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:

Highlight Canyon, LLC

PO Box 4216
Palmer, AK 99645
907-745-6875

05 April 3013

BLM Case Files:

AA-078895 (3809)

AA-080620 (3715)

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Operator Information

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Point of Contact: Dave Norton, Manager (907) 232-0033

Claims Where Initial Planned Disturbances Will Occur:

BLM Serial Numbers	Claim Name
AKAA 032646	White Gold #1
AKAA 032647	White Gold #2
AKAA 032648	White Gold #3

BLM Serial Numbers	Claim Name
AKAA 027440	Lucky #1
AKAA 027441	Lucky #2
AKAA 027442	Lucky #3
AKAA 027443	Lucky #4
AKAA 027444	Lucky #5
AKAA 027445	Lucky Chance
AKAA 027446	Lucky Pair
AKAA 027447	Lucky Hope
AKAA 027448	Lucky Twenty
AKAA 027449	Lucky Joe

Balance of claims in this plan:

BLM Serial Numbers	Claim Name
AKAA 054388	White Gold #4
AKAA 054389	White Gold #5
AKAA 054390	White Gold #6
AKAA 054391	White Gold #7
AKAA 054392	White Gold #8
AKAA 056324	White Gold #9
AKAA 056325	White Gold #10
AKAA 073543	White Gold #11
AKAA 073544	White Gold #12
AKAA 027450	Rusty Assoc. #5
AKAA 027452	Rusty Assoc. #7
AKAA 027453	Rusty Assoc. #8
AKAA 027454	Rusty Assoc. #9
AKAA 027455	Rusty Assoc. #1

APMA A 125691

Highlight Canyon LLC,

by contract with

Clearwater Mountain Mining

White Creek

November 08, 2012

Overview

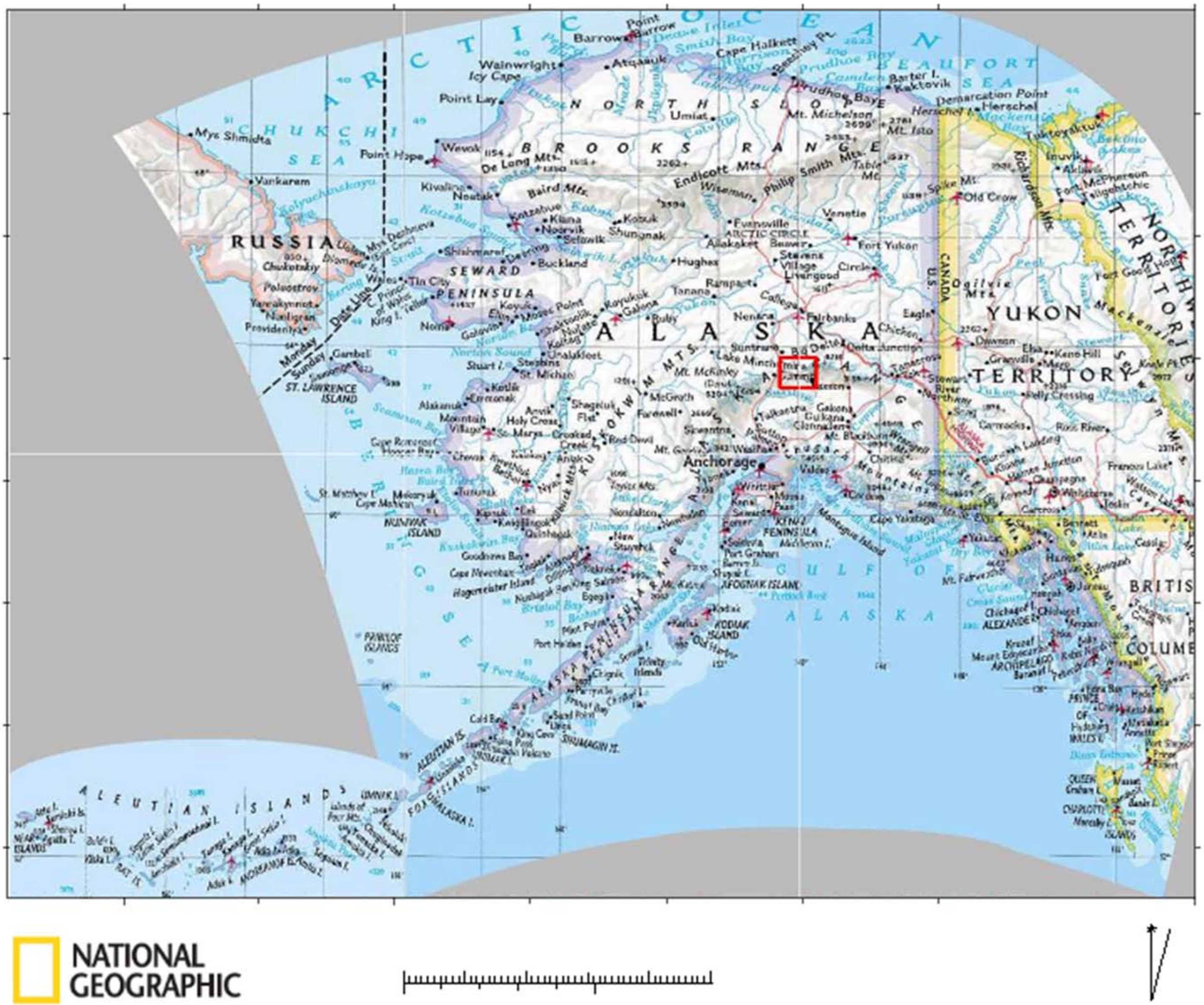
This is the mining and reclamation plan for Highlight Canyon LLC's operations in the White Creek drainage/Gold Hill area within the Valdez Creek Mining District. The purpose of this operation is the safe, economically sound and environmentally compliant, extraction of precious metals from the claims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

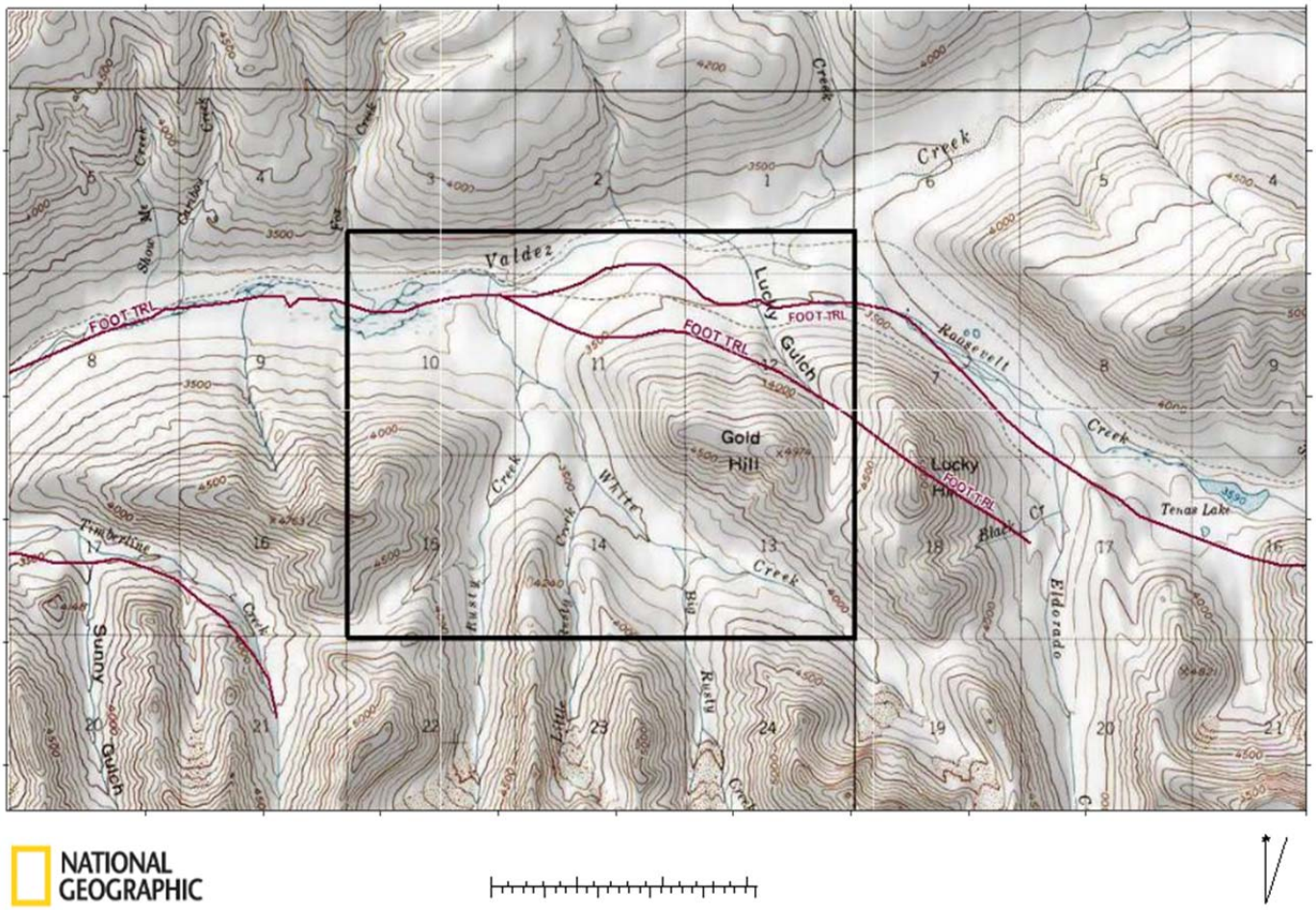


FIGURE 2

The initial active proposed mine area will likely disturb portions of 4 claims (bold red) of the 27 claims associated with the project (Figure 3). Boundaries of claims are enlarged in Figure 4. Boundary depictions are good faith approximations based on GPS coordinates supplied by Claim Owners for the White Gold claims. Alaska Mapper was used to approximate the "Lucky" and Rusty Association claims. Actual boundaries are governed by the onsite physical locations of the claim stakes.

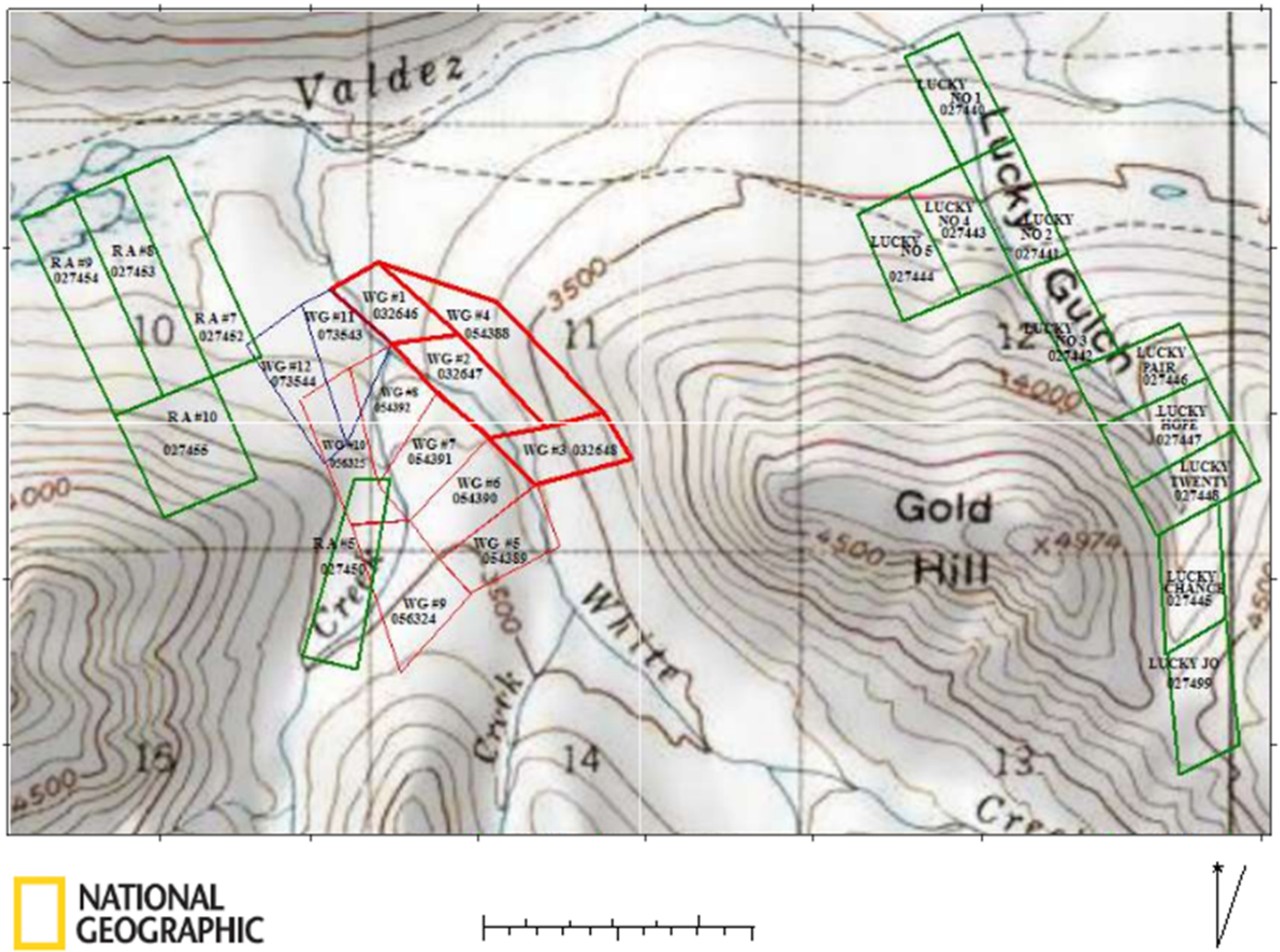
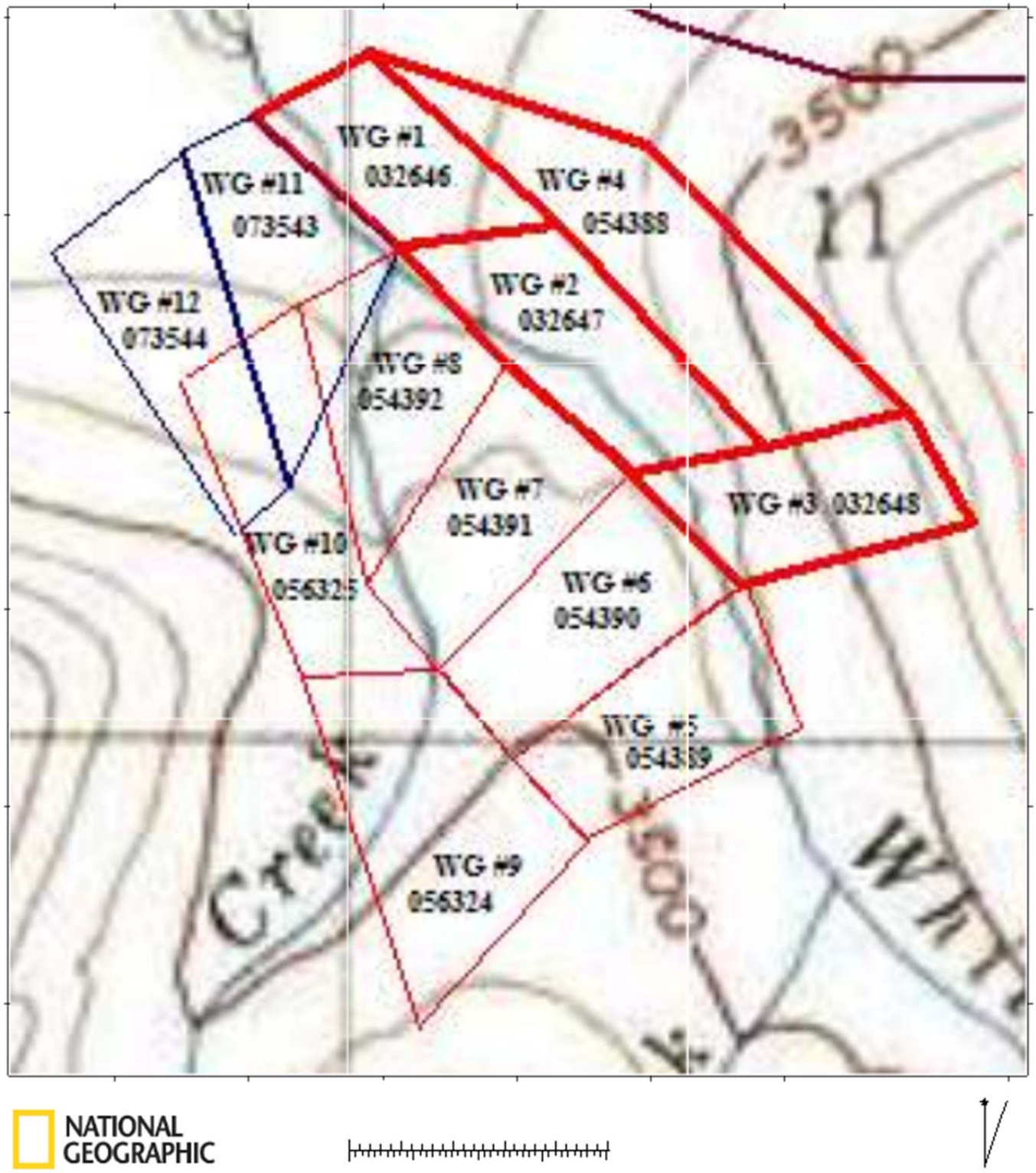


FIGURE 3

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.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WG #9
056324
3500
11
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 and will be trained and capable, to monitor and ensure compliance with State and Federal regulations. Currently that person will be Dave Norton and can be contacted via the same means as Highlight Canyon llc. When any change of personnel occurs in that position, updated contact information will be sent to BLM and other appropriate authorities.

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. Season 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, and more precise resource definition is completed, it is likely that amendments to this plan will be submitted to allow expansion or modification of the scope outlined in this application. Beginning with the 2013 season, it is reasonable to believe the life of the mine to run 20 years. If so, this plan calls for a review at years 10, 15, and 20, to assure its compliance with and accommodation of applicable standards.

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 the 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.

Visitors

Signage will be posted at road access points to the claims. The signage will identify Highlight Canyon LLC as the Operator and holder of the rights to enter and mine the claims for precious metals. The signage will direct visitors to call HLC's office, or to sign in at the mine office when the mine is operating, where they will receive safety information including restricted active operation areas to avoid.

All visitors in the active mining area are required to be MSHA trained or accompanied by mine personnel that have current MSHA training.

Additional signage will warn of open water. Berms, barricades and gates will be positioned to restrict unauthorized vehicular access to active or potentially hazardous areas.

No actions will be taken to restrict the public from entering or using areas of the claims that are not part of the area of operations or in support of operations such as camp facilities and equipment areas.

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. **No culvert or in stream road work will be conducted without written authorization from BLM and other appropriate agencies.**

FIGURE 5 shows the locations of the above mentioned crossings at about mile 10 of Valdez Creek road.

FIGURE 5

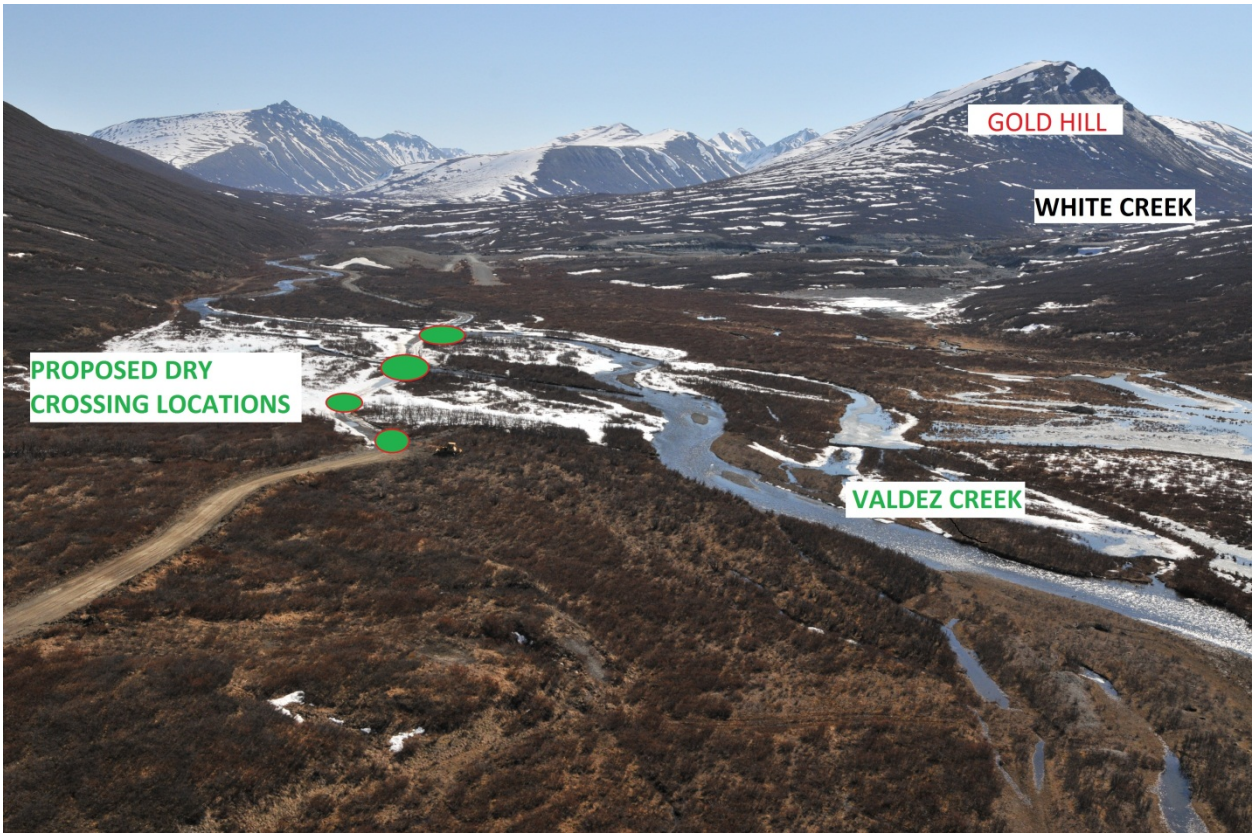


FIGURE 6

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.

During observations made from low altitude over-flight via helicopter in May of 2010, of the White Creek and Valdez Creek confluence, during a time of heavy melt-water runoff and turbidity in lower White Creek, no visible turbidity was observed by the time the White Creek water infiltrated Valdez Creek. The rocks and gravel in Valdez Creek were clearly visible immediately upstream, at, and immediately downstream of the confluence point. Photographs were taken at the time but instrument turbidity readings were not taken.

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 overfilled the area immediately north of our main pit, as well as infilling a portion of our pit. (fig.8)

This overfill 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 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 the neighboring operation that overfilled and prevented the downstream outflow and exfiltration mitigate its actions by installing and maintaining adequate means for outflow and exfiltration at the natural subsurface elevation.

In the event neighboring operation fails to provide and maintain adequate mitigation, this Plan of Operations calls for us to exercise any or all remedies that are legal and available.

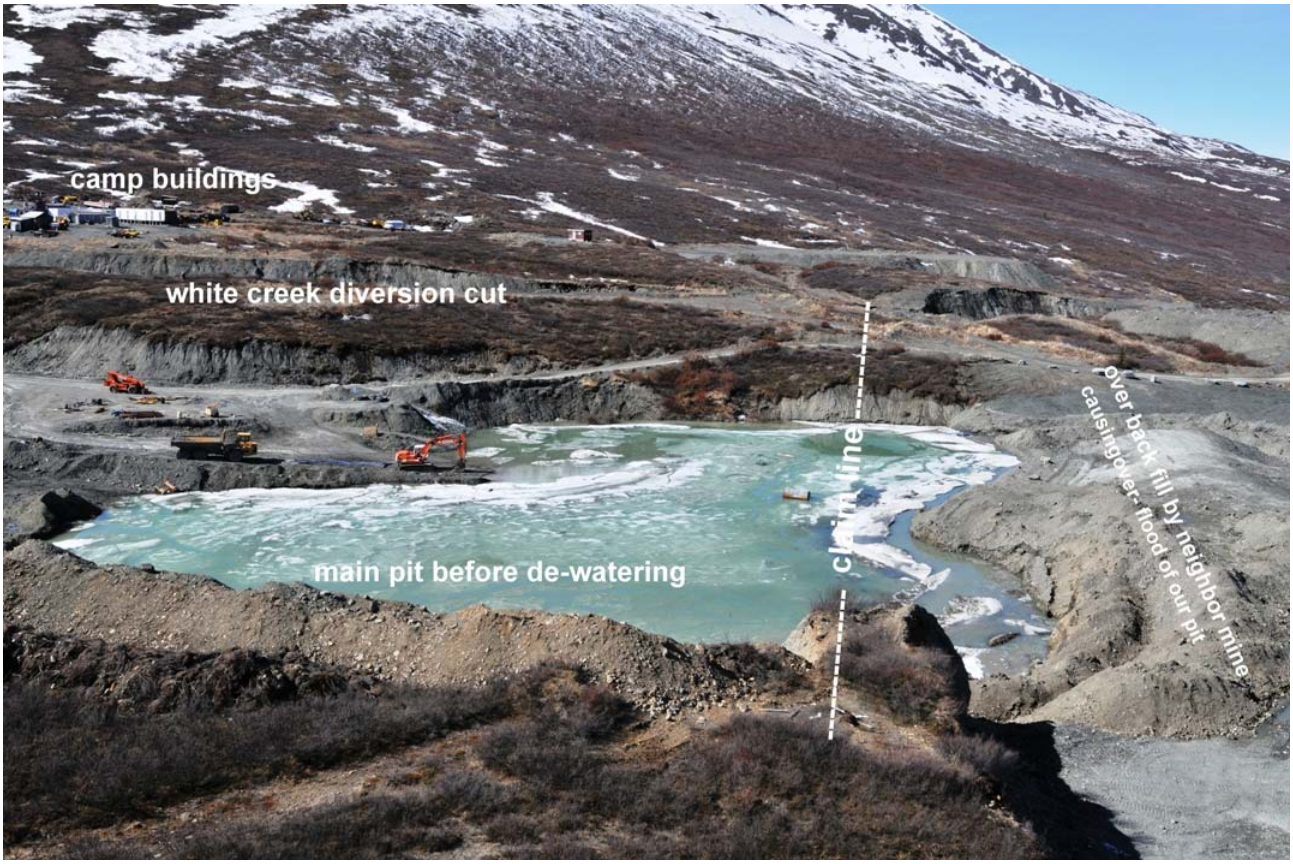


FIGURE 8 go to the index

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.

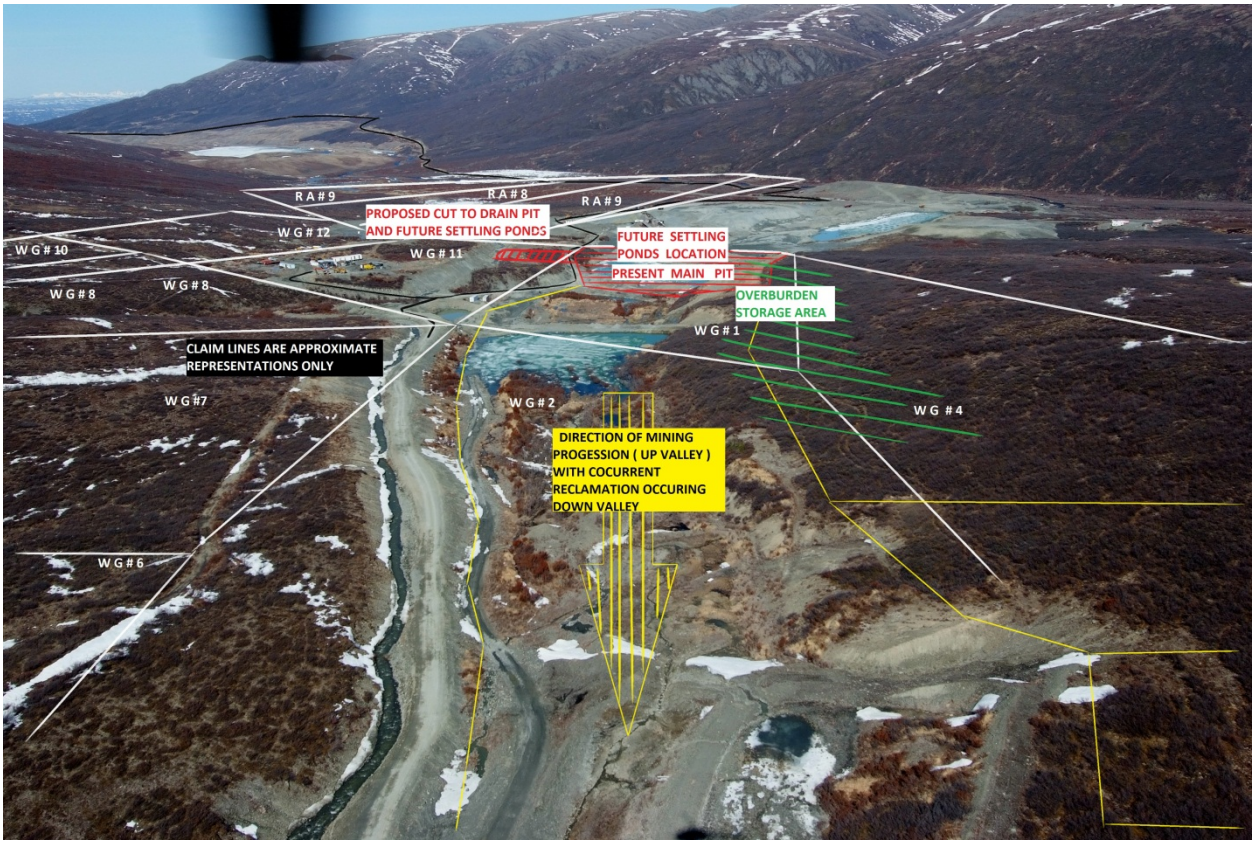


FIGURE 9

Water Management

During 2010, three settling ponds were constructed as 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 the ponds will be used to supply production water for the wash plant when the net water balance in the ponds is positive. If the net water balance from the ponds is negative, 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. A current permit for the mixing zone is being finalized at this time by ADEC, so of course the mixing zone will not be operated until the current permit is completed and issued.

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. The sides of the cut will be shaped to a stable slope and a pipe or culvert placed in the cut and used to convey water pumped from the pit to the three down valley settling ponds at the gravel delta indicated in Figure 17, thus reducing erosion in the cut and keeping the water discreet from White Creek Diversion until after passing through the down valley settling ponds. In the downstream portion of conveyance, where adjacent bank erosion is not an issue, lined ditch may be utilized for conveyance.

Sediment from these ponds can be used to provide soil to aid in establishing soil and vegetation on the gravel delta. The ponds will be configured perpendicular to the slope, in a long crescent shape to maintain elevation and narrow enough to bail sediment via an excavator reaching from the sides. The ponds will be far enough apart to allow room for the equipment to operate safely between them. Water will exit each pond from the opposite end that it enters, thus maximizing the waters residency in the ponds. Water exiting the lower of these ponds will enter White Creek Diversion and, when approved, will be the upstream end of the mixing zone. The upstream and downstream ends of the mixing zone will be marked for water sampling locations and monitoring protocols as per the permit requirements.

As mining progresses up-valley, the upper settling ponds 1, 2, & 3, shown in Figure 10, which receive the discharge from the production operations, will be relocated to the present Main Pit location, also shown in figure 10, where they will then receive pit de-water in addition to production discharge. When the net water balance in these three upper ponds is positive, production water will be drawn from them. When the net water balance in these ponds is negative, no water will be flowing from them into the lower pond system and make up water will come from White Creek.

Please refer to the Reclamation Plan for draining and reclamation of all the ponds.

Because of the influx of substantial ground water, we are requesting permission to have the option of utilizing de-watering wells to mitigate groundwater depending on economic and other practicality considerations. It is anticipated that such a system could

help provide makeup water for production prior to drawing from White Creek Diversion. Design data is not currently available but design data would be submitted to appropriate authorities, including the BLM, and approval received prior to installation of the system.

FIGURE 12

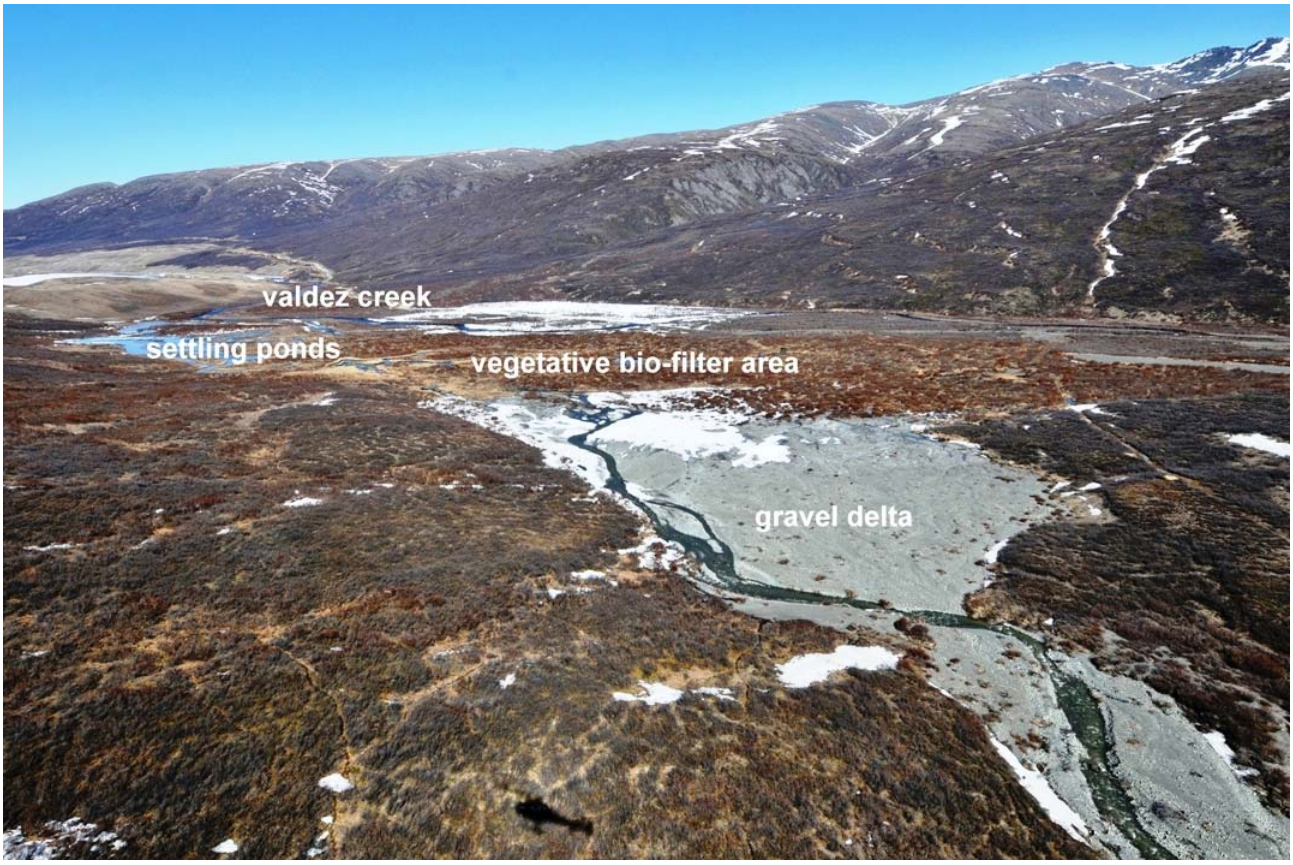


FIGURE 13

FIGURE 14

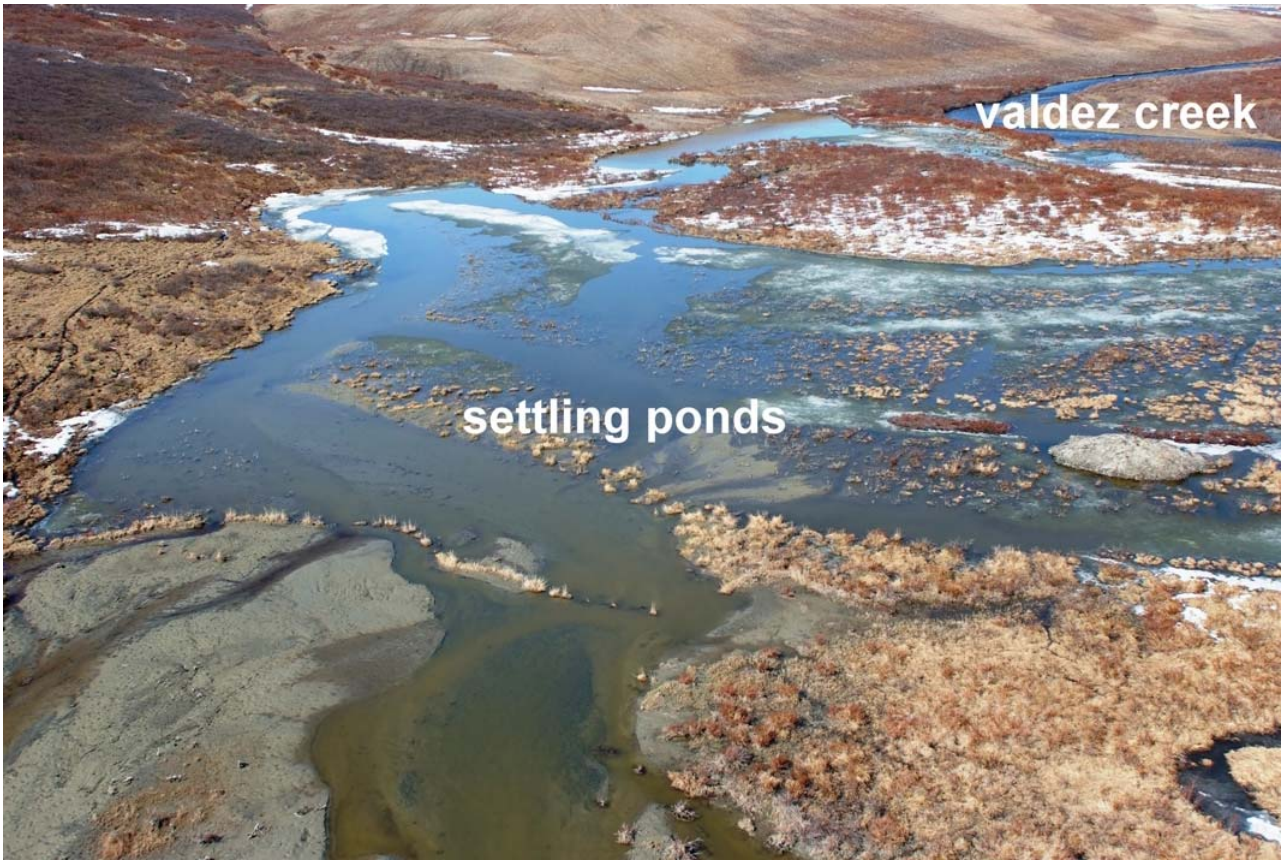


FIGURE 15

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.

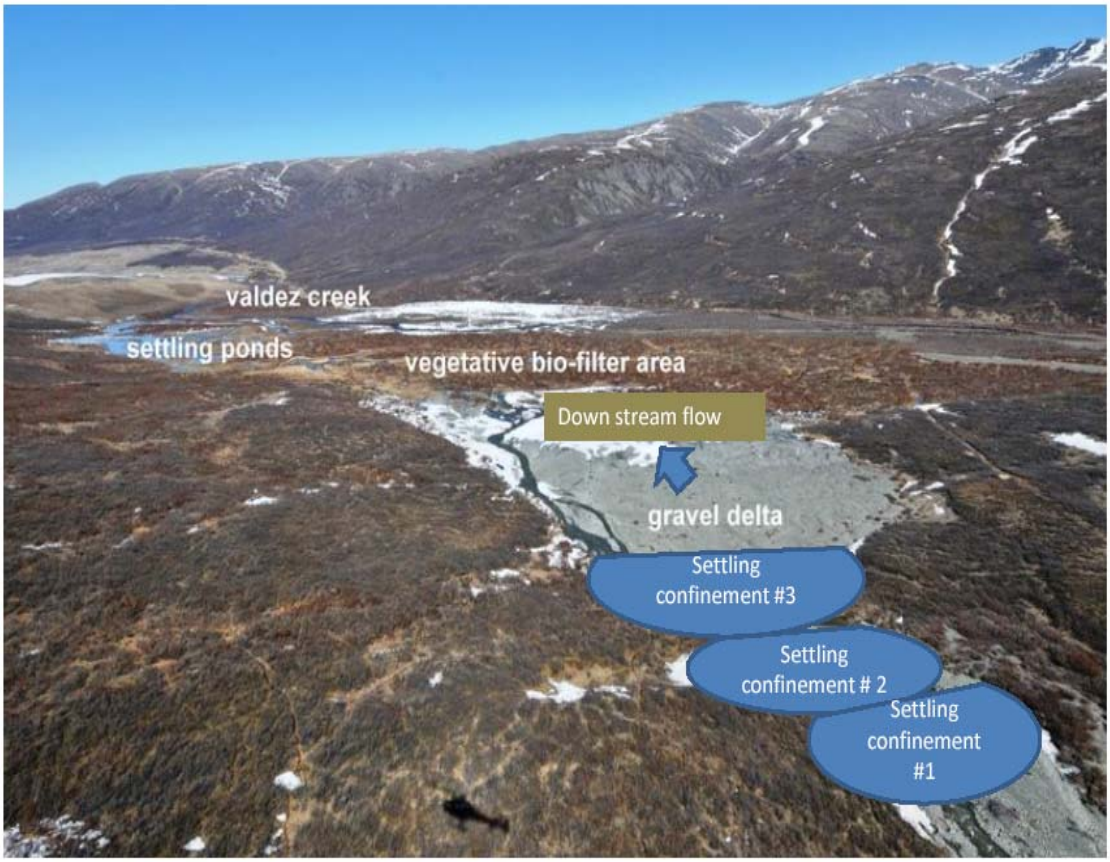


Figure 17: Depiction of detention ponds requested by ADFG habitat to increase water residency in the White Creek diversion, Looking North (downstream) across additional natural settling ponds, prior to White Creek seeping into Valdez Creek. (Disregard "vegetative bio-filter area" label) Actual ponds will be located on the main body of the delta, a little lower than this depiction.

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. The Rusty Creek operations work is trespassing on our claims, which are senior to theirs. We will deal with this as a legal or civil matter.

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. Dimensions are approximate.

1 Cook shack/mess hall	14x60 plus 12x16;	Moved or burned at final closure
2 Sleeping quarter's trailers	12x40 ea.	Moved at final closure
1 Laundry/showers trailer	12x40	Moved at final closure
1 Gold room	20x20	Moved or burned at final closure
2 Tool storage sheds	8x16; 16x16	Moved or burned at final closure
1 Work shop	12x16	Disassembled at final closure
4 Parts storage trailers	2@ 8x40; 2@8x20	Moved at final closure
1 Sauna	6x6	Moved or burned at final closure

We hereby request that these be allowed to remain for office, storage, maintenance and housing purposes for the life of the mine operation.

We request that the following additional structures be allowed to be set up on the property and remain in place during the life of the operation:

Heavy Equipment Maintenance shop 80x96 Demountable. Assembled of shipping container walls with removable roof sections. Floor of non-reinforced concrete or acrylic bonded local aggregate. At closure, roof and walls will be disassembled and removed. Floor will be broken up to < 1 sf size and used as fill.

Hydroelectric plant: Still in conceptual planning stage. Details not yet available. Final approval from appropriate authorities including the BLM will be requested after design is complete and prior to installation. Removed at closure

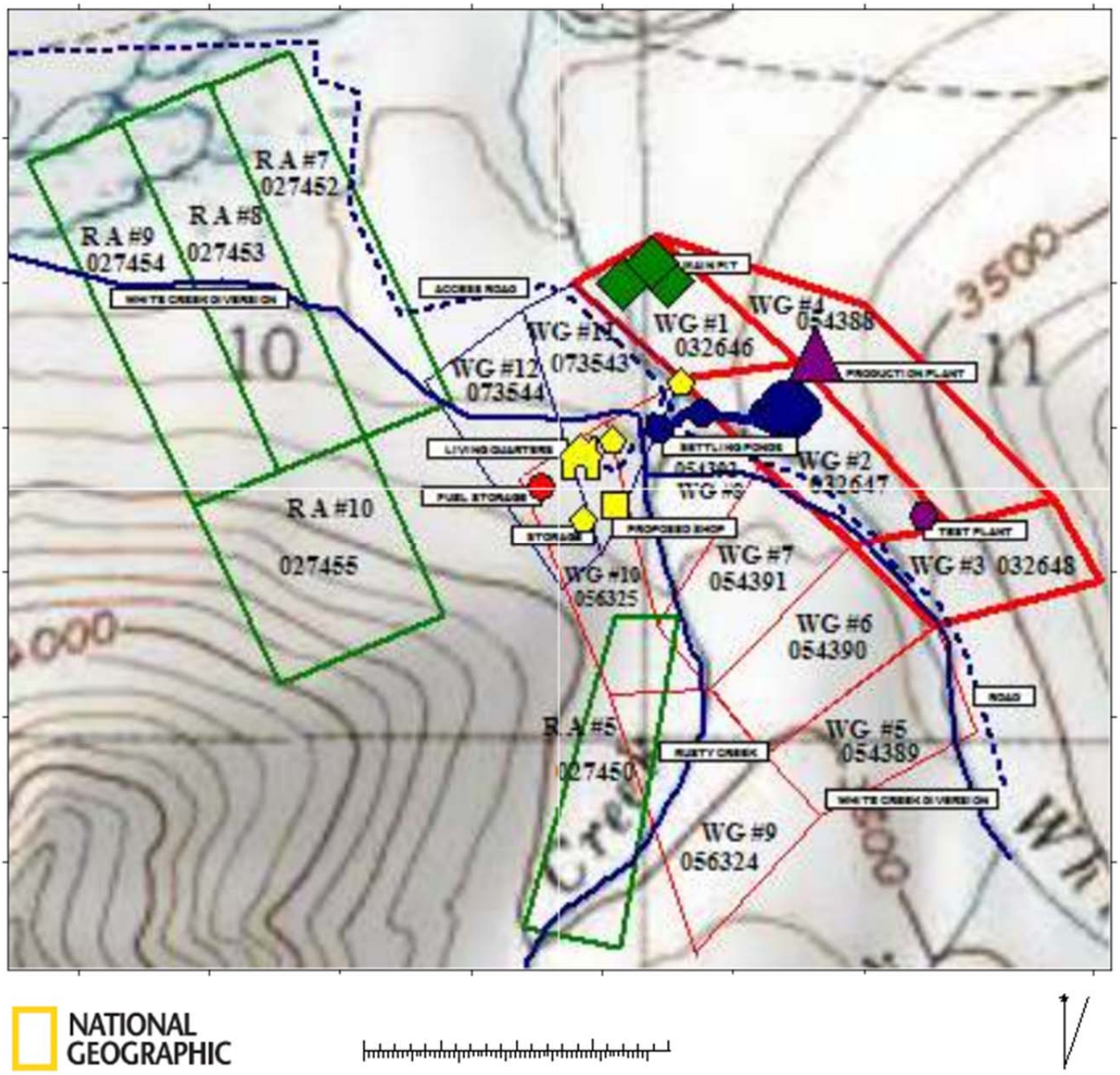
Wash plant shelter 24x60 disassembled and removed at closure

Concentrate production shelter 24x40 disassembled and removed at closure

Additional quarters as needed for personnel Unitized, removed at closure

At final closure all structures will be removed, the underlying ground cleared of debris and reclaimed and blended to surroundings as per Reclamation Plan requirements.

FIGURES 18 & 18a show the location of the existing and proposed facility structures. Claim line representations are approximate.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073543
WG #12
073544
ACCESS ROAD
LIVING QUARTERS
FUEL STORAGE
STORAGE
PROPOSED SHOP
SETTLING POND
PRODUCTION PLANT
TEST PLANT
ROAD
RUSTY CREEK
WHITE CREEK DIVERSION
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NATIONAL GEOGRAPHIC

FIGURE 18

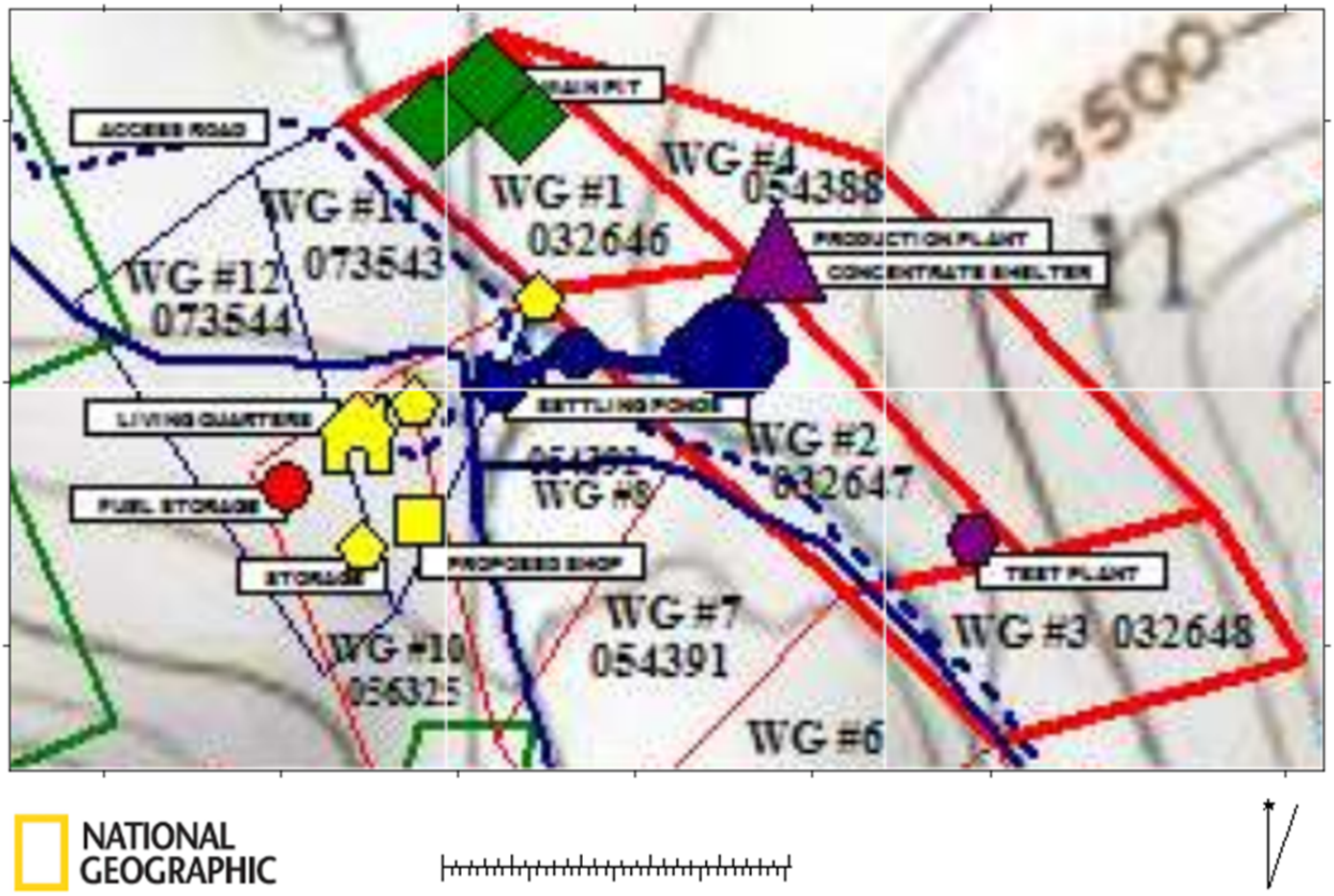

FIGURE 18a (ENLARGED above). **FIGURES 19, 19a (below) Aerial of Buildings**

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 (MSHA) 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. If the downstream ponds are incorporated, water from the upper ponds will be conducted to the lower ponds via pipe or culvert or lined ditch, or a combination of them. In this option case the water from the upper ponds will be kept discreet from the White Creek Diversion waters until downstream of the lower ponds.

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 and pit location** progresses up valley, the wash plant and ponds will be relocated to facilitate mining the materials under their current location. The settling ponds will be relocated in the area that is currently the main pit at the northern (**downstream**) portion of claim number one. It is anticipated that the ponds will remain at this location as long as mining continues up valley. 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. Refer to Reclamation Plan for specifics on draining and reclamation of the ponds.

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.

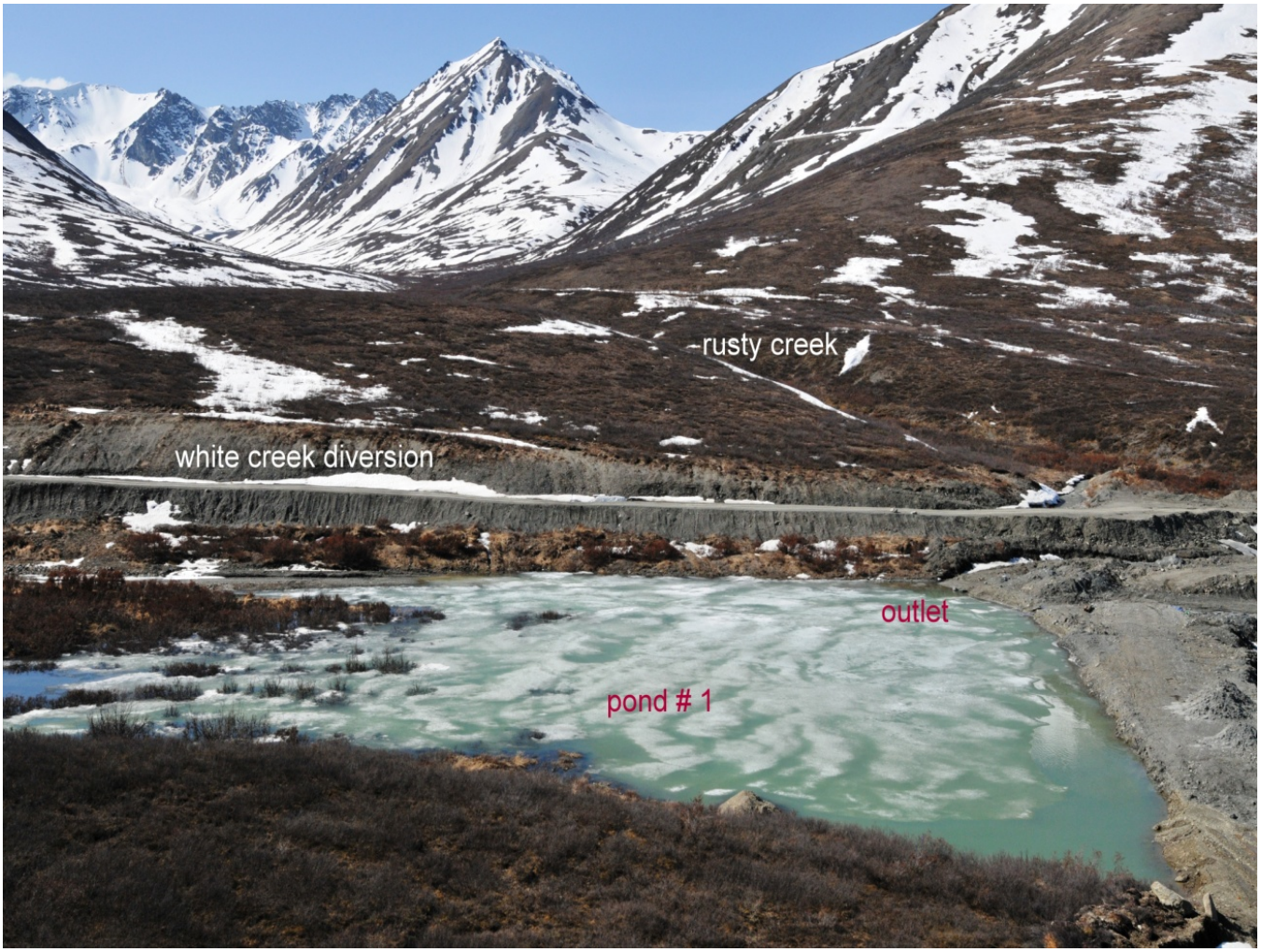

FIGURE 20

Storm Water Pollution Prevention

1. A cross valley ditch will be constructed up valley of the area of operations, where relative elevation grade allows, capturing surface water and redirecting it to White Creek Diversion.

2. Storm water will be allowed to infiltrate in undisturbed areas.

3. Storm water in the immediate area of the process operation, accumulating at elevations too low to flow into White Creek via the cross valley ditch, will be allowed to drain into the settling ponds.

4. 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.

5. Redundant complexes of settling or detention ponds will add additional protections. Storm water runoff in the production area, not captured and redirected by the cross valley ditch will pass through production settling ponds prior to entering White Creek diversion.

Monitoring Plan

Monitoring of the following items will occur and be documented at the frequency listed with each. A copy of documentation will be kept at the mine. A summary report will be submitted annually to the appropriate authorities, including the BLM, not later than January 31 of each year for the previous activities. Additionally the required monthly reports for Water Monitoring will be sent to the BLM.

ITEM	FREQUENCY DURING OPERATIONS
WATER QUALITY	As per permit: see attachments #3,4,5.(DAILY DURING DISCHARGE)
WATER QUANTITY	As per permit: see attachments #3,4,5.(DAILY DURING DISCHARGE)
AIR QUALITY	DAILY
WEATHER (Meteorological conditions)	DAILY
WILDLIFE MORTALITY (mammals, fish, and birds)	DAILY
RECLAIMED AREAS (soil stability, re-vegetation condition)	WEEKLY and after Storm Water Events
FUEL/OIL	AS PER SPCCP

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 activities. Monitoring observations and responses or actions will be documented.

Water Quality Monitoring Required Under NPDES General Permit Number AKG-37-0885 Authorization to Discharge, Authorization date March 27, 2012

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 devise 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 will be sent to the BLM on a monthly basis during times of operation. 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):

Description	*count*
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. Another potential site is the Lucky Gulch Sod House on Claim # AKAA 017445. The Operator agrees to avoid knowingly adversely affecting the structures, 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).The Operator will not disturb these resources until the BLM completes timely required consultation and fieldwork with AKSHPO as per Section 106 of the NHPA.

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:

All vehicles and equipment used in all operations must be thoroughly cleaned prior to entry into the project area. Washing vehicles and equipment to remove material that can contain weed or other propagates will help insure equipment used are weed and weed seed free. High pressure washing is recommended to treat the insides of bumpers, wheel wells, undercarriages, inside belly plates, excavating blades, buckets, tracks, rollers, drills, buckets, shovels, any digging tools, etc., to remove potential weeds, seeds, and soil carrying weed propagules, and non-native vegetative material. After operations commence all vehicles and equipment shall be cleaned whenever moving from an area of known infestations to areas not infested with non-native plants.

The early detection of non-native plant species and a rapid response to their presence will help mitigate ecological damage to all resources within the project area. Prior to the start of operations, a thorough non-native plant inventory of the project area will be conducted to ascertain the presence, and level of existing infestations of invasive plants. Annual inspections/assessments shall be performed to identify new infestations and/or the spread of existing infestations of invasive plants species in the project area. Inspections shall occur during the "snow-free" season, after "green-up" when plants have emerged and can be identified. Assessments shall also be conducted in each of the five years following the completion of mining activities.

All inventories and assessments shall be documented and submitted to the Glennallen Field Office annually. The inspections shall be performed by an individual trained in

the recognition of invasive non-native plants, and shall be recorded on University of Alaska Natural Heritage Program data forms.

If at any point during or after mining activities the project area is found to have newly introduced species, expanded infestations or infestations exceeding the documented levels found during the initial inventory, the proponent shall initiate an Invasive Plant Mitigation/Control Plan. Proponent must confer with the land administrator to develop the Invasive Plant Mitigation/Control Plan to ensure appropriate measures are addressed. Optional control measures shall include hand, mechanical, chemical and biological methods and must be approved by the Authorized Officer before implementation.

Reclamation shall include re-vegetation with approved native seed and plant materials. Seed mixture or coverage rates must reflect (seed weight/ area) X(% germination- rate) X(% purity rate). Transplanting existing native vegetative mats will require supplemental watering for successful re-establishment on disturbed areas requiring reclamation. Sources for Certified weed free native seed and mulch can be found by calling the State of Alaska's Plant Materials Center at: 907-745-4469. Re-vegetation Guidance can be found at: http://www.dnr.state.ak/ag/pmcweb/PMC reveg.

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 practicable.

3. Apply topsoil and vegetation, from the stockpiles, over the graded backfill.

4. In areas where vegetation did not naturally exist prior to mining, a photographic record will be created and reasonable effort will be made to reclaim that area to its natural non-vegetated 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.

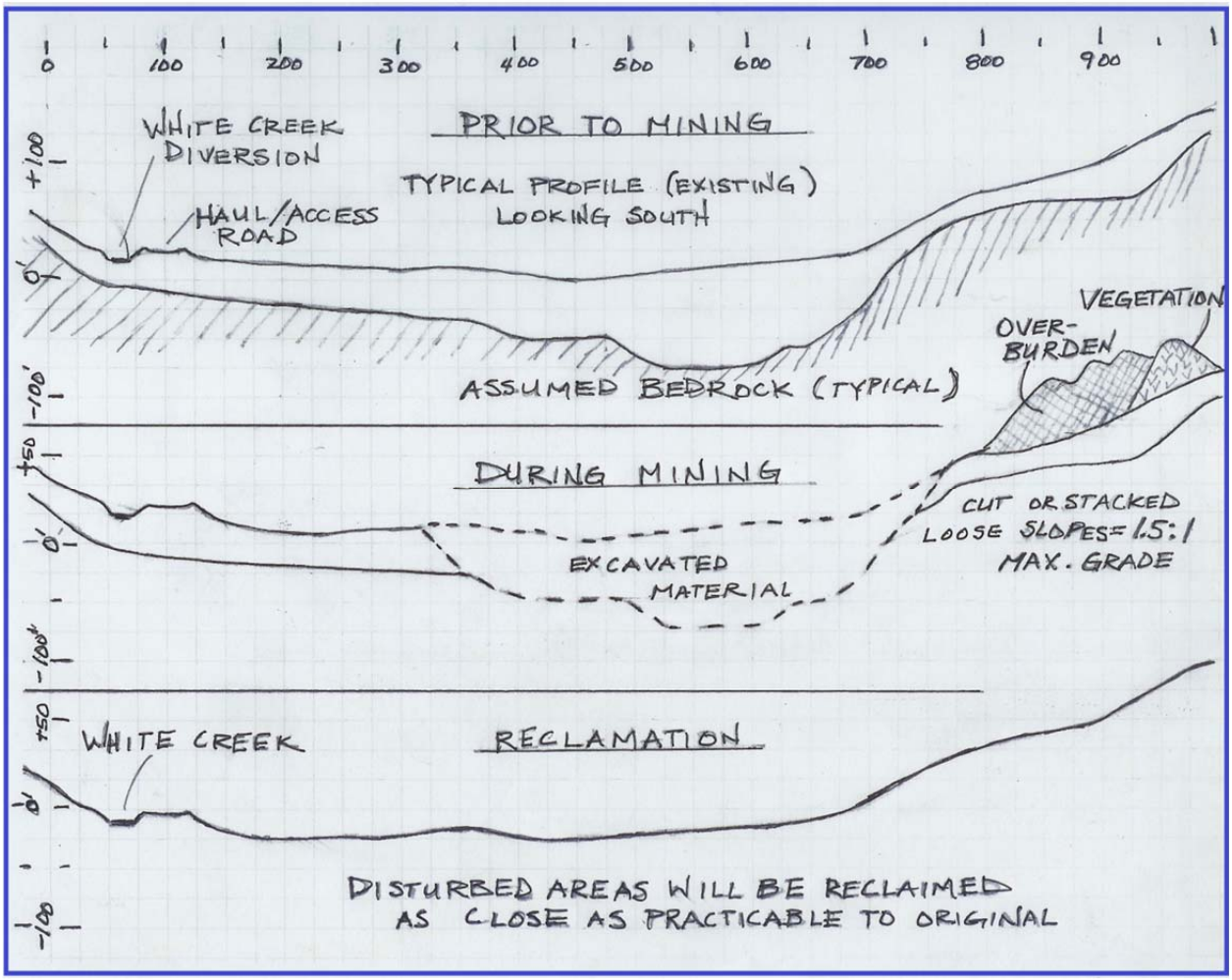

FIGURE 21

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 by allowing solids to settle out then lowering their head gates slowly to drain them. 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 whether apps, was 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 by allowing solids to settle out then lowering their head gates slowly to drain them. Slopes will be re-graded and re-vegetated or planted to prevent erosion.

- 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 particular, the final mine pit location, when mining is complete, is proposed to remain as a pond or lake. In this case the banks of the ponds would be shaped, the slopes made gradual for ease of ingress and egress and dressed according to acceptable reclamation standards. A more particular design will be developed in consultation with the BLM, ADF&G Habitat, DEC as final location and conditions become evident.

- 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. White Creek will be re-established near its original location in the east-center portion of the valley floor. After adequate data is collected in collaboration with the BLM and other appropriate authorities, a design will be created and submitted for approval addressing the various factors such as grade, bank slopes, sinuosity, riffles, bottom composition, vegetation etc. It is anticipated that data collection and design will take two seasons to occur. Re-establishment of White Creek will occur after mining is complete in the valley floor. Until then the current diversion will be utilized.

- The current White Creek Diversion will be re-graded and remain as the access road to up valley locations, unless future mining requires its excavation. In that case an alternate location for the access road will be proposed when the site specific factors are known.

- 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:- 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)- 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
ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

FOR MECHANICAL PLACER MINERS

GENERAL PERMIT NUMBER AKG370000
Authorization Number: AKG370885
Authorization Date: March 7, 2012

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

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, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations.

Owners and operators of mechanical placer mines, except those sites excluded from coverage in Part 1.0 of this Alaska Pollutant Discharge Elimination System (APDES) permit, are authorized to discharge to waters of the United States, only in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

A COPY OF THIS GENERAL PERMIT MUST BE KEPT AT THE SITE WHERE

DISCHARGES OCCUR.

DAVID NORTON

WHITE CREEK, No MZ

This permit is effective **April 6, 2012**.

This permit and the authorization to discharge shall expire at midnight on **October 31, 2014**.
The permittee shall reapply for a permit reissuance on or before **August 2, 2014,** 90 days before the expiration of this permit, if the permittee intends to continue operations and discharge(s) at the facility beyond the term of this permit.

Signed Wade Strickland
Signature

March 7, 2012
Date

Wade Strickland
Printed Name

Program Manager
Title

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SCHEDULE OF SUBMISSIONS

The Schedule of Submissions summarizes some of the required submissions and activities the permittee must complete and/or submit to the Alaska Department of Environmental Conservation during the term of this permit. The permittee is responsible for all submissions and activities even if they are not summarized below.

Table 1: Schedule of Submissions

Permit Part	Submittal or Completion	Frequency	Due Date
4.1	Daily Records	Daily	Completed and maintained on site
4.2	Annual Report	1/year	On or before January 31
1.6	Notice of Intent (NOI) to discharge from a new or recommencing facility	1/permit cycle	60 days prior to discharge
	NOI to discharge from an existing facility that seeks coverage under an administratively extended general permit	1/permit cycle	90 days before expiration of the general permit
Appendix A, 3.4	Oral notification of noncompliance	As Necessary	Within 24 hours from the time the permittee becomes aware of the circumstances of noncompliance
	Written documentation of noncompliance	As Necessary	Within 5 days after the permittee becomes aware of the circumstances

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1.0 PERMIT COVERAGE

1.1 Coverage and Eligibility

1.1.1 Existing Facilities: Facilities with coverage under the 2005 Mechanical Placer Miners General Permit are eligible for coverage under this general permit (hereinafter referred to as permit or GP). See Permit Part 1.6 for notification requirements.

1.1.2 New Facilities / Recommencing Facilities: Upon submittal of a Notice of Intent (NOI) to discharge, all mechanical placer facilities that meet the criteria for coverage under this permit will be granted coverage.

1.1.3 Moving Facilities / Expanding Facilities: Facilities that contemplate moving their outfalls or expanding shall submit a new NOI that describes the new discharge. The current authorization may be terminated and a new authorization, reflecting the changes, issued in its place if the facility meets all the necessary criteria for coverage under this permit.

1.1.4 Authorization to discharge requires written notification from the Alaska Department of Environmental Conservation (hereinafter referred to as Department or DEC) that coverage has been granted and that a specific authorization number has been assigned to the operation.

1.2 Authorized Placer Mining Operations

1.2.1 The following operations are authorized under this permit:

1.2.1.1 Facilities that mine and process gold placer ores using gravity separation methods to recover the gold metal contained in the ore.

1.2.1.2 Open-cut gold placer mines except those open-cut mines that mine less than 1,500 cubic yards of placer ore per mining season.

1.2.1.3 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.

1.2.1.4 Hydraulicking facilities that are considered “non-discharging” facilities.

1.3 Prohibitions

1.3.1 The following operations are not authorized under this permit:

1.3.1.1 Discharges from beneficiation processes that utilize mercury amalgamation, cyanidation, froth floatation, heap leaching, or vat leaching;

1.3.1.2 Hydraulicking facilities that discharge on an intermittent or continuous basis;

1.3.1.3 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, Tier 3 waters, waters designated as wild under the Wild and Scenic Rivers Act, or wetlands designated in the 1995 *Anchorage Wetlands Management Plan*; or

1.3.1.4 Facilities that discharge to marine waters.

1.4 Additional Requirements

1.4.1 Many streams and stream reaches in Alaska have been designated as part of the National Wild and Scenic Rivers System (www.rivers.gov/wildriverslist.html) or as Conservation System Units (dnr.alaska.gov/commis/opmp/anilca/more.htm) by the federal government. Applicants 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.

1.4.2 Many streams in Alaska where placer mining occurs have been designated by the Alaska Department Fish and Game (ADF&G) as anadromous fish streams. Placer mining activities in these streams require an ADF&G 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" (www.sf.adfg.state.ak.us/SARR/awc/) lists the streams in the state that require prior ADF&G authorization. In addition, placer mining activities in resident fish streams require an ADF&G Fish Habitat Permit if the proposed activity has the potential to block or impede the efficient passage of fish. Applicants who wish to operate in anadromous or resident fish streams, or propose to divert surface waters, should contact ADF&G to determine permitting requirements and additional restrictions that may apply.

1.5 Requiring an Individual Permit

1.5.1 In accordance with 18 AAC 83.215, the Department may require or allow any permittee authorized under this GP to apply for and obtain an individual APDES permit or allow an owner or operator of a facility with an individual permit to obtain coverage under this GP.

1.5.2 The Department will notify the operator in writing by certified mail that an individual APDES permit application is required. If the operator fails to submit an application by the date required in the notification, coverage under this GP is automatically terminated at the end of the day specified for application submittal.

1.6 Notification Requirements

1.6.1 Owners or operators of existing facilities eligible for coverage under the administratively extended 2005 GP are automatically covered under this GP. Automatic authorizations include any turbidity modifications authorized under the 2005 GP.

1.6.2 Owners or operators of facilities that are ineligible for automatic coverage (see Part 1.6.1) shall submit an NOI. The information required for a complete NOI is in Appendix E of this permit. Notification must be made 60 days prior to discharge from a new or recommencing facility.

1.6.3 An Annual Placer Mining Application (APMA) will be accepted as an NOI if all the required information is included, and the APMA is signed as required in Part 1.6.4.

1.6.4 The NOI shall be signed by the owner, operator, or other signatory authority in accordance with Appendix A, Part 1.12 (Signature Requirement and Penalties), and a copy shall be retained on site in accordance with Appendix A, Part 1.11 (Monitoring and Records).

1.6.5 To apply for permit coverage, applicants must submit an NOI to the DEC at the address in Appendix A, Part 1.1, or submit an APMA to the Alaska Department of Natural Resources (DNR).

1.6.6

1.6.7 Applicants who do not use the APMA procedure for filing their NOI with DNR 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.

1.6.8 Owners or operators of authorized facilities wishing to continue coverage after the expiration date of this GP must submit a new NOI at least 90 days prior to expiration of this GP, as described in Appendix A, Part 1.3, in order for the conditions of the expired permit to continue in force until the effective date of a new permit.

1.6.9 A copy of the GP will be sent to the owner or operator when it is determined that the facility can be authorized under this GP. If it is determined that a facility cannot be authorized to discharge under this permit, the owner or operator will be informed of this in writing.

2.0 LIMITATIONS AND MONITORING REQUIREMENTS

2.1 Non-Discharging Facilities

2.1.1 Beginning with the effective date of this permit, the permittee shall not discharge wastewater to receiving waters unless the permittee qualifies for a storm exemption as outlined below.

2.1.2 A non-discharging facility may qualify for a storm exemption from the technology-based effluent limit for settleable solids and the flow requirements in Parts 2.2.1.1 and 2.2.1.2, if the following requirements are met:

2.1.2.1 The treatment system is designed, constructed, and maintained to contain

2.1.2.1.1 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, and

2.1.2.1.2 the maximum volume of water (drainage waters) which would result from a 5-year, 6-hour precipitation event, including the volume which would result from the plant site contributing runoff to the individual treatment facility;

2.1.2.2 The permittee takes all reasonable steps to maintain treatment of the wastewater and to minimize the overflow or excess discharge;

2.1.2.3 The permittee is in compliance with the best management practices in Parts 3.2.1 - 3.2.5 and the notification requirements of Appendix A, Parts 3.4 and 3.5.

2.1.3 Discharges that result from a precipitation event and qualify for a storm exemption (Part 2.1.2) must be monitored as listed in Table 2.

Table 2: Precipitation Event Monitoring Requirements

Effluent Characteristic	Units	Monitoring Location [a]	Monitoring Frequency [a]	Sample Type
Settleable Solids	ml/L	Effluent	Daily	Grab
Turbidity	NTU	Effluent	Once per discharge event [b, c]	Grab
		Upstream	Once per discharge event [c]	Grab
Arsenic	ug/L	Effluent	Once per discharge event [b, c]	Grab
		Upstream	Once per discharge event [c, d]	Grab
Flow	gpm	Effluent	Daily	Instantaneous
Seepage	gpm	-	Daily	Estimate [e]

Notes:

a. See Part 2.3 (Other Monitoring Requirements) for details.
b. Effluent samples for turbidity and arsenic monitoring must be taken concurrently.
c. Effluent and upstream samples shall be taken within a reasonable time frame of each other.
d. The upstream arsenic sample is optional and may be collected and submitted on a voluntary basis.
e. A good faith effort must be made to estimate seepage discharging to waters of the U.S. each day that seepage occurs.

2.1.4 If a discharge occurs during dry weather, the facility will be considered a discharging facility covered by the requirements in Part 2.2.

2.2 Discharging Facilities

2.2.1 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:

2.2.1.1 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.

2.2.1.2 The volume of wastewater which may be discharged shall not exceed the volume of infiltration, drainage and mine drainage waters which are in excess of the make-up water required for operation of the beneficiation process.

2.2.1.3 Discharges that do not qualify for a storm exemption (Part 2.1.2) must meet the limits and monitoring requirements as listed in Table 3.

Table 3: Effluent Limits and Monitoring Requirements

Effluent Characteristic	Instantaneous Maximum	Units	Monitoring Location [a]	Monitoring Frequency [a]	Sample Type
Settleable Solids	0.2	ml/L	Effluent	Daily	Grab
Turbidity	5 NTUs above natural conditions	NTU	Effluent	Three times per week [b, c]	Grab
			Upstream	Three times per week [c]	Grab

Arsenic	10	µg/L	Effluent	Once per season [b, c]	Grab
		µg/L	Upstream	Once per season [c, d]	Grab
Flow	-	gpm	Effluent	Daily	Instantaneous
Seepage	-	gpm	-	Daily	Estimate [e]

Notes:

a. See Part 2.3 (Other Monitoring Requirements) for details.
b. Effluent samples for turbidity and arsenic monitoring must be taken concurrently and 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.
c. Effluent and upstream samples shall be taken within a reasonable time frame of each other. Permittess who receive a site-specific turbidity limit (Part 2.2.2) may not be required to take upstream turbidity samples.
d. The upstream arsenic sample is optional and may be collected and submitted on a voluntary basis.
e. A good faith effort must be made to estimate seepage discharging to waters of the U.S. each day that seepage occurs.

2.2.2 Turbidity and Arsenic Modifications

2.2.2.1 Permittees may request a modified turbidity limit based upon an authorized mixing zone. DEC will authorize a modified turbidity limit and mixing zone provided that:

2.2.2.1.1 The modified turbidity limit does not exceed 1500 NTUs;

2.2.2.1.2 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;

2.2.2.1.3 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;

2.2.2.1.4 The modified turbidity limit does not result in a mixing zone in an area of anadromous fish spawning, resident fish spawning redds, and when eggs or alevins are present;

2.2.2.1.5 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;

2.2.2.1.6 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 mixing zone size, prior to their authorization by DEC; and

2.2.2.1.7 The modified limit and resulting mixing zone are consistent with the Clean Water Act and 18 AAC 70.240 (June 26, 2003).

2.2.2.2 A permittee who discharges to a waterbody reclassified in the Alaska Water Quality Standards (WQS) at 18 AAC 70.230(e) may be granted a modified turbidity limit or arsenic limit based on the most stringent criteria applicable to the reclassified waterbody.

2.2.2.3 If DEC authorizes a mixing zone and turbidity modification to a waterbody reclassified in the WQS, the turbidity modification will be included in a facility's authorization if it meets the conditions of Parts 2.2.2.1.2 - 2.2.2.1.6.

2.2.2.4 Pending a decision on the modified turbidity limit or arsenic limit, the limits in Part 2.2.1.3 apply.

2.2.3 Flow Limits

2.2.3.1 The volume of discharge for a facility with an authorized mixing zone shall not exceed the volume reported by the permittee on the NOI. If the permittee exceeds that volume, DEC will not consider the permittee in violation of the flow limit if the following requirements are met:

2.2.3.1.1 The permittee submits to DEC seepage estimates for the discharge and turbidity sample results and flow measurements for the effluent and upstream receiving water taken during the period of the flow exceedence;

2.2.3.1.2 The submitted sample results 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; and

2.2.3.1.3 The permittee reports all exceedences of the flow limit, together with any monitoring data that the permittee intends to use to avoid being considered in violation of the flow limit, pursuant to the reporting requirements in Appendix A, Part 3.4.

2.3 Other Monitoring Requirements

2.3.1 All samples for monitoring purposes must be representative of the monitored activity, as outlined in Appendix A, Part 3.1. Specifically, effluent samples for settleable solids, turbidity, and arsenic shall be collected from the settling pond outlet or other treatment systems outlet *prior to discharge to the receiving stream.* Upstream samples, as required in Tables 2 and 3, shall be taken at a point that is representative of the receiving stream just above the permittee's mining operation.

2.3.2 Analyses of pollutants must be conducted as required in Attachments 1 - 3 (Sampling Protocol) and Appendix A, Part 1.11.4 (Monitoring Procedures).

3.0 SPECIAL CONDITIONS

3.1 Inspection Program

3.1.1 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.

3.1.2 The inspection must include the following:

3.1.2.1 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;

3.1.2.2 An assessment of the presence of sediment buildup within the settling ponds;

3.1.2.3 An examination of all ponds for the occurrence of short circuiting; and

3.1.2.4 Visually monitoring 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.

3.1.3 The permittee shall maintain records of all information resulting from any inspections in accordance with Appendix A, Part 1.11.

3.2 Best Management Practices (BMP) Plan

3.2.1 The flow of surface waters into the plant site shall be interrupted and these waters diverted around and away from incursion into the plant site.

3.2.2 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.

3.2.3 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 U.S.

3.2.4 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 for processing operations.

3.2.5 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.

3.2.6 The permittee 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.

3.2.7 During each mining season, a permittee may not discharge into the receiving water within 300 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 300 feet of the downstream edge of a mixing zone granted for any other upstream placer mining operation.

3.2.8 Care shall be taken by the permitttee during refueling of equipment 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 DEC by calling 1-800-478-9300.

For facilities with a fuel storage capacity greater than 1,320 gallons in total above ground, or greater than 42,000 gallons in total below ground, EPA requires that a Spill Prevention Control and Countermeasure Plan (SPCC Plan) be prepared and updated as necessary in accordance with provisions of 40 CFR Part 112.

4.0 RECORDING AND REPORTING REQUIREMENTS

4.1 Daily Records

4.1.1 The permittee must maintain daily records of all information resulting from any inspections as required in Part 3.1.

4.2 Annual Report Requirements

4.2.1 An Annual Report must be submitted no later than January 31 for the previous calendar year.

4.2.2 The Annual Report must include the following:

4.2.2.1 Permittee name;

4.2.2.2 APDES authorization number;

4.2.2.3 Receiving water name;

4.2.2.4 Monitoring results for settleable solids, turbidity, and arsenic as required under Parts 2.1.3 and 2.2.1.3;

4.2.2.5 Flow measurements and seepage estimates, the number of discharge events, and the duration of each discharge event for each day of the mining season;

4.2.2.6 The results of any additional monitoring by the permittee, as outlined in Appendix A, Part 3.3; and

4.2.2.7 Noncompliance reports required under Appendix A, Part 3.5.

4.2.3 The permittee shall sign and certify all annual reports and other reports in accordance with the requirements of Appendix A, Part 1.12 (Signature Requirement and Penalties). All signed and legible originals of these documents must be submitted to the DEC Compliance and Enforcement Program at the address in Appendix A, Part 1.1.

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

4.3 Standard Conditions

4.3.1 The permittee must also comply with the following recording and reporting requirements, as

described in Appendix A, Standard Conditions:

4.3.1.1 Retention of Records, Part 1.11.2;

4.3.1.2 Records Contents, Part 1.11.3;

4.3.1.3 Special Reporting Obligations, Part 2.0; and

4.3.1.4 Monitoring, Recording, and Reporting Requirements, Part 3.0.

APPENDIX A STANDARD

CONDITIONS APDES PERMIT

PLACER MINE DISCHARGE

August 2010

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Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an individual APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements. Appendix A, Standard Conditions is an integral and enforceable part of the permit. Failure to comply with a Standard Condition in this Appendix constitutes a violation of the permit and is subject to enforcement.

1.0 Standard Conditions Applicable to All Permits

1.1 Contact Information and Addresses

1.1.1 Permitting Program

Permit related documents and plans required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of WaterWastewater
Discharge Authorization Program 610 University Avenue

Fairbanks, Alaska 99709-3643
Telephone (907) 451-2142
Fax (907) 451-2187
Email: dec.water.wqpermit@alaska.gov
Website: dec.alaska.gov/water/wwdp

1.1.2 Compliance and Enforcement Program

Compliance related documents, including Annual Reports, required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program 555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

1.2 Duty to Comply

A permittee shall comply with all conditions of the permittee's APDES permit. Any permit noncompliance constitutes a violation of 33 U.S.C 1251-1387 (Clean Water Act) and state law and is grounds for enforcement action including termination, revocation and reissuance, or modification of a permit, or denial of a permit renewal application. A permittee shall comply with effluent standards or prohibitions established under 33 U.S.C. 1317(a) for toxic pollutants within the time provided in the regulations that establish those effluent standards or prohibitions even if the permit has not yet been modified to incorporate the requirement.

1.3 Duty to Reapply

If a permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. In accordance with 18 AAC 83.105(b), a permittee with a currently effective permit shall reapply by submitting a new application at least 90 days before the existing permit expires, unless the Department has granted the permittee permission to submit an application on a later date. However, the Department will not grant permission for an application to be submitted after the expiration date of the existing permit.

1.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, a permittee may not assert as a defense that compliance with the conditions of the permit would have made it necessary for the permittee to halt or reduce the permitted activity.

1.5 Duty to Mitigate

A permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

1.6 Proper Operation and Maintenance

1.6.1 A permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances that the permittee installs or uses to achieve compliance with the conditions of the permit. The permittee's duty to operate and maintain properly includes using adequate laboratory controls and appropriate quality assurance procedures. However, a permittee is not required to operate back-up or auxiliary facilities or similar systems that a permittee installs unless operation of those facilities is necessary to achieve compliance with the conditions of the permit.

1.6.2 Operation and maintenance records shall be retained and made available at the site.

1.7 Permit Actions

A permit may be modified, revoked and reissued, or terminated for cause as provided in 18 AAC 83.130. If a permittee files a request to modify, revoke and reissue, or terminate a permit, or gives notice of planned changes or anticipated noncompliance, the filing or notice does not stay any permit condition.

1.8 Property Rights

A permit does not convey any property rights or exclusive privilege.

1.9 Duty to Provide Information

A permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.

1.10 Inspection and Entry

A permittee shall allow the Department, or an authorized representative, including a contractor acting as a representative of the Department, at reasonable times and on presentation of credentials establishing authority and any other documents required by law, to:

1.10.1 Enter the premises where a permittee's regulated facility or activity is located or conducted, or where permit conditions require records to be kept;

1.10.2 Have access to and copy any records that permit conditions require the permittee to keep;

1.10.3 Inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under a permit; and

1.10.4 Sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance or as otherwise authorized by 33 U.S.C. 1251-1387 (Clean Water Act).

1.11 Monitoring and Records

A permittee must comply with the following monitoring and recordkeeping conditions:

1.11.1 Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

1.11.2 The permittee shall retain records in Alaska of all monitoring information for at least five years, or longer at the Department's request at any time, from the date of the sample, measurement, report, or application. Monitoring records required to be kept include:

1.11.2.1 All calibration and maintenance records,

1.11.2.2 All original strip chart recordings or other forms of data approved by the Department for continuous monitoring instrumentation,

1.11.2.3 All reports required by a permit,

1.11.2.4 Records of all data used to complete the application for a permit,

1.11.2.5 Field logbooks or visual monitoring logbooks,

1.11.2.6 Quality assurance chain of custody forms,

1.11.2.7 Copies of discharge monitoring reports, and

1.11.2.8 A copy of this APDES permit.

1.11.3 Records of monitoring information must include:

1.11.3.1 The date, exact place, and time of any sampling or measurement;

1.11.3.2 The name(s) of any individual(s) who performed the sampling or measurement(s);

1.11.3.3 The date(s) and time any analysis was performed;

1.11.3.4 The name(s) of any individual(s) who performed any analysis;

1.11.3.5 Any analytical technique or method used; and

1.11.3.6 The results of the analysis.

1.11.4 Monitoring Procedures

Analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010, for pollutants with approved test procedures, and using test procedures specified in the permit for pollutants without approved methods.

1.12 Signature Requirement and Penalties

Any application, report, or information submitted to the Department in compliance with a permit requirement must be signed and certified in accordance with 18 AAC 83.385. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under a permit, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be subject to penalties under 33 U.S.C. 1319(c)(4), AS 12.55.035(c)(1)(B), (c)(2) and (c)(3), and AS 46.03.790(g).

1.13 Proprietary or Confidential Information

1.13.1 A permit applicant or permittee may assert a claim of confidentiality for proprietary or confidential business information by stamping the words "confidential business information" on each page of a submission containing proprietary or confidential business information. The Department will treat the stamped submissions as confidential if the information satisfies the test in 40 CFR §2.208, adopted by reference at 18 AAC 83.010, and is not otherwise required to be made public by state law.

1.13.2 A claim of confidentiality under Appendix A, Part 1.13.1 may not be asserted for the name and address of any permit applicant or permittee, a permit application, a permit, effluent data, sewage sludge data, and information required by APDES or NPDES application forms provided by the Department, whether submitted on the forms themselves or in any attachments used to supply information required by the forms.

1.13.3 A permittee's claim of confidentiality authorized under Appendix A, Part 1.13.1 is not waived if the Department provides the proprietary or confidential business information to the EPA or to other agencies participating in the permitting process. The Department will supply any information obtained or used in the administration of the state APDES program to the EPA upon request under 40 CFR §123.41, as revised as of July 1, 2005. When providing information submitted to the Department with a claim of confidentiality to the EPA, the Department will notify the EPA of the confidentiality claim. If the Department provides the EPA information that is not claimed to be confidential, the EPA may make the information available to the public without further notice.

1.14 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any action or relieve a permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under state laws addressing oil and hazardous substances.

1.15 Cultural and Paleontological Resources

If cultural or paleontological resources are discovered because of this disposal activity, work that would disturb such resources is to be stopped, and the Office of History and Archaeology, a Division of Parks and Outdoor Recreation of the Alaska Department of Natural Resources (http://www.dnr.state.ak.us/parks/oha/), is to be notified immediately at (907) 269-8721.

1.16 Fee

A permittee must pay the appropriate permit fee described in 18 AAC 72.

1.17 Other Legal Obligations

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted and all plan approvals implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

2.0 Special Reporting Obligations

2.1 Planned Changes

2.1.1 The permittee shall give notice to the Department as soon as possible of any planned physical alteration or addition to the permitted facility if:

2.1.1.1 The alteration or addition may make the facility a "new source" under one or

more of the criteria in 18 AAC 83.990(44); or

2.1.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged if those pollutants are not subject to effluent limitations in the permit or to notification requirements under 18 AAC 83.610.

2.1.2 If the proposed changes are subject to plan review, then the plans must be submitted at least 30 days before implementation of changes (see 18 AAC 15.020 and 18 AAC 72 for plan review requirements). Written approval is not required for an emergency repair or routine maintenance.

2.1.3 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.2 Anticipated Noncompliance

2.2.1 A permittee shall give seven days' notice to the Department before commencing any planned change in the permitted facility or activity that may result in noncompliance with permit requirements.

2.2.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.3 Transfers

2.3.1 A permittee may not transfer a permit for a facility or activity to any person except after notice to the Department in accordance with 18 AAC 83.150. The Department may modify or revoke and reissue the permit to change the name of the permittee and incorporate such other requirements under 33 U.S.C. 1251-1387 (Clean Water Act) or state law.

2.3.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.4 Compliance Schedules

2.4.1 A permittee must submit progress or compliance reports on interim and final requirements in any compliance schedule of a permit no later than 14 days following the scheduled date of each requirement.

2.4.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.5 Corrective Information

2.5.1 If a permittee becomes aware that it failed to submit a relevant fact in a permit application or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit the relevant fact or the correct information.

2.5.2 Information must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.6 Bypass of Treatment Facilities

2.6.1 Prohibition of Bypass

Bypass is prohibited. The Department may take enforcement action against a permittee for any bypass, unless:

2.6.1.1 The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2.6.1.2 There were no feasible alternatives to the bypass, including use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. However, this condition is not satisfied if the permittee, in the exercise of reasonable engineering judgment, should have installed adequate back-up equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

2.6.1.3 The permittee provides notice to the Department of a bypass event in the manner, as appropriate, under Appendix A, Part 2.6.2.

2.6.2 Notice of bypass

2.6.2.1 For an anticipated bypass, the permittee submits notice at least 10 days before the date of the bypass. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the conditions of Appendix A, Parts 2.6.1.1 and 2.6.1.2.

2.6.2.2 For an unanticipated bypass, the permittee submits 24-hour notice, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting.

2.6.2.3 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.6.3 Notwithstanding Appendix A, Part 2.6.1, a permittee may allow a bypass that:

2.6.3.1 Does not cause an effluent limitation to be exceeded, and

2.6.3.2 Is for essential maintenance to assure efficient operation.

2.7 Upset Conditions

2.7.1 In any enforcement action for noncompliance with technology-based permit effluent limitations, a permittee may claim upset as an affirmative defense. A permittee seeking to establish the occurrence of an upset has the burden of proof to show that the requirements of

Appendix A, Part 2.7.2 are met.

2.7.2 To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

2.7.2.1 An upset occurred and the permittee can identify the cause or causes of the upset;

2.7.2.2 The permitted facility was at the time being properly operated;

2.7.2.3 The permittee submitted 24-hour notice of the upset, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting; and

2.7.2.4 The permittee complied with any mitigation measures required under 18 AAC 83.405(e) and Appendix A, Part 1.5, Duty to Mitigate.

2.7.3 Any determination made in administrative review of a claim that noncompliance was caused by upset, before an action for noncompliance is commenced, is not final administrative action subject to judicial review.

2.8 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges

2.8.1 In addition to the reporting requirements under 18 AAC 83.410, an existing manufacturing, commercial, mining, and silvicultural discharger shall notify the Department as soon as that discharger knows or has reason to believe that any activity has occurred or will occur that would result in:

2.8.1.1 The discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.1.1 One hundred micrograms per liter (100 µg/L);

2.8.1.1.2 Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile, 500 micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol, and one milligram per liter (1 mg/L) for antimony;

2.8.1.1.3 Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.1.4 The level established by the Department in accordance with 18 AAC 83.445.

2.8.1.2 Any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the

highest of the following notification levels:

2.8.1.2.1 Five hundred micrograms per liter (500 µg/L);

2.8.1.2.2 One milligram per liter (1 mg/L) for antimony;

2.8.1.2.3 Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.2.4 The level established by the Department in accordance with 18 AAC 83.445.

3.0 Monitoring, Recording, and Reporting Requirements

3.1 Representative Sampling

A permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into the receiving waters. Samples and measurements must be representative of the volume and nature of the monitored activity or discharge.

3.2 Reporting of Monitoring Results

The permittee shall summarize monitoring results on the annual report form or approved equivalent. The permittee shall submit its annual report at the interval specified in the permit. The permittee shall sign and certify all annual reports and other reports in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirement and Penalties. The permittee shall submit the legible originals of these documents to the DEC Compliance and Enforcement Program at the address in Appendix A, Part 1.1.2.

3.3 Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than the permit requires using test procedures approved in 40 CFR Part 136, adopted by reference at 18 AAC 83.010, or as specified in this permit, the results of that additional monitoring must be included in the calculation and reporting of the data submitted in the DMR or annual report required by Appendix A, Part 3.2. All limitations that require averaging of measurements must be calculated using an arithmetic means unless the Department specifies another method in the permit. Upon request by the Department, the permittee must submit the results of any other sampling and monitoring regardless of the test method used.

3.4 Twenty-four Hour Reporting

A permittee shall report any noncompliance event that may endanger health or the environment as follows:

3.4.1 A report must be made:

3.4.1.1 Orally within 24 hours after the permittee becomes aware of the circumstances, and

3.4.1.2 In writing within five days after the permittee becomes aware of the circumstances.

3.4.2 A report must include the following information:

3.4.2.1 A description of the noncompliance and its causes, including the estimated volume or weight and specific details of the noncompliance;

3.4.2.2 The period of noncompliance, including exact dates and times;

3.4.2.3 If the noncompliance has not been corrected, a statement regarding the anticipated time the noncompliance is expected to continue; and

3.4.2.4 Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3.4.3 An event that must be reported within 24 hours includes:

3.4.3.1 An unanticipated bypass that exceeds any effluent limitation in the permit (see Appendix A, Part 2.6, Bypass of Treatment Facilities).

3.4.3.2 An upset that exceeds any effluent limitation in the permit (see Appendix A, Part 2.7, Upset Conditions).

3.4.3.3 A violation of a maximum daily discharge limitation for any of the pollutants listed in the permit as requiring 24-hour reporting.

3.4.4 The Department may waive the written report on a case-by-case basis for reports under Appendix A, Part 3.4 if the oral report has been received within 24 hours of the permittee becoming aware of the noncompliance event.

3.4.5 The permittee may satisfy the written reporting submission requirements of Appendix A, Part 3.4 by submitting the written report via e-mail, if the following conditions are met:

3.4.5.1 The Noncompliance Notification Form or equivalent form is used to report the noncompliance;

3.4.5.2 The written report includes all the information required under Appendix A, Part 3.4.2;

3.4.5.3 The written report is properly certified and signed in accordance with Appendix A, Parts 1.12;

3.4.5.4 The written report is scanned as a PDF (portable document format) document and transmitted to the Department as an attachment to the e-mail; and

3.4.5.5 The permittee retains in the facility file the original signed and certified written report and a printed copy of the conveying email.

3.4.6 The e-mail and PDF written report will satisfy the written report submission requirements of this permit provided the e-mail is received by the Department within five days after the time the permittee becomes aware of the noncompliance event and the e-mail and written report satisfy the criteria of Part 3.4.5. The e-mail address to report noncompliance is:

dec-wqreporting@alaska.gov

3.5 Other Noncompliance Reporting

A permittee shall report all instances of noncompliance not required to be reported under Appendix A, Parts 2.4 (Compliance Schedules), 3.3 (Additional Monitoring by Permittee), and 3.4 (Twenty-four Hour Reporting) at the time the permittee submits monitoring reports under Appendix A, Part 3.2. (Reporting of Monitoring Results). A report of noncompliance under this part must contain the information listed in Appendix A, Part 3.4.2 and be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

4.0 Penalties for Violations of Permit Conditions

Alaska laws allow the State to pursue both civil and criminal actions concurrently. The following is a summary of Alaska law. Permittees should read the applicable statutes for further substantive and procedural details.

4.1 Civil Action

Under AS 46.03.760(e), a person who violates or causes or permits to be violated a regulation, a lawful order

of the Department, or a permit, approval, or acceptance, or term or condition of a permit, approval or acceptance issued under the program authorized by AS 46.03.020 (12) is liable, in a civil action, to the State for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $10,000 for each day after that on which the violation continues, and that shall reflect, when applicable:

4.1.1 Reasonable compensation in the nature of liquated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

4.1.2 Reasonable costs incurred by the State in detection, investigation, and attempted correction of the violation;

4.1.3 The economic savings realized by the person in not complying with the requirements for which a violation is charged; and

4.1.4 The need for an enhanced civil penalty to deter future noncompliance.

4.2 Injunctive Relief

4.2.1 Under AS 46.03.820, the Department can order an activity presenting an imminent or present danger to public health or that would be likely to result in irreversible damage to the environment be discontinued. Upon receipt of such an order, the activity must be immediately discontinued.

4.2.2 Under AS 46.03.765, the Department can bring an action in Alaska Superior Court seeking to enjoin ongoing or threatened violations for Department-issued permits and Department statutes and regulations.

4.3 Criminal Action

Under AS 46.03.790(h), a person is guilty of a Class A misdemeanor if the person negligently:

4.3.1 Violates a regulation adopted by the Department under AS 46.03.020(12);

4.3.2 Violates a permit issued under the program authorized by AS 46.03.020(12);

4.3.3 Fails to provide information or provides false information required by a regulation adopted under AS 46.03.020(12);

4.3.4 Makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with a permit issued under or a regulation adopted under AS 46.03.020(12); or

4.3.5 Renders inaccurate a monitoring device or method required to be maintained by a permit issued or under a regulation adopted under AS 46.03.020(12).

4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) $200,000; (2) three times the pecuniary gain realized by the defendant as a result of the offense; or (3) three times the pecuniary damage or loss caused by the defendant to another, or the property of another, as a result of the offense (AS 12.55.035(c)(B), (c)(2), and (c)(3)).

APPENDIX B ACRONYMS

7Q10	7-day, 10-year low flow
AAC	Alaska Administrative Code ADF&G Alaska Department of Fish and Game
APDES	Alaska Pollutant Discharge Elimination System APMA Annual Placer Mining Application
BAT/BCT	Best Available Technology/Best Conventional Technology BMP Best Management Practice
CFR	Code of Federal Regulations
CWA	Clean Water Act
DEC	Alaska Department of Environmental Conservation DNR Alaska Department of Natural Resources
EFH	Essential Fish Habitat
ELG	Effluent Limitation Guidline
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
GP	General Permit GPM or gpm Gallons per minute
MCL	Maximum Contaminant Level
ml/L	Milliliters per Liter
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System NSPS

	New Source Performance Standards
NTU	Nephelometric Turbidity Unit
SPCC	Spill Prevention Control and Countermeasure
µg/L	Micrograms per Liter
U.S.C.	United States Code
USFWS	United States Fish & Wildlife Service USGS
	United States Geological Survey
WQS	Water Quality Standards

APPENDIX C DEFINITIONS

5-Year, 6-Hour Rainfall Event	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
7-day, 10-year low flow (7Q10)	Seven-day, consecutive low flow with a ten year return frequency; the lowest stream flow for seven consecutive days that would be expected to occur once in ten years
Alaska Pollutant Discharge Elimination System (APDES)[a]	The state's program, approved by EPA under 33 U.S.C. 1342(b), for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under 33 U.S.C. 1317, 1328, 1342, and 1345

Annual	Once per calendar year
Application	A written "notice of intent" pursuant to 18 AAC 205

Best Management Practices (BMPs)[a]
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.

Bypass[a]	The intentional diversion of waste streams from any portion of a treatment facility

Clean Water Act (CWA)[a]
The federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972

Commissioner[a]	The commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee
Criterion[b]	A set concentration or limit of a water quality parameter that, when not exceeded, will protect an organism, a population of organisms, a community of organisms, or a prescribed water use with a reasonable degree of safety.
Department[a]	The Alaska Department of Environmental Conservation
Director[a]	The commissioner or the commissioner's designee assigned to administer the APDES program or a portion of it, unless the context identifies an EPA director
Discharge[a]	When used without qualification, means the discharge of a pollutant
Drainage Water	Incidental surface waters from diverse sources such as rainfall, snow melt or permafrost melt
Effluent[b]	The segment of a wastewater stream that follows the final step in a treatment process and precedes discharge of the wastewater stream to the receiving environment
Estimated	A way to estimate the discharge volume. Approvable estimations include, but are not limited to, the number of persons per day at the facility, seepage volume, noncompliance event volume and weight, etc.
Existing Facilities	Those mechanical operations facilities having coverage under the 2005 Mechanical Placer Miners General Permit
Expanding Facility	Any facility increasing in size such as to affect the discharge but operating within the permit area covered by its general permit

a) See 18 AAC 83
b) See 18 AAC 70.990

Grab Sample	A single instantaneous sample collected at a particular place and time that represents the composition of wastewater only at that time and place
Hydraulicking	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).

Infiltration Water	Water that permeates through the earth into the plant site
Instantaneous Maximum	The maximum value measured at any time
Make-up Water	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
Method Detection Limit (MDL)[c]	The minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte
Mining Season	The time between the start of mining in a calendar year and when mining has ceased for that same calendar year
Mixing Zone[b]	The volume of water adjacent to a discharge in which wastes discharged mix with the receiving water
Moving Facility	Any facility that moves its outfall outside the area covered by its general permit
Nephelometric Turbidity Unit (NTU)	An expression of the optical property that causes light to be scattered and absorbed rather than transmitted in a straight line through the water
New Facility	A facility that has not operated in the area specified in the NOI prior to the submission of the NOI
New Water	Water from any discrete source such as a river, creek, lake or well which is deliberately allowed or brought into the plant site
Permittee	A company, organization, association, entity, or person who is issued a wastewater permit and is responsible for ensuring compliance, monitoring, and reporting as required by the permit
Plant Site	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
Pollutant[a]	Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under 42 U.S.C. 2011), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, or agricultural waste discharged into water
Receiving Waterbody	Waters such as lakes, rivers, streams, creeks, wetlands, or any other surface waters that receive wastewater discharges
Recommencing Facilities	Those facilities that may have let permit coverage lapse but still meet the coverage requirements of the Mechanical Placer Miners General Permit
Resident Fish	Arctic grayling, northern pike, rainbow trout, lake trout, brook trout, cutthroat trout, whitefish, sheefish, Arctic Char (Dolly Varden), burbot, and landlocked coho, king,

a) See 18 AAC 83
b) See 18 AAC 70.990

and sockeye salmon

Settleable Solids[b] Solid material of organic or mineral origin that is transported by and deposited from water, as measured by the volumetric Imhoff cone method and at the method detection limits specified in method 2540(F), *Standard Methods for the Examination of Water and Wastewater*, 18th edition (1992), adopted by reference in 18 AAC 70.020(c)(1)

Severe Property Damage[a] 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.

Short Circuiting Ineffective settling due to inadequate or insufficient retention characteristics, excessive sediment deposition, embankment infiltration/percolation, lack of maintenance, etc.

Turbidity Modification 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:

$$Q1C1 + Q2C2 = Q3C3,$$

where C1 = effluent turbidity;
C2 = natural background turbidity;
C3 = receiving water downstream turbidity after mixing where the allowable increase is 5 NTU above background;
Q1 = effluent flow;
Q2 = receiving water flow upstream from the discharge (i.e., 7Q10); and Q3 = total receiving water flow downstream from discharge after complete mixing (Q1 + Q2).

Upset[a] An exceptional incident in which there is unintentional and temporary noncompliance with technology-based 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.

Wastewater 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

Wastewater Treatment Any process to which wastewater is subjected in order to remove or alter its objectionable constituents and make it suitable for subsequent use or acceptable for discharge to the environment

Waters of the United States or Waters of the U.S. Has the meaning given in 18 AAC 83.990(77)

Week The time period of Sunday through Saturday

a) See 18 AAC 83
b) See 18 AAC 70.990

APPENDIX D MIXING ZONE AUTHORIZATIONS

Table D-1 presents facilities with mixing zones to be authorized under the General Permit.

Table D-1: Mixing Zone Authorizations

APMA [a]	APDES [b]	Permittee	Receiving Water	USGS Quad Map	Effluent Limits		Mixing Zone Length (ft.) [e]	Authorized Discharge Period [f]	Status [g]
					Turbidity (NTU) [c]	Flow (GPM) [d]			
F9434	AKG370609	Alvin C. Hanson	Boulder Crk.	Solomon D-6	74	50	800	Year Round	N
F7104	AKG370588	Carl J. Congdon	Quail Crk	Livengood B-6	665	10	670	6/16-4/30	E
A5696	AKG370269	Clark-Wiltz Co.	Ganes Crk.	Iditarod D-2	470	100	3713	6/16-4/30	E
F9004	AKG370223	Cy Bras	Canyon Crk.	Eagle A-1	142	200	1843	6/16-4/30	E
A5570	AKG370114	Dan & Cindy Plano	Innoko R.	Ophir A-1, A-2	144	800	3735	Year Round	E
F9607	AKG370540	David Jacobs	Eva Crk.	Fairbanks A-4	29	150	359	Year Round	E
F7332	AKG370256	Dawn & John Lines	NF Harrison Crk.	Circle B-3	32	50	174	6/16-4/30	E
F5909	AKG370391	Donald Stein, DEPEM	Gilmore Crk.	Fairbanks D-1	139	25	433	Year Round	E
A2776	AKG370649	Estill DeWitt	Alfred Crk.	Anchorage D-2	1500	10	1195	Year Round	E
F9149	AKG370394	George Seuffert	Faith Crk	Circle B-5	856	30	3150	6/16-4/30	N
A5590	AKG370131	Girdwood Mining Co.	Crow Crk.	Anchorage A-6	47	500	1083	Year Round	E
F6953	AKG370220	Great Divide Mining Co.	Lil. Boulder Crk.	Tanana A-3	29	250	615	6/16-4/30	E
F6006	AKG370214	Int.Alaskana Assoc.	Harrison Crk.	Circle B-3	39	300	845	6/16-4/30	E
A2729	AKG370595	Ivan Merrill	Falls Crk.	Seward B-7	308	150	2000	5/15-7/15	N
A3027	AKG370728	Ivan Merrill & John Deacon	Frenso Crk.	Seward C-7	211	150	339	Year Round	E
F7106	AKG370713	L & L Mining	Eagle Crk.	Circle B-3	339	10	474	Year Round	E
F6859	AKG370559	Larry Weisz	Hammond R.	Wiseman B-1	921	150	2165	Year Round	E
F7223	AKG370154	Mark Gumaer	Dick Crk.	Bendeleben D-6	104	50	838	Year Round	E
F5997	AKG370184	Miller Creek Mining Co.	Ketchem Crk.	Circle B-2	22	125	152	Year Round	E
F5845	AKG370070	N.B. Tweet & Sons	Kougarok R.	Bendeleben C-6	320	300	5280	6/16-8/31	E

F9702	AKG370589	Ralph Hamm, Slisco Inc.	Nugget Crk.	Chandaler B-6	26	400	432	6/16-4/30	E

Table D-1: Mixing Zone Authorizations

APMA [a]	APDES [b]	Permittee	Receiving Water	USGS Quad Map	Effluent Limits		Mixing Zone Length (ft.) [e]	Authorized Discharge Period [f]	Status [g]
					Turbidity (NTU) [c]	Flow (GPM) [d]			
F7194	AKG370718	Rampart Exploration	American Crk.	Tanana A-3	18	200	337	Year Round	E
A5657	AKG370597	Roland Boehne	Red Crk	Talk. Mtns. B-1	23	170	624	Year Round	E
A5657	AKG370598	Roland Boehne	Joe Crk	Talk. Mtns. B-1	64	170	1587	Year Round	E
F9049	AKG370007	Ron Wrede	Switch Crk.	Circle B-2	66	20	91	Year Round	N
F2015	AKG370556	Sheldon Maier	Montana Crk	Eagle B-3	28	150	232	Year Round	E
F9016	AKG370226	Taiga Mining Co., Inc.	Aloha Crk.	Hughes A-6	75	200	614	5/1-6/15	E
F9017	AKG370227	Taiga Mining Co., Inc.	Clear Crk.	Hughes A-6	78	200	1038	5/1-6/15	E
A6191	AKG370039	Tod Bauer	Eldorado Crk.	Talk. Mtns. C-6, D-6	139	500	2860	Year Round	E
F4399	AKG370412	William J. Aldridge	Poker Crk.	Eagle A-1	20	150	180	Year Round	E

Notes:

a. Annual Placer Mining Application number

b. Alaska Pollution Discharge Elimination System authorization number

c. The Turbidity Limit is the modified maximum allowed turbidity level, measured in Nephelometric Turbidity Units (NTU), at the point of discharge into the receiving waterbody and is calculated using the 7-day, 10-year low flow.

d. The Flow Limit is the maximum allowed discharge that could result from the operation as indicated by the applicant.

e. The Mixing Zone Length is the calculated length downstream, in feet, of the modified mixing zone, measured from the point of discharge into the receiving waterbody. The mixing zone length is calculated based on 95% complete mixing of the modified turbidity limit during a 2-year, 1-day high flow event.

f. Timing restrictions may be placed on the turbidity modification as a result of fish spawning habitat in the receiving waterbody.

g. E: Extended facilities that were issued mixing zones under the 2005 general permit and submitted a Notice of Intent prior to the expiration date.
N: New mixing zone authorizations under the current permit

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APPENDIX E NOTICE OF INTENT INFORMATION

Mechanical Placer Miners General Permit: AKG370000

PERMITTEE NAME:

PREVIOUS NPDES PERMIT NUMBER (if any)

AKG370 _____

ADDRESS SUMMER WINTER **WATER THAT THE FACILITY DIRECTLY DISCHARGES TO (Receiving Water) *:**

PHONE

OPERATOR NAME:

☐ Check if same as Permittee

ADDRESS SUMMER WINTER **PLEASE PROVIDE A DRAWING OF YOUR OPERATION ON THE BACK OF OR ATTACHED TO THE NOI SHEET THAT IS SUBMITTED.**

PHONE

FACILITY NAME: MINING DISTRICT: LATITUDE:

NEAREST TOWN: New Source? □ Y □ N

(e.g. virgin ground) LONGITUDE:

QUAD MAP, TOWNSHIP, RANGE, SECTION: MERIDIANS: Umiat Kateel

__ Fairbanks Seward

__ Copper River

Type of Operation: MECHANICAL __No discharge HYDRAULICKING __No discharge only

__Discharge

Maximum Effluent Flow anticipated from your operation: _____GPM

Amount of Material Processed:

Do you wish to receive a mixing zone and turbidity modification? ☐ Y ☐ N For additional information contact DEC at 907-451-2142

* The 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, Tier 3 waters, or waters designated as wild under the Wild & Scenic Rivers Act.

SIGNATURE:

PRINTED NAME: **DATE:**

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.

Permittee Name:	Previous NPDES PERMIT NUMBER (if any) AKG370 _____
Receiving Water:	

Drawing:

Accessible by: ☐ 2WD ☐ 4WD ☐ ATV ☐ Boat ☐ Airplane ☐ Helicopter

Directions to facility from nearest highway (if applicable):

Attachment 1 - Settleable Solids Sampling Protocol

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 / 39 degrees Fahrenheit (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.

Reference

1. Standard Methods for the Examination of Water and Wastewater , 18th Edition, 1992

Attachment 2 - Turbidity Sampling Protocol

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 / 39 degrees Fahrenheit (iced)), if analysis is not performed immediately.

4. Cooled samples must be analyzed within 48 hours of sample collection.

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 / 39 degrees Fahrenheit (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.