel in the safe, timely and practicable eradication of small isolated outbreaks of noxious weeds through hand or mechanical means.
 5. Collaborating with BLM GFO in the event any large outbreaks are encountered.
- Accomplishing site reclamation with indigenous plant species by:
 1. Stockpiling native vegetation for future reclamation, when conducting stripping operations.
 2. Transplanting native vege-mat to concurrent reclamations when practicable.
 3. Reseeding, for reclamation and stabilization, with approved weed free seed of native species.

In collaboration with BLM GFO, an initial, on-the-ground, non-native invasive plant survey will be conducted in the proposed project work corridor during the 2013 summer growing season (July/August). Thereafter, HLC will conduct inventories and assessments annually for the life of the project.

Non-native plant survey data will be incorporated into the mine's invasive species monitoring and management plan which will be updated annually for effective mitigation and management.

Reclamation and Closure Plan

Bonding

The operators of this project have chosen to participate in the State of Alaska DNR State Wide Bond Pool. 20 acres have been listed as the quantity that will require reclamation at any given time.

Plan of Reclamation for Proposed Mining

Primary Reclamation will be accomplished as follows:

1. After mining begins, and enough area has been developed to allow reclamation to proceed without hampering the mining processes and personnel safety, the plan is to backfill the mined out excavated sub-surface cuts on a regular basis. When this schedule is not practicable, all efforts will be made to re-establish a regular schedule as soon as practicable after a delay. It is likely that it will take 2 to 3 months of mining before the regular concurrent reclamation begins, after which it will continue for the life of the project.
2. Grade backfilled material as close as practicable to pre-development conditions. This will also be done on a regular basis whenever possible.
3. Apply topsoil and vegetation from the stockpiles over the graded backfill.
4. Areas where vegetation did not naturally exist prior to mining will be reclaimed to that pre-mining state.
5. Areas where primary reclamation has not already occurred, including exploration and bulk sampling disturbances, and historic disturbances that pre-existed this proposed development but are in the immediate vicinity of our work, will be reclaimed concurrently with new reclamation efforts as mining of those areas is completed.

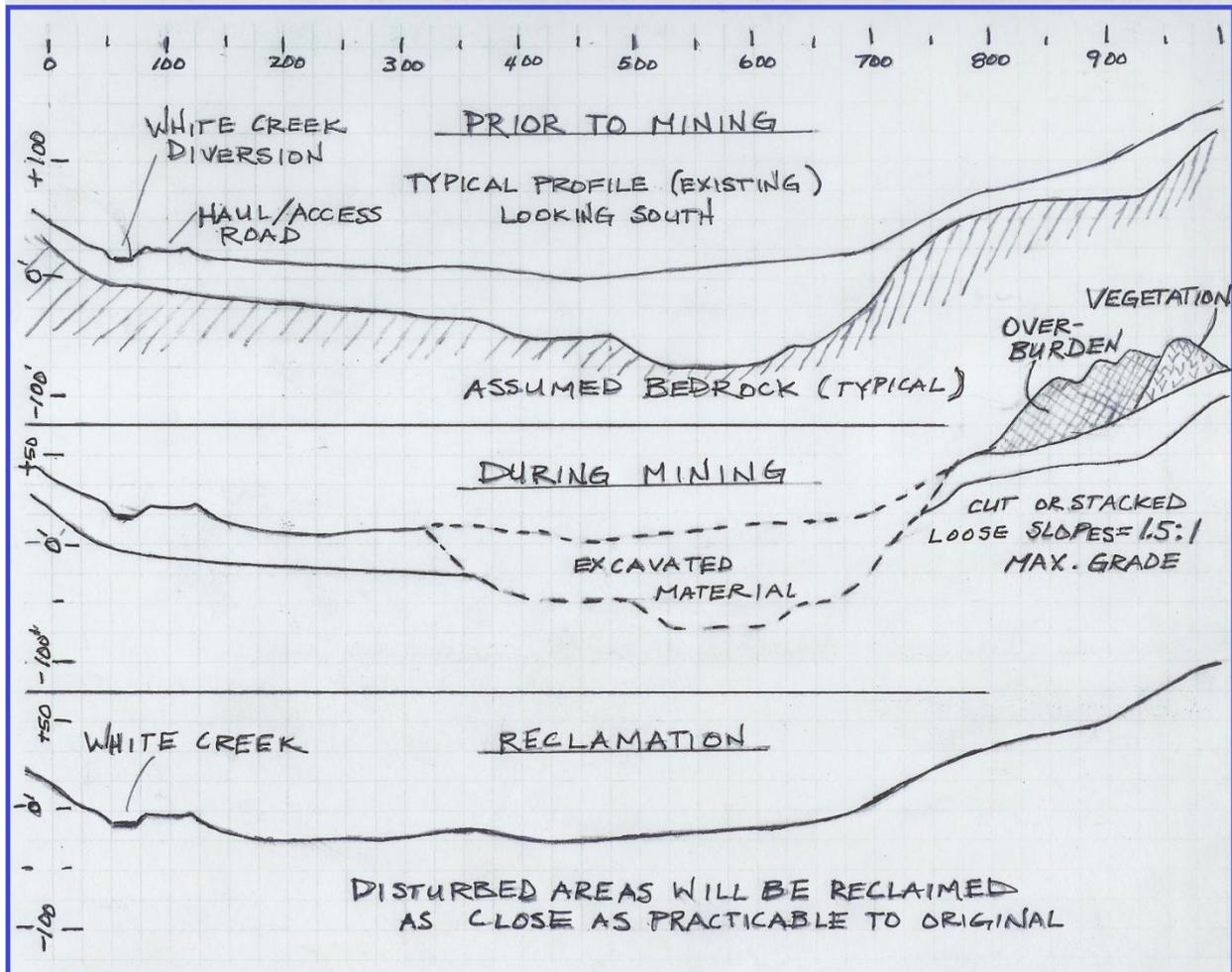


FIGURE 21

Secondary Reclamation will be accomplished as follows:

1. Secondary reclamation will attempt to create a blended topography between all reclaimed areas and will repair and cover, with natural or recycled vegetation, or seeding when necessary, any gaps between areas.

2. Seeding of any areas not covered with recycled vegetation with a mixture of non-native grass seed and/or seeds of native plants will be conducted as practicable every mining season and will continue for newly reclaimed areas until mining ceases each season.
3. Ponds will be drained at the end of their service life in a manner that prevents loss of sediment and slopes will be re-graded and re-vegetated or planted to prevent erosion.
4. The North wall of the existing main pit, which was pulled back in 2011 to mitigate the unsafe conditions created by the neighboring mine's over-fill, will be contoured and reclaimed by the same processes and timing described above.

Closure (Seasonal or Temporary Closure)

During seasonal or temporary closure, settling pond water levels will be lowered as far as practicable. Drainage ditches and culverts will be checked to make sure they are clear.

Bulk fuel tanks will be locked. Buildings will be closed up, locked where practical and largely boarded up during winter closure. Supplies and small equipment are stored in tool sheds and containers.

Heavy equipment will be parked in an orderly fashion.

The grounds will be checked to see that they are tidy and hazards are minimized and marked.

The steel gate to the main camp will be closed and locked.

The site will be monitored for weather conditions by the use of Internet weather apps, as well as phone conversation with year round residents in the area. A satellite receiver has been installed at the main camp and eventually we may have onsite cameras that we can monitor.

BLM will be notified via mail, email or fax or phone regarding the occurrence and estimated duration of extended temporary or seasonal closure.

Closure (to occur after mining has ceased in the project area)

The following closure methods are planned:

- All structures and equipment will be removed from the site and final grading will be performed to blend the ground with surrounding terrain and reestablish drainage features. Soil and vegetative material will be spread to aid in reestablishment of local flora. Non-native seed may be spread in some areas to aid in reestablishment of vegetation and help prevent erosion.
- Ponds will be drained in a manner that prevents loss of sediment.
- Ponds will be filled and the banks will be re-graded to have no steeper than 3:1 slopes except where the pre-development slope was greater, in which case the slope will be blended to the surrounding terrain.
- If agreed with appropriate agencies, some ponds may be identified as valuable potential habitat, and may by mutual agreement remain after mining is concluded. In this case the banks of the ponds would be shaped and dressed according to acceptable reclamation standards.
- Any alterations to the channeling of any creek will be returned, as close as practicable, to its pre-mining condition or contoured to the surrounding terrain, in accordance with acceptable standards.
- Notification will be made to interested Federal and State agencies, including the ADNR and BLM, when final reclamation efforts have been completed so that an inspection of the site can be conducted. This will be done at the conclusion of mining operations and final reclamation.
- Post reclamation inspections will be conducted for two years after reclamation is completed. The scope and frequency of the inspections will

be dictated by the conditions encountered at each previous inspection. If inspections reveal that final reclamation efforts have not been successful in preventing unnatural erosion, then additional measures may be undertaken to mitigate the situation along with additional corresponding inspections.

Acknowledgements

- A. It is understood that should the nature of the operation change, modifications, amendments or supplements to this plan of operations and reclamation will be required.

- B. It is understood that approval of this plan of operation and reclamation does not constitute:
 - 1. Certification of ownership to any person named herein;
 - 2. Recognition of the validity of any mining claim herein.

- C. It is understood that approval of this plan does not relieve the operator of responsibility to comply with any other applicable State or Federal laws, rules or regulations.

- D. It is understood that any information provided with this plan that is marked “Confidential” will be treated by the receiving agency in accordance with that agency’s laws, rules and regulations.

Manager – Highlight Canyon, LLC

Date

Attachments

Attachment 1

August 10, 2011

State of Alaska
Dept. of Fish & Game
Ron Benkert
1800 Glenn Highway, Suite 6
Palmer, AK 99645-6736

Re: Mine Dewatering at White Creek

Attention: Ron Benkert

Mr. Benkert,

As per our earlier conversations, our dewatering efforts at our White Creek operation are planned as follows:

- We plan to increase the residence of the water we pump into White Creek by the construction of a series of three detention ponds on/or upstream of the gravel delta which exists down-stream of the White Creek diversion cut identified on the photos we supplied.
- After the water exits the down-stream detention pond it will flow across the gravel delta, filtering through the tundra forbs and willows and then through the complex of beaver ponds before seeping into Valdez Creek.
- We plan to excavate a channel from our main pit to White Creek, thus decreasing the head when dewatering the pit.
- Prior to and during channel excavation, we will pump over or around the ridge that the channel will pass through, but at all times the plan is for the pumped water to enter White Creek above the three detention ponds.
- Of course, all of these activities will be conducted in compliance with the instruction we receive from ADEC.

Sincerely,
David C. Norton

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF HABITAT

SEAN PARNELL, GOVERNOR

1800 Glenn Highway, Suite 6
Palmer, AK 99645-6736
PHONE: (907) 861-3200
FAX: (907) 861-3232

FISH HABITAT CASE NUMBER FH-11-IV-0612

August 17, 2011

Doris Coiner
1289 110 Street
Olin, IO 52320

Re: Mine Dewatering
White Creek
Sections 10 and 11, T. 20 S., R. 2 E., F.M.

Dear Ms. Coiner:

Pursuant to AS 16.05.871(b) and AS 16.08.841, the Alaska Department of Fish and Game, Division of Habitat (Habitat) has reviewed your project plans to construct a diversion channel and a series of three detention ponds on White Creek to dewater your mine site. Prior to and during diversion channel excavation, water will be pumped over the ridge the channel will be constructed through and be discharged into White Creek above the three detention ponds. After the water exits the lower detention pond, it will flow across a gravel delta, through a flat vegetated area, and into a series of beaver ponds before entering Valdez Creek (see attached site plan).

Based on available, documented fisheries information, your project as proposed will not occur in waters specified by the Commissioner as important for the spawning, rearing or migration of anadromous fishes and will not entail potential blockages to efficient passage in known resident fish streams. Therefore, a permit from Habitat is not required for your activities as proposed.

This determination does not lessen the possibility that Habitat may require a permit for future operations or require mitigation for your current proposal under A.S. 16.05.871 should future fish surveys document the presence of either anadromous or resident fish. A.S. 16.05.861 provides that upon written notification from the Commissioner, any barriers or obstructions to fish passage that are not removed by the owner within a reasonable time specified by the Commissioner, shall be considered a public nuisance subject to abatement and removal. If you have any knowledge of the presence of fish in the area of your proposed operation, we request that you provide such data to Habitat at this time.

Please be advised that this determination does not relieve you of the responsibility for securing other permits: state, federal or local, and that you are still required to comply with all other applicable laws, statutes and regulations.

Any questions or concerns about this permit may be directed to Ron Benkert at (907) 861-3204 or email to: ronald.benkert@alaska.gov.

Sincerely,

Cora Campbell, Commissioner



By: Michael L. Bethe, Habitat Biologist
Division of Habitat
(907) 861-3200

-rcb

cc:	S. Ivey, SF	A. Ott, Habitat	T. Oleck, AWT	D. Valentine, AWT
	M. Agnew, AWT	D. Massie, AWT	K. Krause, DNR	N. Dallman, DEC
	D. Norton, Highlight Canyon, LLC			

Attachment 3

Hi Dave,

Following are the temporary mixing zone / discharge requirements until a new general permit is reissued:-
o Comply with the 2005 EPA-issued Mechanical Placer General Permit and Guidance, as sent earlier.
o Review the permit, particularly Section II (Effluent Limitation and Monitoring Requirements) and Section III (Monitoring and Reporting Requirements)-
o Comply with the mixing zone monitoring and turbidity modifications, as described below:
o A mixing zone of length 1260' has been calculated.
o Turbidity at the edge of the mixing zone may not exceed 5 NTUs above background.
o Turbidity samples must be taken at the edge of the mixing zone and upstream of the discharge, as described in Section II of the permit (3X / Weekly).
§ A monitoring point at the edge of the mixing zone should be measured and marked.
o Flow may not exceed 4500 GPM and should be controlled as necessary to meet the turbidity limits.
o All other samples (e.g. Settleable Solids and Arsenic) are to be taken at the outfall. Let me know if you have any questions.

Thanks, Nick

From: Dallman, Nicholas E (DEC)

Sent: Tuesday, July 26, 2011 4:59 PM

To: akgoldex@gmail.com

Cc: Pilon, Timothy A (DEC); Foley, Christopher (DEC); Dallman, Nicholas E (DEC); Books, Linda K (DNR); j05whitl@blm.gov; Bethe, Michael L (DFG)

Subject: APMA A115691 Norton - White Creek

Hi Dave,

A copy of the expired Mechanical Placer General Permit (AKG370000) and a permit guidance document are attached. **Although the general permit is expired, you may operate under the conditions of the expired permit until a new general permit is issued.** The new general permit is expected to be issued in late September or October. The “end of pipe” turbidity limit on the expired permit is 5 NTUs above background. Based on discussion with our compliance section, a temporary mixing zone, and modified turbidity limit, will be created until a final permit, authorization, and mixing zone can be issued. However, the temporary mixing zone will have to be calculated and also run by ADF&G. It should be possible to come up with a modified turbidity limit by the middle or end of next week. Until the modified the modified turbidity number is calculated, you may continue to operate under the expired general permit provided that you are able to meet the limits without a mixing zone. Let me know if you have any questions.

Thanks, Nick

Attachment 4

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM (NPDES) FOR
MECHANICAL PLACER MINING IN ALASKA

General Permit No.: **AKG-37-0000**

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. 1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act":

Owners and operators of Mechanical Placer Mines except those sites excluded from coverage in Part I. of this NPDES permit, are authorized to discharge only in accordance with effluent limitations, monitoring requirements, and other provisions set forth herein.

**A COPY OF THIS GENERAL PERMIT MUST BE KEPT AT THE SITE OF THE
PLACER MINE AT ALL TIMES.**

[Facility Name]

[Receiving Water]

This permit will become effective on October 4, 2005.

This permit and the authorization to discharge this permit shall expire at midnight on October 4, 2010.

Signed this 24th day of August, 2005.

/s/ Robert R. Robichaud for
Michael F. Gearheard
Director
Office of Water & Watersheds

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I. PERMIT COVERAGE

A. Coverage

1. Authorization to discharge requires written notification from EPA that coverage has been granted and that a specific permit number has been assigned to the operation.
2. Existing Facilities (those mechanical operations facilities having coverage under the 2000 Alaska placer miner general permit): Owners or operators of facilities with coverage under the 2000 General Permit are eligible for coverage under this permit. See Permit Part I.F. for notification requirements.
4. New Facilities: New mechanical operations facilities that are determined to be new sources under the CWA will be required to have an Environmental Assessment (EA) completed pursuant to the National Environmental Policy Act (NEPA). A finding of no significant impact (FNSI) by EPA is necessary prior to receiving coverage under this permit. A FNSI will become effective only after the public has had notice of, and an opportunity to comment on, the FNSI including either the accompanying EA or a summary of it, and the EPA has fully considered all public comments submitted, pursuant to 40 CFR § 6.400(d). If there may be a significant impact, the facility will require an Environmental Impact Statement (EIS). An EIS will be issued only after public notice and an opportunity for public comments on a draft EIS pursuant to 40 CFR § 6.403(a) and § 1503.1(a).
5. Expanding Facilities: Mechanical operations facilities that contemplate expanding shall submit a new NOI that describes the new discharge. The current permit may be terminated and a new permit, reflecting the changes, issued in its place if the facility meets all the necessary requirements of coverage.

B. Authorized Placer Mining Operations

1. Facilities that mine and process gold placer ores using gravity separation methods to recover the gold metal contained in the ore.
2. Open-cut gold placer mines except those open-cut mines that mine less than 1,500 cubic yards of placer ore per mining season.
3. Mechanical dredge gold placer mines except those dredges that remove less than 50,000 cubic yards of placer ore per mining season or dredge in open waters.
4. Hydraulicking facilities that are considered "no discharge" facilities.

C. Additional Requirements

1. Many streams and stream reaches in Alaska have been designated as part of the federal wild and scenic rivers system or as Conservation System Units (CSUs) by the federal government. Permittees should contact the district offices of the federal agencies that administer the designated area for additional restrictions that may apply to operating within the area. See Permit Part I.F.6. for addresses.
2. Many streams in Alaska where placer mining occurs have been designated by the Alaska Department of Natural Resources/Office of Habitat Management and Permitting (OHMP) as anadromous fish streams. Placer mining activities in these streams require an OHMP Fish Habitat Permit that may include additional restrictions. The "Atlas to the Catalog of Waters Important for the Spawning, Rearing, or Migration of Anadromous Fish" lists the streams in the State that require prior OHMP authorization. In addition, placer mining activities in resident fish streams require an OHMP Fish Habitat Permit if the proposed activity will block or impede the efficient passage of fish. Permittees operating in anadromous or resident fish streams should contact OHMP to determine permitting requirements and additional restrictions that may apply.

D. Prohibitions

1. Discharges from the following beneficiation processes are not authorized under this permit: mercury amalgamation, cyanidation, froth floatation, heap and vat leaching.
2. Hydraulic mining facilities, as defined in Part VI.I., that discharge on an intermittent or continuous basis are not authorized under this permit.
3. This general permit does not apply to facilities that are proposed to be located in National Park System Units (i.e., Parks and Preserves), National Monuments, National Sanctuaries, National Wildlife Refuges, National Conservation Areas, National Wilderness Areas, National Critical Habitat Areas, or waters adjacent to areas designated as wild under the Wild & Scenic Rivers Act.
4. This permit does not apply to wetlands designated in the 1995 Anchorage Wetlands Management Plan.

E. Requiring an Individual Permit

1. The Regional Administrator may require any person authorized by this permit to apply for and obtain an individual NPDES permit when:
 - a. The single discharge or the cumulative number of discharges is/are a significant contributor of pollution;

- b. The discharger is not in compliance with the terms and conditions of the general permit;
 - c. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
 - d. Effluent limitations guidelines are subsequently promulgated for the point sources covered by the general permit;
 - e. A Water Quality Management Plan containing requirements applicable to such point sources is approved;
 - f. A Total Maximum Daily Load (TMDL) and corresponding wasteload allocation has been completed for a waterbody or a segment of a waterbody;
 - g. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary.
2. The Regional Administrator may deny coverage under this permit in the following circumstances:
- a. a land management agency with jurisdiction over affected portions of the receiving water, bed, or uplands submits a request that general permit coverage be denied to EPA within thirty (30) days of the agency's receipt of an NOI; and,
 - b. the land management agency's request includes proposed additional or revised permit terms that the requesting agency believes -- based upon evidence attached to or cited in the request -- are necessary to protect the natural values of the affected location; and,
 - c. the land management agency's request concerns a person who either;
 - (1) seeks to discharge into U.S. waters located in National Recreation Areas, National Historic or Natural Landmarks, congressionally designated Land Use Designation (LUD) II which are to be managed in a roadless state, or in State Refuges, Sanctuaries, or Critical Habitat Areas; or,
 - (2) is in significant noncompliance with the terms and conditions of the most recent applicable NPDES permit; or,
 - (3) intends to discharge into waters designated as impaired under the

Clean Water Act.

Any person denied coverage under this part must apply for and obtain coverage under either: (1) an individual permit; or (2) another applicable watershed-specific general permit. Upon receipt of any such application, EPA will determine whether the permit terms requested by the land management agency should be included in the applicable permit.

3. The Regional Administrator will notify the operator in writing by certified mail that a permit application is required. If an operator fails to submit an individual NPDES permit application by the date required in the notification, coverage under this general permit is automatically terminated at the end of the day specified for application submittal.
4. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application (Form 1 and Form 2C or 2D) with reasons supporting the request to the Regional Administrator at the address in paragraph I.F.4.
5. When an individual NPDES permit is issued to an owner or operator otherwise covered by this permit, the applicability of this permit to the facility is automatically terminated on the effective date of the individual permit.
6. When an individual NPDES permit is denied to an owner or operator otherwise covered by this permit, the Permittee is automatically reinstated under this permit on the date of such denial, unless otherwise specified by the Regional Administrator.
7. A source excluded from a general permit solely because it already has an individual permit may request that the individual permit be revoked and that it be covered by the general permit. Upon revocation of the individual permit, the general permit shall apply to the source.

F. Notification Requirements

1. Owners or operators of facilities eligible for this permit shall submit an NOI to be covered by this permit. The information required for a complete NOI is in Appendix A of this permit. Notification must be made:
 - a. by January 1 of the year of discharge to allow time for completion of the NEPA evaluation from a new facility or facility established since 1988 which would be subject to New Source Performance Standards (NSPS) that has not previously been covered by a permit. Notifications received after January 1 will likely not be processed until the next year; or
 - b. 60 days prior to discharge from a new or recommencing facility not subject

to NSPS; or

- c. 60 days prior to the expiration of an existing individual permit.
- 2. Any facility authorized under the 2000 general permit that files an NOI prior to the expiration date will be automatically authorized under this general permit.
- 3. An Annual Placer Mine Application (APMA) will be accepted as an NOI if all the required information is included and the APMA is signed as required in paragraph 4, below.
- 4. The NOI shall be signed by the owner or other signatory authority in accordance with Permit Part V.F. (Signatory Requirements), and a copy shall be retained on site in accordance with Permit Part III.F. (Retention of Records). The address for NOI submission to EPA is:

USEPA - Alaska Operations Office
Placer Mining NOI
222 W. 7th Avenue, Box #19
Anchorage, Alaska 99513

- 5. A copy of the NOI must also be sent to the Alaska Department of Environmental Conservation (ADEC). The address is:

Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, Alaska 99709

- 6. Permittees who do not use the APMA procedure for filing their NOI with Alaska Department of Natural Resources shall send a copy of the NOI to the Federal, State, or local agency that manages or owns the land in which the mine is located or proposed to be located. The addresses are:

<u>Anchorage Area</u>	<u>Fairbanks Area</u>	<u>Glennallen Area</u>
U.S. Department of Interior BLM 222 West 7th Avenue, #13 Anchorage, AK 99513-7599	U.S. Department of Interior BLM 1150 University Avenue Fairbanks, AK 99709	U.S. Department of Interior BLM P.O. Box 147 Glennallen, AK 99588
U.S. Department of Interior Fish and Wildlife Service 1011 E Tudor Rd. Anchorage, AK 99503	U.S. Department of Interior Fish and Wildlife Service 101 12th Avenue, Box 19 Fairbanks, AK 99701	U.S. Department of Interior National Park Service Wrangell St. Elias P.O. Box 439 Copper Center, AK 99573

Anchorage Area (cont)	Fairbanks Area (cont)	Tok Area
U.S. Department of Interior National Park Service 605 West 4th Avenue, Suite 104 Anchorage, AK 99501	U.S. Department of Interior National Park Service 250 Cushman, Suite 1A Fairbanks, AK 99701	U.S. Department of Interior BLM P.O. Box 309 Tok, AK 99780
<u>Nome Area</u>		<u>Juneau Area</u>
U.S. Department of Interior Bureau of Land Management P.O. Box 925 Nome, AK 99762	U.S. Department of Interior Fish and Wildlife Service 3000 Vintage Blvd, Suite 201 Juneau, AK 99801	
U.S. Department of Interior National Park Service P.O. Box 220 Nome, AK 99762	U.S. Department of Interior National Park Service P.O. Box 21089 Juneau, AK 99802-1089	

7. A copy of the general permit will be sent to the Permittee when it is determined that the facility can be authorized under this general permit. If it is determined that a facility cannot be authorized to discharge under this permit, the applicant will be informed of this in writing.

G. Permit Expiration

This permit will expire five years from the effective date. For facilities submitting a new NOI 90 days prior to expiration of this general permit, the conditions of the expired permit continue in force until the effective date of a new permit.

II. EFFLUENT LIMITATION AND MONITORING REQUIREMENTS

A. Discharge Limitations and Monitoring Requirements - No Discharge Facilities

1. Beginning with the effective date of this permit, the permittee shall not discharge wastewater to receiving waters except:
 - (a) overflow from facilities designed, constructed and maintained to contain the maximum volume of untreated process wastewater which would be discharged, stored, contained and used or recycled by the beneficiation process into the treatment system during a 4-hour operating period without an increase in volume from precipitation or infiltration, plus
 - (b) the maximum volume of water (drainage waters) which would result from a 5-year, 6-hour precipitation event.

In computing the maximum volume of wastewater which would result from a 5-year, 6-hour precipitation event, the facility must include the volume which

would result from all areas contributing runoff to the individual treatment facility.

2. The facility shall take all reasonable steps to minimize the overflow or excess discharge.
3. If a discharge occurs, the operator shall comply with the notification requirements of Permit Parts III.G. and III.H. If a discharge occurs during dry weather, the facility will be considered a discharging facility covered by the requirements in Permit Part II.B., below.
4. Discharges resulting from a precipitation event when the facility is designed as described above shall be monitored as listed below:

Effluent Characteristic	Monitoring Location	Monitoring Frequency	Sample Type
Settleable Solids, ml/L	effluent	once per day each day of discharge	Grab
Turbidity, NTU	effluent	once per discharge event*	Grab
	upstream	once per discharge event*	Grab
Arsenic, µg/L	effluent	once per discharge event**	Grab
Flow, gpm	effluent	***	Instantaneous
<small>* See Part II.C.2. for details. ** See Part II.C.3. for details. *** See Part II. C.5. for details.</small>			

B. Discharge Limitations and Monitoring Requirements - Discharging Facilities

Beginning with the effective date of this permit, the permittee shall not discharge wastewater to receiving waters except in compliance with the following effluent limitations:

1. Effluent discharges are prohibited during periods when new water is allowed to enter the plant site. Additionally, there shall be no discharge as a result of the intake of new water.
2. The volume of wastewater which may be discharged shall not exceed the volume of infiltration, drainage and mine drainage waters which is in excess of the make-up water required for operation of the beneficiation process.

3. Limitations and Monitoring Requirements:

Effluent Characteristic	Instantaneous Maximum	Monitoring Location	Monitoring Frequency	Sample Type
Settleable Solids, m/L	0.2	effluent	once per day each day of discharge	Grab
Turbidity, NTU	5 NTUs above natural conditions****	effluent	three times per week	Grab
		upstream	three times per week*	Grab
Arsenic, µg/L	50	effluent	once per season**	Grab
Flow, gpm	-	effluent	Daily***	Instantaneous
* See Part II.C.2. for details. ** See Part II.C.3. for details. *** See Part II. C.5. for details. ****See Part II.B.5 for details				
Those who receive a site-specific turbidity limit, described below, may not be required to take background turbidity samples. Samples for arsenic and turbidity monitoring must be taken during sluicing at a time when the operation has reached equilibrium. For example, samples should be taken when sluice paydirt loading and effluent discharge are constant.				

4. Permittees may request a modified turbidity limit based upon a mixing zone approved by the Alaska Department of Environmental Conservation (ADEC) pursuant to 18 AAC 70.260. EPA will approve a modified turbidity limit proposed by ADEC under this General Permit if the modified limit and resulting mixing zone are consistent with the Clean Water Act, EPA's regulations, 18 AAC 70.250 and 255, and provided that:
- a. the modified turbidity limit does not exceed 1500 NTUs;
 - b. the modified turbidity limit does not cause turbidity levels to exceed 100 NTUs in more than one-half of the cross-sectional area of resident and anadromous fish migration corridors;
 - c. the modified turbidity limit is calculated using the 7-day, 10-year low flow (7Q10) as the chronic criterion design flow for the protection of aquatic life, see Permit Part VI.W.;
 - d. the modified turbidity limit does not result in a mixing zone in an area of anadromous fish spawning or resident fish (as defined in Permit Part VI.T.) spawning redds when eggs or alevins are present;
 - e. approved mixing zones do not overlap and the availability and extent of approved mixing zones is limited as necessary to avoid potentially harmful cumulative effects on the receiving environment; and,
 - f. the public was provided reasonable notice of, and an opportunity to comment on, the modified turbidity limit and associated mixing zone, including site-specific assessments used to calculate the limit and zone,

prior to their approval by ADEC.

If ADEC issues a mixing zone and turbidity modification to a waterbody reclassified in the Alaska Water Quality Standards (AWQS), EPA will approve the turbidity modification and include it in a facility's GP if it meets the conditions of b. through f. above.

5. The volume of discharge shall not exceed the volume reported by the permittee on the NOI (Appendix A). If the permittee exceeds that volume, EPA will not consider the permittee in violation of the flow limit if:
 - a. the permittee submits to EPA turbidity samples, flow measurements/seepage estimates for the discharge, and flow and turbidity measurements for the upstream receiving water taken during the period of the flow exceedence; and,
 - b. those samples show that the permittee's discharge did not cause the standard of 5 NTU above background to be exceeded at the edge of the mixing zone.

The permittee must report all exceedences of the flow limit, together with any turbidity and flow/seepage data that the permittee intends to use to avoid being considered in violation of the flow limit, pursuant to the reporting requirements in Part III.G.

Pending decision on the modified turbidity limit, the limit in Permit Part II.B.2. applies.

6. Arsenic Modifications

- a. Permittees may request a modified arsenic limit reflecting the arsenic concentrations naturally present in the receiving waters as determined by ADEC. EPA will approve a modified arsenic limit proposed by ADEC under this General Permit provided:
 - (1) the modified limit is consistent with the Clean Water Act, EPA's regulations, and state water quality standards regulations;
 - (2) The arsenic concentration naturally present in the receiving waters is determined upstream from any human-caused influence on, discharge to, or addition of material to, the waterbody; and
 - (3) the public was provided reasonable notice of, and an opportunity to comment on, the modified arsenic limit, including all data and other information used to calculate the limit, prior to its approval by ADEC.

Pending decision on the modified arsenic limit, the limit in Permit Part II.B.2. applies.

- b. An affected community or individual may request a modified arsenic limit in conjunction with a request that the State evaluate the need for a more stringent site specific criterion.

C. Other Monitoring Requirements

The following requirements apply to all facilities covered by this permit.

1. Inspection Program

The Permittee shall institute a comprehensive inspection program to facilitate proper operation and maintenance of the recycle system and the wastewater treatment system. The Permittee shall conduct a visual inspection of the site once per day, while on site, during the mining season. The Permittee shall maintain records of all information resulting from any inspections in accordance with part III.F. of this permit. These records shall include an evaluation of the condition of all water control devices such as diversion structures and berms and all solids retention structures including, but not limited to, berms, dikes, pond structures, and dams. The records shall also include an assessment of the presence of sediment buildup within the settling ponds. The Permittee shall examine all ponds for the occurrence of short circuiting.

2. Turbidity Monitoring

The Permittee shall monitor visually for turbidity at the edge of the mixing zone or at the point of discharge if no mixing zone is approved, at least once each day a discharge occurs. The Permittee shall maintain records of all information resulting from this observation in accordance with Permit Part III.F.

Discharge (effluent) and upstream samples shall be taken within a reasonable time frame of each other. All samples should be taken and stored in the manner set forth in Attachment 1. The sample results shall be reported in the Annual Report (AR). Monitoring shall be conducted in accordance with accepted analytical procedures. See Attachment 1 for sampling protocol.

3. Arsenic Monitoring

Arsenic samples shall be representative of the discharge and shall be taken at a *point prior to entering the receiving stream*. Sampling should be concurrent with a turbidity sample. Monitoring shall be conducted in accordance with accepted analytical procedures. All samples should be taken and stored in the manner set forth in Attachment 2. The Permittee shall report the sample results in the AR. See Attachment 2 for sampling protocol.

4. Settleable Solids Monitoring

Settleable solids samples shall be representative of the discharge and shall be taken daily each day of discharge at a point *prior to entering the receiving stream*. Monitoring shall be conducted in accordance with accepted analytical procedures (Standard Methods, 18th Edition, 1992). The Permittee shall report the monthly average and daily maximum results in the AR. See Attachment 3 for sampling and analysis protocol.

5. Flow Monitoring

Effluent flow shall be measured at the discharge *prior to entering the receiving water*. Effluent flow shall be measured at least once per day each day a discharge occurs. The operator must also make a good faith effort to estimate seepage discharging to waters of the United States each day that seepage occurs. Effluent flow and seepage flow shall be reported in gallons per minute (gpm). The flow measurements and seepage estimates, the number of discharge events, and the duration of each discharge event shall be reported in the AR for each day of the mining season.

D. Best Management Practices (BMP)

The following BMPs apply to all facilities covered by this permit.

1. The flow of surface waters (i.e., creek, river, or stream) into the plant site shall be interrupted and these waters diverted around and away to prevent incursion into the plant site.
2. Berms, including any pond walls, dikes, low dams, and similar water retention structures shall be constructed in a manner such that they are reasonably expected to reject the passage of water.
3. Measures shall be taken to assure that pollutant materials removed from the process water and wastewater streams will be retained in storage areas and not discharged or released to the waters of the United States.
4. The amount of new water allowed to enter the plant site for use in material processing shall be limited to the minimum amount required as makeup water.
5. All water control devices such as diversion structures and berms and all solids retention structures such as berms, dikes, pond structures, and dams shall be reasonably maintained to continue their effectiveness and to protect from failure.
6. The operator shall take whatever reasonable steps are appropriate to assure that, after the mining season, all unreclaimed mine areas, including ponds, are in a condition that will not cause degradation to the receiving waters over those

resulting from natural causes.

7. During each mining season, a permittee may not discharge into the receiving water within three hundred feet of any other upstream or downstream placer mining operation which is discharging or from which it is visually apparent by the permittee that a discharge has occurred. Nor may a permittee discharge at a point within three hundred feet of the downstream edge of a mixing zone granted for any other upstream placer mining operation.
8. Care shall be taken by the operator during refueling operations to prevent spillage into surface waters or to groundwater. Any spills shall be cleaned up using materials such as sorbent pads and booms. All spills shall be reported to ADEC by calling 1-800-478-9300.

E. Other Requirements

The operator shall maintain fuel handling and storage facilities in a manner that will prevent the discharge of fuel oil into the receiving waters or on the adjoining shoreline. A Spill Prevention Control and Countermeasure Plan (SPCC Plan) shall be prepared and updated as necessary in accordance with provisions of 40 CFR Part 112 for facilities with the capacity to store 660 gallons in a single container above ground, 1320 gallons in the aggregate above ground, or 42,000 gallons below ground.

The Permittee shall indicate in the AR if an SPCC Plan is necessary and in place at the site and if changes were made to the Plan over the previous year.

F. Storm Exemption

A non-discharging facility may qualify for a storm exemption from the technology-based effluent limitation for settleable solids and the flow requirements in Permit Parts II.B.1. and II.B.2. of this NPDES general permit if the following conditions are met:

1. The treatment system is designed, constructed and maintained to contain
 - a. the maximum volume of untreated process wastewater which would be discharged, stored, contained and used or recycled by the beneficiation process into the treatment system during a 4-hour operating period without an increase in volume from precipitation or infiltration, plus
 - b. the maximum volume of water runoff (drainage waters) resulting from a 5-year, 6-hour precipitation event.

In computing the maximum volume of water which would result from a 5-year, 6-hour precipitation event, the operator must include the volume which should result from the plant site contributing runoff to the individual treatment facility.

2. The operator takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow.
3. The operator complies with the notification requirements of Permit Parts III.G. and III.H.

III. MONITORING AND REPORTING REQUIREMENTS

- A. Representative Sampling.** All samples for monitoring purposes shall be representative of the monitored activity. To determine compliance with permit effluent limitations, "grab" samples shall be taken as established under Permit Part II.B. Specifically, effluent samples for settleable solids, turbidity, and arsenic shall be collected from the settling pond outlet or other treatment system's outlet prior to discharge to the receiving stream. Additionally, turbidity background samples shall be taken at a point that is representative of the receiving stream just above the permittee's mining operation.
- B. Reporting of Monitoring Results.** If sampling occurs, monitoring results shall be summarized each month and reported on EPA Form 3320-1 (DMR, OMB #2040-0004, expiration date 5/31/98) as part of the Annual Report (AR). The AR shall be submitted to the Environmental Protection Agency, Region 10, 1200 Sixth Avenue, NPDES Compliance Unit OCE-133, Seattle, Washington 98101-3188, **no later than January 31 for the previous calendar year.**

If there is no mining activity during the year or no wastewater discharge to a receiving stream, the Permittee shall notify EPA of these facts no later than January 31 for the previous calendar year.

The AR shall also be sent to the ADEC office located in Fairbanks. The address can be found in Permit Part I.F.5.

- C. Monitoring Procedures.** Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- D. Additional Monitoring by the Permittee.** If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the AR. Such increased frequency shall also be indicated.
- E. Records Contents.** Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) analyses were performed;
 4. The individual(s) who performed the analyses;

5. The analytical techniques or methods used; and
6. The results of such analyses.

F. Retention of Records. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director or ADEC at any time. Data collected on-site, copies of the Annual Reports (ARs), and a copy of this NPDES permit must be maintained on-site during the duration of activity at the permitted location.

G. Notice of Noncompliance Reporting.

1. Any noncompliance which may endanger health or the environment shall be reported as soon as the Permittee becomes aware of the circumstance. A written submission shall also be provided in the shortest reasonable period of time after the Permittee becomes aware of the occurrence.
2. The following occurrences of noncompliance shall also be reported in writing in the shortest reasonable period of time after the Permittee becomes aware of the circumstances:
 - a. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Permit Part IV.G., Bypass of Treatment Facilities.); or
 - b. Any upset which exceeds any effluent limitation in the permit (See Permit Part IV.H., Upset Conditions.).
 - c. Any violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the Permit.
3. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
4. The Director may waive the written report on a case-by-case basis if an oral report has been received by the NPDES Compliance Unit in Seattle, Washington, by phone, (206) 553-1846.

5. Reports shall be submitted to the addresses in Permit Part II.B., Reporting of Monitoring Results.

H. Other Noncompliance Reporting. Instances of noncompliance not required to be reported in Permit Part III.G., above, shall be reported at the time that monitoring reports for Permit Part II.B. are submitted. The reports shall contain the information listed in Permit Part III.G.3.

IV. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

B. Penalties for Violations of Permit Conditions.

1. **Civil and Administrative Penalties.** Pursuant to 40 CFR Part 19 and the Act, any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$32,500 per day for each violation).

2. **Criminal Penalties:**

- a. **Negligent Violations.** The Act provides that any person who negligently violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or by both.
- b. **Knowing Violations.** The Act provides that any person who knowingly violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be punished by a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or by both.
- c. **Knowing Endangerment.** The Act provides that any person who knowingly violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or

imprisonment of not more than 15 years, or both. A person which is an organization shall, upon conviction of violating this subparagraph, be subject to a fine of not more than \$1,000,000.

- d. **False Statements.** The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both.

Nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

- C. **Need to Halt or Reduce Activity not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- E. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.
- F. **Removed Substances.** Solids, sludges, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner so as to prevent any pollutant from such materials from entering waters of the United States.
- G. **Bypass of Treatment Facilities.**
 1. **Bypass not exceeding limitations.** The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section.
 2. **Notice:**
 - a. **Anticipated bypass.** If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - b. **Unanticipated bypass.** The Permittee shall submit notice of an unanticipated bypass as required under Permit Part III.G., Notice of

Noncompliance Reporting.

3. Prohibition of bypass.
 - a. Bypass is prohibited and the Director or ADEC may take enforcement action against a Permittee for a bypass, unless:
 - i. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - iii. The Permittee submitted notices as required under paragraph 2 of this section.
 - b. The Director and ADEC may approve an anticipated bypass, after considering its adverse effects, if the Director and ADEC determine that it will meet the three conditions listed above in paragraph 3.a. of this section.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph 2 of this section are met. An administrative review of a claim that noncompliance was caused by an upset does not represent final administrative action for any specific event. A determination is not final until formal administrative action is taken for the specific violation(s).
2. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the Permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The Permittee submitted notice of the upset as required under Permit Part III.G., Notice of Noncompliance Reporting; and
 - d. The Permittee complied with any remedial measures required under Permit Part IV.D., Duty to Mitigate.

3. Burden of proof. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

I. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

V. GENERAL REQUIREMENTS

A. **Anticipated Noncompliance.** The permittee shall also give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. **Permit Actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

C. **Duty to Reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit by resubmitting the information in Appendix A. The NOI must be submitted at least 90 days before the expiration date of this permit.

D. **Duty to Provide Information.** The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

E. **Other Information.** When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.

F. **Signatory Requirements.** All applications, reports or information submitted to the Director shall be signed and certified.

1. All permit applications shall be signed as follows:

- a. For a corporation: by a responsible corporate officer.
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
- c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the

Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described above and submitted to the Director, and
 - b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph V.F.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph V.F.2. must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- G. Availability of Reports.** Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Director. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.
- H. Oil and Hazardous Substance Liability.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.
- I. Property Rights.** The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

J. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

K. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

L. Paperwork Reduction Act.

EPA has reviewed the requirements imposed on regulated facilities in this general permit under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq. The information collection requirements of this permit have already been approved by the Office of Management and Budget in submission made for the NPDES permit program under the provisions of the CWA.

VI. DEFINITIONS

- A. *"5-Year, 6-Hour Rainfall Event"* means the maximum 6-hour precipitation event with a probable recurrence interval of once in 5 years, as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States", May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom.
- B. *"Application"* means a written "notice of intent" pursuant to 40 CFR 122.28.
- C. *"Best Management Practices"* (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States". BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, waste disposal, or drainage from mined areas.
- D. *"Bypass"* means the intentional diversion of waste streams around any portion of a treatment facility.
- E. *"Director"* means the Regional Administrator of the United States Environmental Protection Agency, Region 10 or an authorized representative.
- F. *"Drainage Water"* means incidental surface waters from diverse sources such as rainfall, snow melt or permafrost melt.
- G. *"Expanding Facility"* means any facility increasing in size such as to affect the discharge but operating within the permit area covered by its general permit.
- H. A *"Grab"* sample is a single sample or measurement taken at a specific time.
- I. *"Hydraulicking"* means both the hydraulic removal of overburden and the use of

hydraulic power to move raw rock to the point of processing (i.e. to the gate of the sluice or other processing equipment).

- J. "*Infiltration Water*" means that water that permeates through the earth into the plant site.
- K. "*Instantaneous Maximum*" means the maximum value measured at any time.
- L. "*Make-up Water*" means that volume of water needed to replace process water lost due to evaporation and seepage in order to maintain the quantity necessary for the operation of the beneficiation process.
- M. "*Mining Season*" means the time between the start of mining in a calendar year and when mining has ceased for that same calendar year."
- N. "*New Facility*" means a facility that has not operated in the area specified in the NOI prior to the submission of the NOI.
- O. "*New Water*" means water from any discrete source such as a river, creek, lake or well which is deliberately allowed or brought into the plant site.
- P. "*NTU*" (Nephelometric Turbidity Unit) is an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in a straight line through the water.
- Q. "*Plant Site*" means the area occupied by the mine, necessary haulage ways from the mine to the beneficiation process, the beneficiation area, the area occupied by the wastewater treatment storage facilities and the storage areas for waste materials and solids removed from the wastewaters during treatment.
- R. "*Receiving Water*" means waters such as lakes, rivers, streams, creeks, wetlands, or any other surface waters that receive wastewater discharges.
- S. "*Recommencing Facilities*" are those facilities that may have let permit coverage lapse but still meet the coverage requirements of the GP.
- T. "*Resident Fish*" means Arctic grayling, northern pike, rainbow trout, lake trout, brook trout, cutthroat trout, whitefish, sheefish, Arctic Char (Dolly Varden), burbot, and landlocked coho, king, and sockeye salmon.
- U. "*Severe property damage*" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- V. "*Short circuiting*" means ineffective settling due to inadequate or insufficient retention characteristics, excessive sediment deposition, embankment infiltration/percolation, lack of maintenance, etc.

- W. "*Turbidity Modification*" means the procedures used to calculate a higher turbidity limit based on a mass balance equation that relates upstream and effluent flow and turbidity to downstream flow and turbidity. The basic form of this equation is:

$$Q_1C_1 + Q_2C_2 = Q_3C_3,$$

- where C_1 = effluent turbidity;
 C_2 = natural background turbidity
 C_3 = receiving water downstream turbidity after mixing where the allowable increase is 5 NTU above background;
 Q_1 = effluent flow
 Q_2 = receiving water flow upstream from the discharge (i.e., 7Q10)
 Q_3 = total receiving water flow downstream from discharge after complete mixing ($Q_1 + Q_2$).

- X. "*Upset*" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- Y. "*Wastewater*" means all water used in and resulting from the beneficiation process (including but not limited to the water used to move the ore to and through the beneficiation process, the water used to aid in classification, and the water used in gravity separation), mine drainage, and infiltration and drainage waters that commingle with mine drainage or waters resulting from the beneficiation process.
- Z. "*Waters of the United States.*" See 40 CFR 122.2.

ATTACHMENT 1

Turbidity Sampling Protocol

1. Grab samples shall be collected.
2. Samples shall be collected in a sterile one liter polypropylene or glass container.
3. Samples must be cooled to 4 degrees Celsius (iced).
4. Samples must be analyzed within 48 hours of sample collection.

ATTACHMENT 2

Arsenic Sampling Protocol

1. Grab samples shall be collected.
2. Samples shall be collected in a sterile one liter polypropylene or glass container.
3. Samples must be acidified promptly with nitric acid (HNO₃), to a pH less than 2 or sent to a laboratory within 48 hours of sample collection. Non-acidified samples must be chilled to 4 degrees Celsius (iced) until acidified at the laboratory.
4. Acidified samples must be analyzed within 180 days of the sample collection date.
5. Samples must be acidified for at least 16 hours prior to analysis.

ATTACHMENT 3

Settleable Solids Sampling Protocol

1. Grab samples shall be collected.
2. Samples shall be collected in a sterile one liter polypropylene or glass container.
3. Samples must be cooled to 4 degrees Celsius (iced), if analysis is not performed immediately.
4. Cooled samples must be analyzed within 48 hours of sample collection.

Settleable Solids Analysis Protocol

1. Fill an Imhoff cone to the liter mark with a thoroughly mixed sample.
2. Settle for 45 minutes, then gently stir the sides of the cone with a rod or by gently spinning the cone.
3. Settle 15 minutes longer, then record the volume of settleable matter in the cone as milliliters per liter. Do not estimate any floating material. The lowest measurable level on the Imhoff cone is 0.1 ml/l. Any settleable material below the 0.1 ml/l mark shall be recorded as trace.

APPENDIX A
MECHANICAL PLACER MINING PERMIT: AKG-37-0000
NOTICE OF INTENT INFORMATION

PERMITTEE NAME			PREVIOUS NPDES PERMIT NUMBER (if any) AKG-37-0
ADDRESS	<u>SUMMER</u>	<u>WINTER</u>	WATER THAT THE FACILITY DIRECTLY DISCHARGES TO (Receiving Water):
	PHONE		
OPERATOR NAME <input type="checkbox"/> Check if same as Permittee			PLEASE PROVIDE A DRAWING OF YOUR OPERATION ON THE BACK OF OR ATTACHED TO THE NOI SHEET THAT IS SUBMITTED
ADDRESS	<u>SUMMER</u>	<u>WINTER</u>	
PHONE			
FACILITY NAME:	Is your facility located in an area National Parks System Units (i.e., Parks and Preserves), National Monuments, Sanctuaries, Wildlife Refuges, Conservation Areas, Wilderness Areas, or Critical Habitat Areas. <input type="checkbox"/> Y <input type="checkbox"/> N <i>If yes, Which?</i>		LATITUDE
NEAREST TOWN:			LONGITUDE
MINING DISTRICT:		New Source? <input type="checkbox"/> Y <input type="checkbox"/> N (e.g. virgin ground)	
QUAD MAP, TOWNSHIP, RANGE, SECTION		MERIDIANS: <input type="checkbox"/> Umat <input type="checkbox"/> Kateel <input type="checkbox"/> Fairbanks <input type="checkbox"/> Seward <input type="checkbox"/> Copper River	
For Mixing Zone information please contact: ADEC, 610 University Avenue, Fairbanks, Alaska 99709			
Type of Operation:	Mechanical <input type="checkbox"/> No discharge <input type="checkbox"/> Discharge	or Hydraulicking <input type="checkbox"/> No discharge only	Amount of Material Processed:
SIGNATURE:		DATE:	
PRINTED NAME:			
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			

Attachment 5



**Alaska Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program**

Mechanical Placer Mining General Permit Guidance

The purpose of this guidance is to summarize the monitoring frequency, monitoring methods, and reporting requirements of the Mechanical Placer Miners General Permit (AKG370000). The information below is a summary of the requirements contained in the permit. This document serves only as guidance and does not replace any permit conditions, policy or regulation. Permittees should consult the permit for specific requirements. If you have questions, please contact Nick Dalman, the Department Placer Mining Permit Coordinator, at (907) 451-2142 or email <nicholas.dalman@alaska.gov>.

The following tables present effluent limits and monitoring requirements for non-discharging and discharging facilities:

Effluent Characteristic	Units	Monitoring Location	Monitoring Frequency	Sample Type
Settleable Solids	ml/L	Effluent	Once per day each day of discharge	Grab
Turbidity	NTU	Effluent	Once per discharge event	Grab
		Upstream	Once per discharge event	Grab
Arsenic	ug/L	Effluent	Once per discharge event	Grab
Flow	gpm	Effluent	Once per day each day of discharge	Visual Estimate

Effluent Characteristic	Instantaneous Maximum	Units	Monitoring Location	Monitoring Frequency	Sample Type
Settleable Solids	0.2	ml/L	Effluent	Once per day each day of discharge	Grab
Turbidity	5 NTUs above natural conditions	NTU	Effluent	Three times per week	Grab
			Upstream	Three times per week	Grab
			Downstream	Once per day of discharge	Visual
Arsenic	10	µg/L	Effluent	Once per season	Grab
	-	µg/L	Upstream	Once per season (optional)	Grab
Flow	-	gpm	Effluent	Once per day each day of discharge	Instantaneous
Seepage	-	gpm	-	Each day seepage occurs	Estimate

Part 1.0 Explanation of Monitoring and Protocol

1.1 Analytical Laboratory vs. Field Analysis

Analysis of Settleable Solids, Turbidity, and Arsenic can be done by an analytical laboratory. The local yellow pages directory or internet search should provide you a list of analytical labs. The Alaska Department of Environmental Conservation (DEC) does not maintain a list of “recommended” labs. The DEC Drinking Water section does have a list of labs certified to run analyses for drinking water, however, the permit does not require that analyses be performed at labs that are “Drinking Water certified”. A list of Drinking Water certified laboratories may be obtained by contacting DEC or visiting the website at www.dec.state.ak.us/eh/lab/certchemlabs.aspx. Although not required, you may choose (1) a Drinking Water certified lab for analyses or (2) a non-certified lab that is capable of running approved tests. Select a lab that is convenient to your location.

For the analysis of Settleable Solids and Turbidity monitoring, you have the option of either analyzing your own samples or having the lab run the analysis. Both Settleable Solids and Turbidity samples must be analyzed within 48 hours.

- If you are able to get a sample to a lab within 48 hours, you may either contact a lab and request a sample kit or choose to analyze your own samples.
- If you are not able to get a sample to a lab within 48 hours, you must perform your own analyses.
- In order to analyze your own samples, you will need to obtain additional field equipment and follow the analysis procedures below.

Arsenic monitoring will require laboratory analysis and cannot be conducted in the field.

1.2 Monitoring Locations

As required in the tables above, samples must be collected from the following locations:

Effluent Sample

Effluent samples for settleable solids, turbidity, and arsenic must be collected from the settling pond outlet or other outlet prior to the discharge to the receiving stream.

Upstream Sample

Upstream samples must be taken at a point above the permittee's mining operation that is representative of the receiving stream.

1.3 Settleable Solids Monitoring

Settleable solids samples must be taken daily each day of discharge at a point prior to entering the receiving stream.

Sampling

1. Collect a “grab” sample in a clean one liter polypropylene or glass container.
2. If you’re sending the sample to a lab or you’re not going to analyze it immediately, it should be put in a cooler with ice and be kept at 39°F. Do not allow the sample to freeze. The sample must be analyzed within 48 hours of taking the sample.

Analysis (field)

1. Fill an Imhoff cone to the liter mark with a thoroughly mixed sample.
2. Settle for 45 minutes, then gently stir the sides of the cone with a rod or by gently spinning the cone.
3. Settle 15 minutes longer, then record the volume of settleable matter in the cone as milliliters per liter. Do not estimate any floating material. The lowest measurable level on the Imhoff cone is 0.1 ml/l. Any settleable material below the 0.1 ml/l mark shall be recorded as trace.

Equipment

- Imhoff Cone*
- 1 Liter collection container (polypropylene or glass)
- Cooler with ice (for shipping) or refrigerator (short-term storage)

*field analysis equipment (not necessary if sample is to sent to a lab)

1.4 Turbidity

a. Visual Monitoring

Facilities without mixing zones: Turbidity must be visually monitored at the point of discharge at least once each day a discharge occurs.

Facilities with mixing zones: Turbidity must be visually monitored at the edge of the assigned mixing at least once each day discharge occurs.

Record your observations in a log.

b. Grab Sampling

Samples for turbidity monitoring must be taken during sluicing at a time when sluice pay dirt loading and effluent discharge are about equal (constant).

Discharge (effluent) and upstream samples must be taken within a reasonable time frame of each other.

Those who receive a mixing zone, and site-specific turbidity limit, may not be required to take background turbidity samples. If discharge occurs three or fewer days per week, samples must be taken every day a discharge occurs. Facilities should anticipate weekly discharges in order to plan sample events.

Sampling

1. Collect a "grab" sample in a clean one liter polypropylene or glass container.
2. If you're sending the sample to a lab or you're not going to analyze it immediately, it should be put in a cooler with ice and be kept at 39°F. Do not allow the sample to freeze. The sample must be analyzed within 48 hours of taking the sample.

Analysis (field)

1. Calibrate or validate the Turbidimeter
2. Pour sample in sample vial
3. Take reading and record

Equipment

- Turbidimeter* (must meet EPA Method 180.1 such as the Hach 2100P Turbidimeter)
- Sample vials* (with extras in case of breakage or wear)
- Calibration Standards*
- Glass wipes*
- 1 Liter collection container (polypropylene or glass)
- Cooler with ice (for shipping) or refrigerator (short-term storage)

*field analysis equipment (not necessary if sample is to sent to a lab)

1.5 Arsenic Monitoring

Samples for arsenic monitoring must be taken during sluicing at a time when sluice pay dirt loading and effluent discharge are about equal (constant).

Sampling should be concurrent with a turbidity sample.

Arsenic samples must be taken at the discharge point prior to entering the receiving stream.

The operator may collect and submit an optional upstream arsenic sample on a voluntary basis. The upstream arsenic sample should be taken within the same time as the discharge sample.

The lab will provide a sample bottle that is pre-cleaned and pre-acidified.

Sampling

1. Collect a "grab" sample in a clean one liter polypropylene or glass container.
2. Pour the water sample from the container into the sample bottle.
 - Keep the sample bottle sealed until you are ready to fill.
 - The sample bottle is pre-cleaned and pre-acidified with a small amount of nitric acid by the lab. The nitric acid preserves the sample for up to 180 days.
 - Do not wash out the sample bottle prior to taking sample.
 - Do not overfill bottle when filling so you do not lose any nitric acid.
 - Wear protective nitril gloves and eye protection when handling the sample bottles containing the nitric acid.
3. **Samples do not need to be acidified in the field if the sample bottle is prepared by the lab.**
4. Acidified samples must be analyzed within 180 days of the sample collection date.

Equipment

- 1 Liter collection container (polypropylene or glass)
- Sample kit for Arsenic from a DEC certified lab. The lab will usually provide a pre-cleaned and pre-acidified sample bottle within a cooler and bubble wrap.

1.6 Flow Monitoring

Effluent

The operator must measure effluent discharge to the receiving water for each day that discharge occurs. Flow shall be reported in gallons per minute (gpm) and recorded. Suggestion: use a stopwatch to time how long it takes to fill a five gallon bucket with effluent. Divide 5 gallons by the time (in minutes) to calculate the flow rate.

Seepage

The operator must make a good faith effort to estimate seepage discharging to the receiving water for each day that seepage occurs. Seepage flow shall be reported in gallons per minute (gpm) and recorded.

Part 2.0 Recording and Reporting Requirements

2.1 Annual Report

Due Date: no later than January 31 for the previous calendar year

The Annual Report must include the following:

1. Permittee name;
2. APDES authorization number;
3. Receiving water;
4. Monitoring results for settleable solids, turbidity, and arsenic;
5. Flow measurements and seepage estimates, the number of discharge events, and the duration of each discharge event for each day of the mining season;
6. Additional monitoring results;
7. Noncompliance reports; and
8. Permittee signature.

DEC does not currently require the Annual Report to be submitted on a specific form, provided that all of the information above is included.

If there is no mining activity during the year or no wastewater discharge to a receiving stream, you must notify DEC of these facts no later than January 31 for the previous calendar year.

2.2 Report of Noncompliance

If you have a noncompliance event such as an:

- Unanticipated bypass that exceeds any effluent limitation in the permit; or
- Upset that exceeds any effluent limitation in the permit,

Then you are required to call in and report within 24 hours and submit a written report within 5 days.

If you are unable to meet the reporting time limits, you may send a written report on the next re-supply plane or within the shortest reasonable period of time under the following circumstances:

- If your facility lacks satellite phone or cell phone coverage or is located on a road system where the closest public phone is more than 100 miles from the facility.
- The facility lacks internet access, or road access to a post office, or does not receive regularly scheduled air service.

The written report must include:

- Detailed information of the noncompliance;
- A detailed explanation why the report was submitted after the deadline; and
- A detailed explanation why the written report's submission is considered to be in the shortest reasonable period of time following the occurrence.

2.3 Contact Information and Mailing Address

Annual Reports and Reports of Noncompliance should be directed to the following address:

Alaska Department of Environmental Conservation
Attn: Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501

Phone: 1-877-569-4114
Fax: 1-907-269-4604
Email: dec-wqreporting@alaska.gov

