



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Central Yukon Field Office
1150 University Avenue
Fairbanks, AK 99709



ENVIRONMENTAL ASSESSMENT DOI-BLM-AK-03000-2011-0034-EA

FF092995 (362113)

Existing Mineral Material Pit at
Dalton Highway Mile Post 76

Proposed action located in:
Township 15N, Range 12W, Sec. 31
Fairbanks Meridian

Mineral Material Free Use Permit Site
State of Alaska
Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, AK 99701

A. INTRODUCTION

1. Background

Alaska Department of Transportation and Public Facilities (ADOT&PF) maintains the Dalton Highway with repair and upgrade projects for the road and various facilities along the highway. This requires the use of mineral material sites located along the highway for the materials needed to complete these projects.

2. Purpose and Need for the Proposed Action

a. ADOT&PF's Purpose and Need:

ADOT&PF has requested to continue the use of the existing gravel pit at about Dalton Highway mile post 76. The material mined from the mineral material pit will be used to conduct road upgrade and maintenance projects to the Dalton Highway for the next 10 or more years. These projects are needed to allow safer travel along the highway for the haulage of material to and from the northern portions of Alaska.

b. BLM's Purpose and Need:

The BLM administers mineral material resources along the Dalton Highway corridor to provide material for infrastructure projects by responding to applicants for the use of the material. ADOT&PF filed an application continue using the existing gravel pit in 2010, and the BLM needs to respond to the application under the authority of 43 CFR 3601 and 30 USC 601 (Materials Act of 1947).

c. Decision to be Made:

The BLM will decide whether or not to issue ADOT&PF a Free Use Permit to expand the existing gravel pit at about Dalton Highway mile post 76. The BLM will also determine the mitigation necessary to prevent undue and unnecessary degradation of the resources.

3. Potential Issues

Specialists in the Central Yukon Field Office identified potential issues that involve air quality, Areas of Critical Environmental Concern, invasive non-native plants, hazardous and solid wastes, water quality, wetlands, access, visual resources, and wildlife. Of these, the most substantial concerns were:

1. Invasive plant seeds could be transported into previously uninfested areas
2. Sediment from the existing pit could spread over the vegetative mat and increase water turbidity

4. Conformance with Land Use Plan and Land Status

The proposed action falls within the Utility Corridor Resource Management Plan prepared by BLM. Mineral material extraction is dealt with specifically on Pg. 2-108 of the Utility Corridor RMP, "Mineral material (gravel) sales would be allowed throughout the planning area with certain safeguards for specific areas (e.g., within the Jim River and Prospect Creek floodplains and the Ivishak River ACEC)."



Map 1: Generalized location map and aerial photo

5. Relationship to Statutes, Regulations, or Other Plans

The management of these lands, subject to valid existing rights, is in accordance with the 1947 Mineral Materials Act, applicable provisions of the Alaska National Interest Lands Conservation Act (ANILCA), the Federal Land Policy and Management Act of 1976 (FLPMA), and the Utility Corridor Resource Management Plan/Environmental Impact Statement which covers the area within which the proposed action would take place.

The following list summarizes the principal laws and regulations that pertain to this analysis. This is not a comprehensive listing of all laws and regulations that may pertain to BLM's management responsibility.

- Materials Act of 1947 (61 Stat. 681).
- 43 Code of Federal Regulations (CFR) 3620.01
- Federal Land Policy and Management Act of 1976.
- Alaska National Interest Lands Conservation Act of 1980, as amended.
- Executive Order 11988 of 1977, as amended - Floodplains
- Executive Order 11990 of 1977 - Protection of Wetlands.
- Endangered Species Act of 1973, as amended.
- Antiquities Act of 1906.
- National Historic Preservation Act of 1966, as amended.
- Archaeological Resources Protection Act (ARPA) of 1979.
- Clean Air Act, as amended.
- Clean Water Act of 1977.
- Resource Conservation and Recovery Act (RCRA) of 1976 (Solid Waste Disposal Act), as amended.
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1970, as amended.
- 40 CFR Subparts 110 and 112.
- Migratory Bird Treaty Act of 1918, as amended
- Executive Order 13186 for migratory birds
- Bald Eagle Protection Act of 1940

B. PROPOSED ACTION AND ALTERNATIVE

1. Proposed Action

The Alaska Department of Transportation and Public Facilities (ADOT&PF) has submitted a request to reauthorize the existing mineral material site along the Dalton Highway at about mile post 76, to conduct road maintenance projects along the Dalton Highway for the next 10 years. The ADOT&PF basic mining plan text follows. Figure 1 shows the MTP currently approved boundary.

Access to the proposed mine site would be from the Dalton Highway, along the existing access road to the mineral material pit.

Operations could be conducted 24 hours a day during the mining at the material site. The noise and dust will probably not be noticeable along the Dalton Highway. Since the material is being removed from an alluvial fan, it is pre-broken and no blasting is needed.

The mineral material site will be authorized for use by ADOT&PF to mine pit run material for incidental use on minor projects up to 5,000 cubic yards per year without any further NEPA review. When ADOT&PF prepares to go out for bid to conduct major mining operations, they will be required to submit for approval and possible NEPA analysis the mining plan submitted by their selected contractor. Mining will not start until the contractors mining plan is reviewed and approved by the BLM. The following is from ADOT&PF and is the material that they require from their contractors, prior to hiring them to mine the material sites:

ADOT&PF General Information

These general development guidelines apply to ADOT&PF material sites, and are incorporated into its material sale contracts, agreements, and free use permits with State, Federal and private land owner agencies.

These guidelines may be modified when sufficient information is available for development of site-specific mining and reclamation guidelines. These guidelines are subject to any site specific and/or project specific conditions and stipulations required by specific sales contracts, use agreements, and project permits.

ADOT&PF geotechnical reports and material site information are located at the Department of Transportation and Public Facilities office at 2301 Peger Road, Fairbanks, Alaska 99709.

Cell Development

Develop material sites in cells. Cell development is intended to facilitate systematic extraction of materials; put materials to highest and best use; and reclaim areas concurrent with development, thereby avoiding large un-reclaimed areas. Cells will generally be 5 acres and developed sequentially. However, as noted below, the presence of frozen ground within a site requiring natural thawing of material may result in multiple cells under development at a given time.

Buffers

Buffers are generally provided within material site boundaries to provide a barrier between mining activity and adjacent land uses. Buffer widths vary. Other than disturbance required to create access to the mining area, manage activities to eliminate disturbance within buffers. Mining and overburden storage areas, work pads, stockpile locations or other developments will not be located within buffers.

Access Roads, Work Pads and Facilities

Locate access roads to provide sight distances on approached roadways that are equal or greater than minimum stopping sight distances calculated from signed traffic speeds and local road grades.

Access to the material site and a work pad will remain at the end of individual projects for future use for crushing, screening and stockpiling material. When possible, this work pad will be at least 5 acres. Once the entire material site is depleted, the work pad and access road will be reclaimed and the pit closed out. Remove all facilities and equipment after use. Garbage, trash or other items (e.g. guardrail, concrete, etc.) will not be disposed of within the site.

Mining Method

Mining and processing method selection is at the discretion of the contractor or user. Contractors or users are responsible for visiting and inspecting the site, and reviewing available site information prior to equipment or mining method selection, and development of a Project Mining and Reclamation Plan specific to each ADOT&PF project.

Sites with unconsolidated deposits

Generally, these sites contain unconsolidated deposits of silt, sand and gravel. Standard excavation techniques are generally adequate for development and mining. Depending on contractor or user preference and project timing, blasting, excavation equipment, or natural thawing may be employed to loosen frozen material. If a contractor or user elects to use natural thawing, multiple cells may be stripped and excavated concurrently.

Mining Plan

Mining will take place following the same basic principals for each cell:

- 1. Survey and mark material site and buffer boundaries in the area to be mined prior to breaking ground.*
- 2. Windrow or stockpile surface vegetation and organic soils for use in reclamation adjacent to the buffers, as shown in the attached maps.*
- 3. Windrow or stockpile overburden adjacent to the vegetation and organic soils, or preferably use directly for reclamation of previously mined areas.*
- 4. Minimize stockpiling overburden where it will need moving during future stripping.*
- 5. Conserve material for future mining by not placing overburden stockpiles on top of material that can be mined in the future.*
- 6. Conduct mining activities to put materials to their highest and best use.*
- 7. The side slopes of the active pit should not be steeper than 1:1 so stockpiled berms do not fall or slough into the active pit.*
- 8. All mining and stockpiling activities shall be in accordance with applicable Construction General Permits (CGP) and Storm Water Pollution Prevention Plans (SWPPP).*

Reclamation Plan

The reclamation plan has several general objectives:

- 1. Not to disturb previously reclaimed areas.*
- 2. To merge with previous reclamation and surrounding topography.*
- 3. To prevent erosion and sediment transport to surrounding, undisturbed areas.*

4. *To allow reestablishment of native vegetation, and development of wildlife habitat.*
5. *To leave the site in a safe condition that does not endanger people or wildlife.*
6. *Not to preclude or unduly hinder future development of un-mined areas.*
7. *All reclamation activities will be in accordance with applicable CGP and SWPPP.*

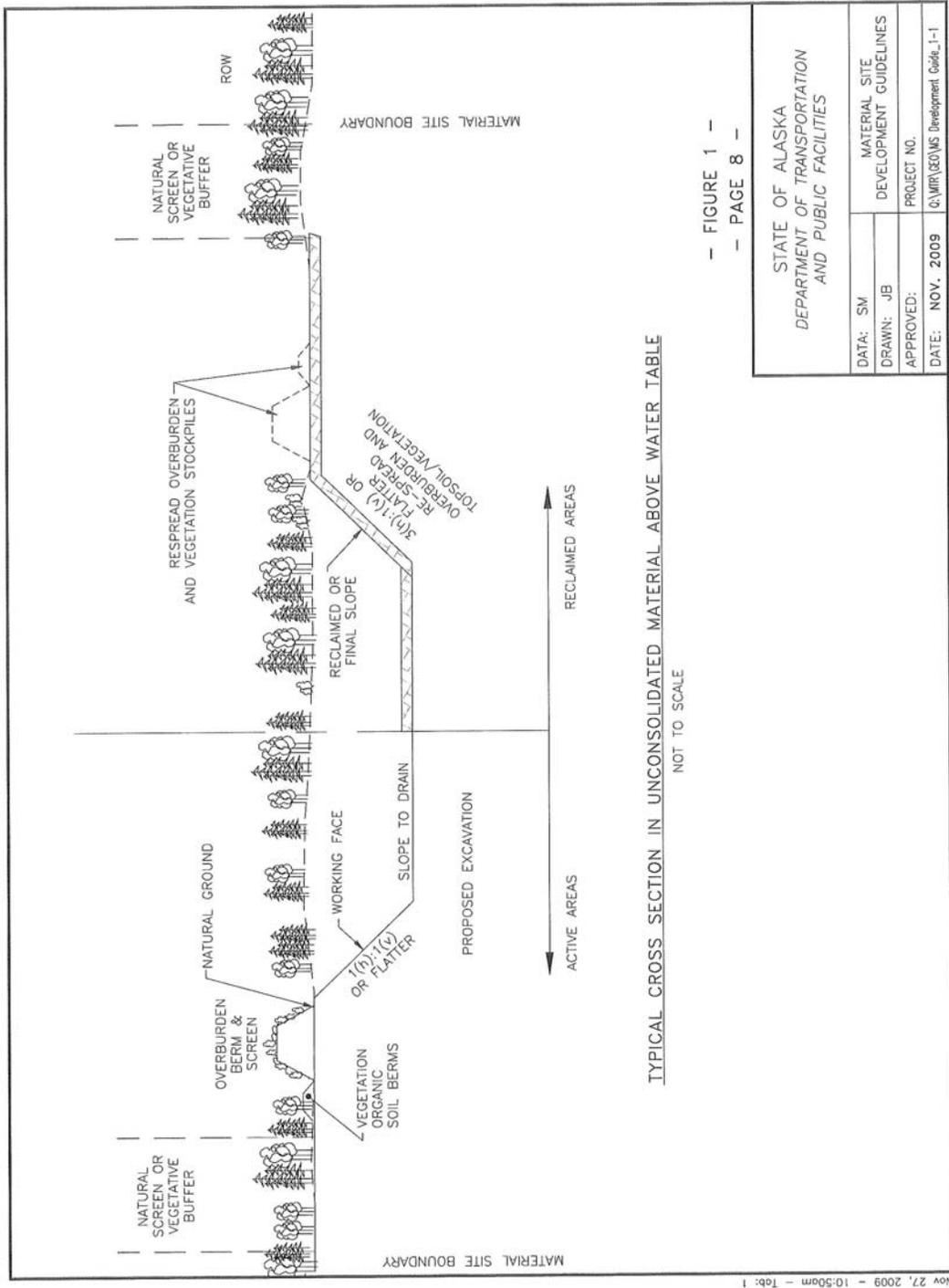
Reclaim cells as soon as practical after depletion. Also perform concurrent reclamation of disturbed areas to the extent possible as part of the active project. Reclamation activities will include:

1. *Reclaim slopes along the material site boundaries, or where future development is not anticipated.*
2. *Grade slopes above the water table to 3(H):1(V), or flatter.*
3. *Grade slopes within 30 feet of the shore in areas that are either underwater or expected to be underwater, to provide shallow water habitat, with water depth less than three feet.*
4. *Spread available organic soils over re-graded side slopes. Spread available vegetative material over the organic soils to aid reestablishment of native species.*
5. *Contact agencies to determine site-specific seeding and fertilizer requirements.*
6. *Grade the pit floor or pad to a flat or gently sloping shape, and remove all equipment and non-native debris and waste. Grade slopes above the water table and adjacent to areas of future production to 1(H):1(V) or flatter. Overburden or organic material need not be re-spread on these slopes.*
7. *Reclaim the active work area and remove or reclaim access roads once the site is depleted.*
8. *Where not covered by the above items, or typical sections, final contouring and grading pond margins will occur in accordance with the appropriate sections of the State of Alaska Department of Fish and Game Technical Report 93-9, North Slope Gravel Pit Performance Guidelines.*

Reclamation activities will follow these general guidelines:

1. *Grade overburden or unusable material piles after each use to slopes of 3(H):1(V), or flatter.*
2. *Reclaim pit or quarry walls where future development is not anticipated at the end of each project, as long as access to the working faces or benches is not impacted. Grade pit or quarry walls to 2(H):1(V) or flatter. Stockpiled overburden or unusable material can be used for grading.*
3. *Spread available organic soils over re-graded slopes. Spread available vegetative material over the organic soils to aid reestablishment of native species.*
4. *Contact agencies to determine site-specific seeding and fertilizer requirements.*

5. *At the end of each use, un-reclaimed faces shall be scaled of loose and dangerous rock so the faces are left in a condition such that they will not collapse or allow loose rock that presents a safety hazard to fall from them.*
6. *A pit or quarry wall is exempt from the requirements of 2-4 of this section if the steepness of the wall makes them impracticable or impossible to accomplish.*
7. *After each use, the pit floor or pad will be graded to a flat or gently sloping shape, and the contractor or user will remove all equipment and non-native debris and waste.*
8. *Reclaim the active work area and remove or reclaim access roads once the site is depleted.*



TYPICAL CROSS SECTION IN UNCONSOLIDATED MATERIAL ABOVE WATER TABLE
NOT TO SCALE

— FIGURE 1 —
— PAGE 8 —

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
DATA: SM	MATERIAL SITE DEVELOPMENT GUIDELINES
DRAWN: JB	PROJECT NO.
APPROVED:	
DATE: NOV. 2009	Q:\MTR\GEOMIS Development Guide_1-1

Figure 3: ADOT&PF typical cross section for mining unconsolidated material.

Project Mining and Reclamation Plan

Prior to use of the site for any project, the contractor or user shall submit a detailed Project Mining and Reclamation Plan, in accordance with A.S. 27.19, 11 AAC 97 and the project contract documents for approval by both the land owner agency and the ADOT&PF.

The Project Mining and Reclamation Plan, by sketch map and narrative describes the proposed method of operation and must comply with the conditions outlined above. After approval of this plan, it will be followed by the contractor or user and if applicable, the Project Engineer. Revisions to the plan require approval of the ADOT&PF and, if applicable, the regulatory agencies having jurisdiction. In general, all data should be shown graphically unless it can be better described in the accompanying narrative. Section and profile drawings should be used as appropriate.

Project Mining and Reclamation Plans should contain the following as appropriate:

Sketch Maps

Sketch maps shall have a scale sufficient for clarity under field conditions and should not be overly complex or inflexible. Items to be shown on sketch maps, when appropriate, shall include:

- 1. Site boundary (including monumentation and demarcation);*
- 2. Existing access route;*
- 3. Proposed working limits to be marked on the ground;*
- 4. Development stages;*
- 5. Approximate contours before and after excavation;*
- 6. High and low water lines;*
- 7. Vegetation lines and type of vegetation, screens and dimensions;*
- 8. Material stockpiling areas;*
- 9. Overburden and reject stockpiling areas;*
- 10. Other planned features, such as port-a-potties, offices, processing plants, temporary housing, wells), weigh scales, explosive storage facilities, etc.;*
- 11. Final slope ratios and site drainage measures including grade and, when appropriate, day-lighting ditches or stream diversions;*
- 12. Scale of drawing, North arrow, and specific dimensions as appropriate.*

Narrative

The mining and reclamation plan narrative may be made part of the sketch map or may be attached to the sketch map as conditions allow. Items to be addressed in the narrative shall include:

- 1. Methods of operation;*
- 2. Length and times of operation (day, month, year, and working hours);*
- 3. Air and water pollution control measures;*
- 4. Rehabilitation measures.*
- 5. Blasting plan, only if applicable, detailing explosive and detonation types, onsite storage and duration of blasting.*

2. Alternatives

No Action Alternative:

The No Action Alternative would deny the applicant's request to expand the existing mineral material site. This alternative would require ADOT&PF to continue to use the existing mineral material sites for the continued maintenance projects along the Dalton Highway.

Alternate Locations:

Other locations for this proposed mineral material site have been looked at and discarded. Any other possible locations on the Dalton Highway would be further from the immediately proposed project and increase traffic along the road. This could raise the risk for equipment/vehicle collisions during the haulage of material from other mineral material sites for the maintenance projects.

C. AFFECTED ENVIRONMENT

1. General Setting

The project location is north of the Dalton Highway about mile post 76. The site is within the view shed of the Dalton Highway.

2. Affected Resources

Table 1. Elements of the human environment that have been considered for this environmental assessment (EA) are listed below. Elements that may be affected are further described in this EA. Those elements marked as not being affected will not be considered further in this Environmental Assessment.

Elements of the Human Environment					
Elements	Affected		Elements	Affected	
	Yes	No		Yes	No
Air Quality	X		Native American Religious Concerns		X
Areas of Critical Environmental Concern		X	Threatened or Endangered Species		X
Cultural Resources		X	Hazardous and Solid Wastes		X
Environmental Justice		X	Water Quality- Surface and Ground	X	
Essential Fish Habitat		X	Riparian/Wetlands	X	
Prime and Unique Farm Lands		X	Wild and Scenic Rivers		X
Floodplains	X		Wilderness		
Invasive, Non-native Species	X		Boundary		X
Other Elements	Affected		Other Elements	Affected	
	Yes	No		Yes	No
Access		X	Visual Resources		X
Fire Management		X	Wildlife/Aquatic		X
Mineral Resources	X		Wildlife/Terrestrial		X
Soils	X		Recreation		X
Subsistence		X			
Vegetative Resources		X			

Air Quality:

The Clean Air Act requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six principal pollutants commonly found throughout the United States. The six pollutants include: ground-level ozone, particulate matter, lead, carbon monoxide, sulfur dioxide, and nitrogen dioxide. EPA calls these pollutants “criteria air pollutants” because the agency has developed health-based criteria as the basis for setting allowable levels in the air we breathe. These standards apply to the concentration of a pollutant in outdoor air. If the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area; areas that don't meet the national standard are called nonattainment areas (EPA 2009 website).

The six air quality parameters are not monitored within a meaningful distance of the proposed action. The EPA has, however, delineated attainment/nonattainment designations for the six criteria in Alaska. Most of Alaska, including the area surrounding the permit site is classified as an “unclassifiable/attainment” area for PM_{2.5} particles (particles smaller than 2.5mm) and PM₁₀ particles (particles smaller than 10mm). There are no “nonattainment” areas for sulfur dioxide, lead, carbon monoxide, and nitrogen dioxide in the State of Alaska. The entire State of Alaska is classified as “attainment” for ozone (EPA 2009 website).

The air quality in the vicinity of the operation is predicted to be good to excellent during most warm summer months and when wind is available to mix and dilute air layers during the cold winter months of the year. Emissions and roadside dust from local highway traffic and maintenance operations and particulates from heating habitations at the Alaska Department of Transportation road maintenance facility are the major sources of air pollution.

Invasive, Non-native species:

Annual surveys along the Dalton Highway have occurred since 2004, and, to date, 446 infestations of 28 different species have been documented from the beginning of the highway to Coldfoot (FDO field files, Cortés-Burns et al. 2008, Alaska Exotic Plant Information Clearinghouse Database: <http://akweeds.uaa.alaska.edu/index.htm>). The roadsides, pullouts, material pits, and waysides are the most common places for nonnative invasive plants (NIP) to occur, because they readily colonize disturbed sites. Roads are corridors for the spread of NIP because plant seeds and parts can be transported by vehicles and other anthropogenic related activities (Cortés-Burns et al. 2008). In addition, research has shown that the area in the vicinity of the Dalton Highway is particularly susceptible to infestations by invasive legumes because of mineral soils that tend toward a pH that is basic (Villano 2008, Cortés-Burns et al. 2008). Invasive plants in Alaska are ranked on a scale of 0-100, with 100 being the most invasive (Mathew et al. 2008). The species of utmost concern in the Dalton Management Area are: *Melilotus officinalis* (White sweetclover; ranking: 80), which has been rapidly expanding its range northward along the Dalton Highway in recent years, and *Vicia cracca* (Bird vetch; ranking: 73). Both species form dense stands that crowd out native vegetation and their seeds remain viable for a very long time in the soil (as much as 50-80 years for *M. officinalis*). Both of these species have been found as far north as Coldfoot. Other highly

aggressive species that occur along the Dalton include *Linaria vulgaris* P. (Yellow toadflax; ranking: 69), *Leucanthemum vulgare* (Ox-eye daisy; ranking: 61), *Hordeum jubatum* (Foxtail barley; ranking: 63), *Tanacetum vulgare* (Common tansy; ranking: 57) and *Crepis tectorum* (Annual hawksbeard; ranking: 54). Of growing concern along is *Medicago lupulina* (Yellow alfalfa), which occurs at the Prospect airstrip and is a new species of NIP on the Dalton. Of all NIP known to occur along the Dalton Highway, these species are the most likely to be introduced to new areas, the most easily spread and hardest to control. They also are highly effective competitors with native vegetation.

H. jubatum occurs at the gravel pit and was recorded during monitoring surveys in 2010 to be 1% of the canopy cover with an estimate of over 10,000 stems in the infested area.

Mineral Resources:

The material source pit is located at about mile post 76 of the Dalton Highway. The mineral material is a hard rock mineral deposit. However, due to the material type and weathered beds at this shallow mining depth, the material is removable with the use of a bulldozer at this particular site. There are no economic concentrations of any of the minerals defined as critical or strategic minerals.

Soils:

In general, soils found in northern Alaska are poorly developed due to the cold temperature regime. They are shallow, with a thin organic layer, underlain by combinations of sand, silt, and gravel. Most lowland areas are poorly drained. Well drained sites often display fine textured upper horizons over gravelly subhorizons (USDI 1989).

Soil and permafrost characteristics vary along the Dalton Highway. Soil formation at this pit location (hillside) likely occurred through weathering processes on bedrock in combination with deposition from wind driven silt. Discontinuous permafrost is regionally prevalent. Stability of the permafrost and its' active layer have been disrupted where mining and road building have occurred. Natural disturbances to vegetative ground cover from forest fires (there is evidence of a recent burn on the perimeter of the pit) also have the potential to impact permafrost conditions.

Ground disturbance to date at this pit equals approximately 30 acres. Due to the expected slow soil formation at this site, saving and subsequent re-spreading of the organic layer and topsoil as mining continues will influence recovery of the soils. Seed dispersal from the surrounding undisturbed vegetation may quicken revegetation and vegetative litter from the same area could enrich the disturbed soil as it is decomposed and incorporated into the surface layer.

Water Quality:

Approximately 350 feet of a small stream crosses the northeast corner of the pit boundary. Physical habitat measurements were recorded by BLM personnel from this stream where it crosses the Dalton Highway on 8/03/2010 (Karlen 2010 site visit). Water

was not flowing at the time of the site visit though standing water was observed in pools. Floodplain and riparian width was also measured at approximately 15 meters.

The region surrounding the pit is part of the Fort Hamlin Hills and the Ray River watershed. No data is available on the surface water quality of the stream that flows through the area to be permitted. Based on the near pristine environmental conditions of the nearby drainages, water quality is expected to be good, with low turbidity, except during higher flows associated with spring breakup and seasonal storm events. None of the streams in the vicinity of the action have impaired water quality based on Alaska Department of Environmental Conservation (ADEC) standards (ADEC 2011). Surface waters are frozen much of the year. Generally, peak discharge occurs during spring break up which usually happens during the mid to latter part of May in the region between the Yukon River and the Brooks Range.

Wetland/Riparian/Floodplains:

The pit is located in an upland location at the edge of a small hill. The vegetation within the area of the proposed action can generally be described as a mixture of open (25-60 % canopy cover) and closed (60-100 % canopy cover) canopy black spruce forest communities (Viereck et al. 1992). Permafrost is likely present, with surface waters and soils that are frozen much of the year resulting in poorly drained soils that remain saturated throughout the vegetative growing season. These growing conditions limit species variability and annual growth.

Most of the surrounding watershed area, and hence, riparian-wetlands and floodplains is in pristine condition. Nearby disturbance that has already occurred includes: ~ 30 acres at this pit (~12 acres currently disturbed and ~18 acres in an early stage of restoration), ~42 acres at a second pit one mile to the northeast, the Dalton highway and Trans Alaska Pipeline.

Approximately 81 of the 160 acres proposed for development under this permit is classified as wetlands (digital data obtained from the U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.). Three hundred fifty feet (350') of a small stream crosses the northeast corner of the pit boundary. Riparian width measurements were recorded by BLM personnel from this stream where it crosses the Dalton Highway on 8/03/2010 (Karlen 2010 site visit). Riparian width (includes both banks) was 15 meters. Willow was the dominant riparian vegetation. Water was not flowing at the time of the site visit though standing water was observed in pools. Floodplain width was also measured at approximately 15 meters.

D. ENVIRONMENTAL IMPACTS

1. Impacts of the Proposed Action (Direct, Indirect and Cumulative)

Air Quality:

Direct Effects:

The proposed action will produce limited quantities of vehicle emissions as well as fugitive dust resulting from vehicle, earth-moving and rock crushing activities.

With this proposed action, particle pollution is of greatest concern when analyzing the six criteria pollutants due to the combustion (motor vehicles) and industrial processes (crushing or grinding operations, and dust from paved or unpaved roads) occurring at the pit. The above mentioned processes generate particles less than 10 micrometers in diameter (PM₁₀) that pose a health concern because they can be inhaled into and accumulate in the respiratory system (EPA 2009 website).

Particle pollution can be minimized by graveling and/or watering access roads and controlling speed limits during periods of dry weather. Given the timing (summer with good dispersion conditions), seasonal nature of the permitted activity, and the assumption that particle abatement measures will be applied, particle pollution is anticipated to remain within the particle index value of 0 – 50, which is considered to be *good* and has no cautionary health statements attached (EPA 2011 website).

Cumulative Effects:

Oil and gas transportation related activities, gravel mining, road building and maintenance, and recreation are the major past, present, and foreseeable future activities that could impact resources within the region that includes this pit.

The proposed action would result in a minor and short-term (only during active mining and processing) increase in particulate input into the air from burning fuels and activities associated with gravel extraction. The limited duration and extent of the activities (to mine pit run material for incidental use on projects up to 5000 cubic yards per year) at this site, in combination with the other activities outlined above, is expected to produce a very minor effect on the overall air quality of the region.

Invasive, Non-native species:

Direct and Indirect Effects: Any human activity creates potential for contributing to the introduction and spread of invasive plants on BLM administered lands. The proposed action increases heavy equipment use and other activity at the site that increases the potential for introduction of new NIP and spread of existing NIP. Gravel extraction and related equipment can harbor seeds of NIP picked up at other work sites as well as from the nearby source of seeds along the Dalton Highway. Any infestations could provide a seedbank for future spread of NIP over a much larger area. Control of established infestations may require the use of pesticides.

Once plants become established, in addition to anthropogenic means, natural vectors, such as animals, wind and water can transport seeds into previously undisturbed habitats. Creeks and rivers can then be a vector for aggressive NIP infesting undisturbed, natural habitats (Cortés-Burns et al. 2008). Over time, this has the potential to impact previously undisturbed native habitats, their plant community structure and composition, natural ecosystem processes, and ultimately, contribute to biodiversity loss over a much larger area (Cronk and Fuller 1995).

Gravel sites along the Dalton Highway are essential for maintaining and improving the highway surface. Gravel from this pit is likely to be used within a 10 mile or more radius of the pit for these and other purposes. Gravel contaminated with weed seed that is covered with pavement or concrete are not likely to contribute to the introduction of NIP. Use of contaminated gravel to surface, build up shoulders and create pads that are not sealed will result in NIP becoming established at these sites. In the case of gravel from this site, *H. jubatum* will be introduced within this radius. Although invasive, *H. jubatum* is considered a native or at least a naturalized plant by several botanists and is common within many parts of the DHCMA.

Cumulative Effects: As the transportation infrastructure has improved in recent years, traffic in and use of the Utility Corridor has increased from the general hunting public, recreational users, researchers, miners and other user groups. This increase in use of BLM lands in the DHMCA increases the chance that invasive plants currently not present may be transported into the areas. In the reasonably foreseeable future, analysis for construction of a road from the Galbraith Lake area to Umiat will begin. Issuing this permit will further increase the level of activity on and through BLM managed lands in the DHMCA and thus increase the chances that invasive plants will be introduced and spread. Voluntary use of best management practices (BMP) by DOTPF in extracting gravel from this site, moving it for projects and executing maintenance activities, such as grading shoulders, will help reduce and may prevent the introduction and spread of *H. jubatum* and other NIP from these activities. BMPs include grading before weeds set seeds and from north to south as much as possible, assuring that equipment has been pressure washed at the point of origin before traveling to the gravel site or maintenance sites, and participating in early detection and rapid response to new infestations of NIP.

Mineral Resources:

Direct Effects:

Development of mineral resources (sand and gravel) in this area entails physical removal from the earth and “commitment” to other uses, presumably of both physical and economic benefit to society. The minerals themselves are thus consigned, irreversibly and irretrievably, to human use, including repeated recycling in many instances.

Riparian/Wetlands/Floodplains:

Direct/Indirect Effects:

This mine could result in an additional 130 acres of new disturbance (160 acres total request - 30 acres previously disturbed). Any excavation in the riparian zone of the small stream will result in a direct loss of vegetation and functionality. The loss of riparian

vegetation would displace terrestrial species that use this habitat. Additional in-stream impacts from vegetation and gravel removal include bank instability and a decrease in lateral channel stability, both of which lead to increased erosion. Changes in the stream's sediment balance and channel morphology necessary to transport the additional sediment could result in the long-term chronic degradation of aquatic habitat. Retaining a buffer strip between the active channel and the disturbance would help maintain stream channel integrity, the functioning of the floodplain and riparian vegetation, and would thus minimize erosion.

Sheet erosion is expected to occur during active pit operations and for some time following pit reclamation, until vegetation with sufficient root density and root mass to stabilize the soil becomes reestablished. Covering the disturbed areas with fines and stockpiled vegetative material would enhance growth of vegetation and shorten the recovery time. BLM staff will provide input to the operator's reclamation plan (when received) in an effort to speed revegetation and subsequent soil recovery. Recovery time is uncertain and will depend on the quality of reclamation.

Proper access (short and direct) and overburden/gravel storage can also minimize erosion.

Indirect effects of vegetation removal would include limited erosion of sediment into downstream waters during spring and summer runoff events until vegetation is reestablished. Impacts from the expected limited amounts of sediment movement could include sub-lethal impacts to aquatic resources (i.e. temporary displacement, localized reduction in food resources).

There are no mitigating measures which would minimize the loss of wetlands that are associated with the presence of permafrost. Stripped and mined permafrost associated riparian-wetlands would be lost indefinitely, due to altered soil characteristics and improved drainage.

Cumulative Effects:

In addition to the proposed action, there are other active gravel quarrying sites, the Trans-Alaska Pipeline, the Dalton Highway, and an AK DOT highway maintenance facility in the region, all of which have altered habitat and condition.

If the proposed mitigation requiring stream buffers becomes part of the permits mitigation, the functional status and trend of riparian habitat and floodplains within the region would not change with the issuance of this permit. There are no mitigating measures which would minimize the loss of wetlands that are associated with the presence of permafrost. From a regional perspective, the current functionality of wetlands, floodplains and riparian vegetation should be retained given the surrounding watersheds remain in a near natural condition.

Soils:

Direct Effects:

During mining operations, soil would be excavated down through the gravel layer. Consequently, surface erosion on exposed ground surfaces is likely when heavy rains or snow melt occurs during ongoing mining operations. For this permit, much of the material moved by rainstorms or snow melt will likely be confined to the pit.

The risk of post reclamation loss of soil from the pit due to erosion is highest immediately after reclamation prior to revegetation. Mining excavations will mix and displace the surface organic material and remove a layer of underlying substrate. The loss of organic matter at the surface, where it is most useful, is likely to reduce initial plant regeneration on the site after reclamation because soil, organic materials and rock aggregates are likely to be mixed and resorted in such a way that coarse substrate will compose a larger percentage of the soil at the surface.

Given the impacts described above, it is recommended that the vegetation and topsoil removed during clearing at the pit site be stored along the perimeter of the disturbed area and be used to reclaim the mined panels. Depending on the timing of closing one cell and opening another, placing stripped soil (e.g. from the next panel to be stripped) directly onto an area being reclaimed (aka live topsoiling) with minimal compaction would speed the revegetative process since the stripped soil contains viable seeds and soil organisms. In addition, to further accelerate revegetation and minimize soil erosion, heavily compacted surfaces should be scarified to a depth of ~ 8 inches before spreading the stored vegetation and topsoil.

BLM staff will provide input to the operator's reclamation plan (when received) in an effort to speed soil recovery. Revegetation efforts will help rebuild and bind the soil. The more rapidly vegetation is established on site, the sooner exposed soil is covered, erosion is arrested, and the soils begin the process of regaining productivity.

Although dust will accompany mining activities, little effect is anticipated to adjacent areas or streams from wind-carried soil particles.

Cumulative Effects:

There are other active gravel quarrying sites, the Trans-Alaska Pipeline and facilities, the Dalton Highway, and an Alaska DOT highway maintenance facility in the vicinity of the proposed pit, all of which have altered soil condition.

Cumulative impacts to the soils of the area include site reduction of the thickness of the soil profile and an overall leveling of the original slope, as well as the mixing of any mature soil that may have originally existed. Even with the additional disturbance at the mile post 76 gravel pit, current long term functionality of soils in the region should continue.

Water Quality:

Direct Effects:

Water quality changes are most likely if there is runoff out of the pit (i.e. post reclamation), if there is excess surface water accumulating on the pit floor that needs to be pumped from the pit during mining, or if the stream that flows through the northeast corner of the area to be permitted is mined. Direct impacts from runoff out of the pit or pumping water from the pit would include transport of a limited amount of sediment onto the vegetation mat with the potential of reaching waterbodies surrounding the pit. In-stream impacts from vegetation and gravel removal include bank instability and a decrease in lateral channel stability, both of which lead to increased erosion and decreased water quality. Leaving a buffer strip between the pit and the nearby stream would allow existing vegetation to filter much of the sediment from runoff down slope of the pit and lessen the potential for impacts to water quality. The potential for sediment transport into streams can be further reduced by diverting sources of surface water gain around pit excavation.

Cumulative Effects;

Water quality in the Fort Hamlin Hills and the Ray River watersheds is generally good with low turbidity that meets State of Alaska Department of Environmental Conservation (ADEC) water quality standards. Additional effects from this action are not expected to change overall water quality in the downstream drainages.

2. Impacts of the No Action Alternative (Direct, Indirect and Cumulative)

Air Quality:

Denying the request to expand the pit would result in no increase in particulate input into the air from burning fuels and activities associated with gravel extraction. There would be no air quality impacts at this site.

Cumulative Effects: Oil and gas transportation related activities, gravel mining, road building and maintenance, and recreation are the major past, present, and foreseeable future activities that could impact air resources within the region that includes this pit.

Mineral Resources:

Direct effects:

Development of mineral resources (sand and gravel) in this area entails physical removal from the earth and “commitment” to other uses, both physical and economic benefit to society. The minerals themselves are thus consigned, irreversibly and irretrievably, to human use, including repeated recycling in many instances.

Riparian/Wetlands/Floodplains:

Direct and Indirect Effects: Under the no action alternative, riparian-wetlands that could be impacted under the Proposed Action would remain in proper functioning condition.

Cumulative Effects: The total amount of wetland loss or decrease in functional status and trend of riparian habitat and floodplains within the Fort Hamlin Hills and the Ray River watersheds would not change under this alternative. Current functionality of wetlands, floodplains and riparian vegetation would be retained on a landscape scale given the surrounding watersheds remain in a near natural condition.

Soils:

Denying the request to expand the pit would result in no increase in soil disturbance, and thus, no further impacts from activities associated with gravel extraction.

Recovery of site productivity would commence after final reclamation as vegetation takes root, organic matter accumulates and soil horizon development takes place.

Cumulative Effects: If the applicants request is denied, there will still be other active gravel quarrying sites, the Trans-Alaska Pipeline, the Dalton Highway, private in-holdings, and an AK DOT highway maintenance facility in the surrounding area, all of which have altered soil condition. Given the present amount of development in the region, current long term functionality of soils would be expected to continue.

Water Quality:

Direct and Indirect Effects: Under this alternative, water quality would remain as described in the Affected Environment.

Cumulative Effects: Water quality in the Fort Hamlin Hills and the Ray River watersheds

would continue to meet State of Alaska water quality standards.

3. Mitigation Measures

Mitigation measures are most often derived from the standard operating procedures and standard stipulations developed from the accumulated staff knowledge gained in the management of lands and resources in the Central Yukon Field Office.

All activities within the scope of this permit shall conform to the standard stipulations found attached to the Free Use Permit from that have been developed by the BLM. In addition, all activities shall conform to the regulations contained within 43 CFR 3620, and all written orders of the Authorized Officer.

1. Vegetation and organic topsoil will be stockpiled in a manner that minimizes loss through erosion. This material will be the final layer applied during reclamation.
2. The site will be developed sequentially in cells. A disturbed cell will be reclaimed prior to opening a new area. Exceptions to allow for thawing of permafrost can be granted at the discretion of the authorized officer.
3. BLM staff will provide input to the operator's reclamation plan (when received) in an effort to enhance habitat recovery.
4. The permittee/contractor will follow the best management practices for dust abatement to keep dust at an acceptable level.
5. Access roads, the pit floor, and other areas subject to soil compaction shall be scarified to a depth of 8 inches during final reclamation.
6. Sources of potential surface water gain will be diverted around pit excavation sites.
7. The applicant will maintain a 50-foot-wide vegetative buffer between the creek and mining area. Any roads that bisect the 50 foot buffer area will be rehabilitated at the close of mining by revegetating the crossing with live plants to a minimum width of 50 feet.
8. With the exception of designated stream crossings, operation of any equipment, placement of vegetative or mined material, or storage/placement of any equipment and supplies will not be allowed in buffer zones.
9. Vegetation shall be separated from topsoil and overburden gravel will be stockpiled near the uphill side of each mine cut and used for erosion control if protection from excess water gain through the mining cut is deemed necessary by the Authorized Officer. Willow/alder plugs displaced from the mining cut should be saved for reclamation if deemed practical by the authorized officer.

10. To enhance the recovery of vegetation, recountoured areas may require seeding, the application of fertilizer and/or other soil amendments. The measures to be prescribed will be based on the results of a soils test. Soil samples are to be obtained and submitted by the permittee to a qualified soil analysis laboratory (see UAF cooperative extension publications at <http://www.uaf.edu/ces/issues/agriculture/crops/#soiltest>).
11. Access roads, the pit floor, and other areas subject to soil compaction shall be scarified to a depth of 8 inches during final reclamation.
12. Maintain a 100-foot buffer along all streams. Maintain a 50-foot-wide buffer along the remaining site perimeter. Buffers will remain undisturbed.
13. All equipment and hazardous materials shall be stored for the winter on ground outside the floodprone area (~ 50 year flood event) or potential seasonal water flow in order to protect them from flooding or icing.
14. The permittee will keep food, garbage or other wildlife attractants secured while awaiting their use, proper disposal or incineration. Specifically, we recommend they use bear-proof containers for all garbage and other wildlife attractants.
15. The permittee and their contractor will avoid harassing wildlife.
16. Reclamation of disturbed areas shall take place as quickly as possible after mining is complete.
17. If BLM identifies locations where AK BLM listed sensitive plants or AK Natural Heritage program rare plants occur, the permittee will avoid ground-disturbing activities in those areas.
18. The permittee shall avoid disturbing nesting migratory birds. To be sure nesting migratory birds are not disturbed, the permittee should consider clearing vegetation between 1 August and 31 May (see: *ADVISORY: Recommended Time Periods for Avoiding Vegetation Clearing in Alaska to Protect Migratory Birds*. US Fish and Wildlife Service. Fairbanks Fish and Wildlife Field Office (907) 456-0203).
19. Because invasive plant seeds are spread by multiple vectors and readily colonize disturbed ground it is unrealistic to expect that some invasive plant species will not invade the material site as a result of the proposed activity. However, one of the best defenses against the spread of invasive plant species is early detection and treatment of infestations that occur. The applicant, his/her employees and contractors shall learn to identify the invasive plant species of concern in this area and promptly report to the BLM any infestations found, regardless of size. These measures will help reduce the chances of a large infestation occurring, or the

further spread of invasive plants into the surrounding area.

20. Utilization of drip pans/pads under equipment with leaks, or during refilling operations will minimize the potential for release of petroleum products to the environment. The contractor shall have absorbent material readily available on site to contain any spills. Secondary containment of fuel storage containers shall be utilized in a safe location to avoid damage by equipment. Minor equipment repair on site may be conducted to eliminate the release of POLs to the environment and shall be conducted over an impermeable liner. All wastes associated with spill cleanup will be disposed of in accordance with all applicable regulations. Adherence to proper safety procedures and spill prevention plans shall establish mitigating measures.
21. A central location for the collection of solid waste shall be identified. Waste shall be disposed of within an Alaska Department of Environmental Conservation (ADEC) approved landfill on a regular basis.
22. Waste, Human: The contractor shall provide temporary portable facilities.

4. Residual Impacts

Invasive, Non-native species:

Nonnative invasive species, primarily plants, if introduced and established at the site will persist long-term and require repeated treatments to control. Impacts include economic and ecological costs and herbicides may be employed to control. Use of herbicides may require site specific environmental assessments.

Riparian/Wetlands/Floodplains:

Up to 81 acres of wetlands could be disturbed due to the proposed action. Disturbance of wetland habitat will create conditions more suitable to non-hydrophilic plant species not meeting BLM's definition of riparian-wetland habitat. At these sites, natural succession may not lead to the recovery of wetland habitat and the loss could be considered permanent.

Soils:

Impacts to soil from mining are unavoidable and include: the selected removal of the existing soil profile and thawing of any permafrost. Warmer soil temperatures (due to disturbance) combined with spreading stockpiled topsoil and organic matter and planting vegetation will help rebuild and bind the soil. The more rapidly vegetation is established on site, the sooner exposed soil is covered, erosion is arrested, and the soils begin the process of regaining productivity. The site appears capable of regaining productivity, as evidenced by the regeneration and growth of forbs and trees noted along the margins of previously disturbed portions of the pit (Karlen 2010 site inspection). However, the time needed for full recovery of soil productivity to pre-mining conditions is not known.

E. CONSULTATION AND COORDINATION

Alaska Department of Transportation and Public Facilities was coordinated for this project. Alyeska Pipeline Support Company was coordinated with for this project. The BLM's Office of Pipeline Monitoring was consulted with for this project.

List of Preparers

Air Quality	Bob Karlen
ACECs	Darrel VandeWeg
Cultural Resources (Paleontology)	Bill Hedman
Environmental Justice	Darrel VandeWeg
Engineering	Rodd Moretz
Essential Fish Habitat/Fisheries	Bob Karlen
Invasive, Nonnative Species	Ruth Gronquist
Native American Religious Concerns	Bill Hedman
Threatened and Endangered Species	Ruth Gronquist
Wastes, Hazardous and Solid	Joseph Sanchez
Water Quality/Drinking and Ground	Bob Karlen
Wetlands/Riparian/Floodplains	Bob Karlen
Wild and Scenic Rivers	Kelly Egger
Wilderness	Donna Wixon
Minerals	Darrel VandeWeg
NEPA	Gary Foreman
Soils	Bob Karlen
Subsistence	Ruth Gronquist
Wildlife	Ruth Gronquist
Visual Resource Management	Cal Wescott
Realty/Lands	Joyce Voight
Recreation	Kelly Egger
Vegetation	Ruth Gronquist
Boundary	

Table 2. Preparers (BLM Specialists)

F. ATTACHMENTS

1. Site-Specific Stipulations
2. ADOT&PF Expansion Request for Dalton Highway Mineral Material Sites
3. ANILCA Section 810 Evaluation and Findings
4. Essential Fish Habitat Assessment
5. Assessment of Archaeological and Historical Resources
6. Boundary Risk Assessment
7. Wilderness Characteristics Assessment

References

ADEC.2011. <http://www.dec.state.ak.us/>. Alaska Department of Environmental Conservation Water Quality Standards, Assessment, & Restoration.

EPA. 2011. <http://www.epa.gov>. Air Quality Index for Particle Pollution.

EPA. 2009. <http://www.epa.gov>. The Green Book Nonattainment Areas for Criteria Pollutants.

USDI/Bureau of Land Management. 1989. Utility Corridor Proposed Resource Management Plan and Final Environmental Impact Statement. U.S. Dept of Interior, Bureau of Land Management, Arctic District Office, Fairbanks, Alaska.

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

Background:

Alaska Department of Transportation and Public Facilities (ADOT&PF) maintains the Dalton Highway with repair and upgrade projects for the road and various facilities along the highway. This requires the use of mineral material sites located along the highway for the materials needed to complete these projects.

Finding of No Significant Impact:

Based on the analysis of the potential impacts contained in DOI-BLM-AK-03000-2010-0034-EA, I have determined that the proposed action will not have significant impacts on the human environment and preparation of an environmental impact statement is not required.

Decision:

It is my decision to allow the expansion of the mineral material pit at this location for ADOT&PF.

Rationale:

1. Renewal of the existing mineral material pit is needed for this area.
2. The material needed from this mineral material pit will be used for continued maintenance of the Dalton Highway.
3. There are no anticipated impacts to cultural resources. See Assessment of Archeological and Historical Resources.
4. The Proposed Action will not significantly restrict subsistence uses. See Section 810 evaluation and findings.
5. The action will not affect salmon or their habitat. See the Essential Fish Habitat Assessment.

Appeal Procedures

This decision may be appealed to the Interior Board of Land Appeals, Office of Hearings and Appeals, in accordance with 43 CFR Part 4 and DOI Form 1842-1. The notice of appeal must be filed in the Bureau of Land Management Central Yukon Field Office (at the above address) within 30 days from receipt of this decision.

/s/ Shelly Jacobson
Shelly Jacobson, Manager
Central Yukon Field Office

4/19/2012
Date

ATTACHMENT # 1
Site-Specific Stipulations for Free Use Application and Permit for
Mineral Material Permit # FF-92995

1. The permittee/contractor will submit a detailed mining plan to BLM at least 30 days prior to start up for review and approval. The plan will include:
 - A map showing pit boundary, working face, stock piles, access
 - A detailed description of how the gravel will be extracted
 - Cross-section sketch of the current pit
 - Method(s) for mining that will not cause unnecessary and undue degradation of the gravel resource (best mining practices)
 - The types and number of equipment to be used on the project
 - Location of fuel storage on site (types of fuel tanks, fueling equipment, and quantity of fuel to be stored on site)
 - Equipment fueling plans (how fueling will be accomplished, where equipment will be fueled, and fuel spill plans)
 - Location of crew lodging facilities, if located on BLM land
 - Location of other construction material stored on site
 - Plans for human and solid waste disposal
2. Surface water flow will be diverted around the excavated pit to protect the water quality of the area.
3. The contractor/permittee will not conduct any ground-disturbing activities in areas where the BLM has identified federally listed sensitive plants occurring.
4. To enhance the recovery of vegetation, disturbed areas may require seeding, the application of fertilizer and/or other soil amendments. The measures to be prescribed will be based on the results of a soils test. Soil samples are to be obtained and submitted by the permittee to a qualified soil analysis laboratory (see UAF cooperative extension publications at <http://www.uaf.edu/ces/issues/agriculture/crops/#soiltest>).
5. Access roads, the pit floor, and other areas subject to soil compaction shall be scarified to a depth of 8 inches during final reclamation.
6. Maintain a 100-foot buffer along all streams. Maintain a 50-foot-wide buffer along the remaining site perimeter. Buffers will remain undisturbed.
7. Overburden and vegetation will be stockpiled separately on the perimeter of cells, adjacent to buffer strips. Storage of these materials will be in a manner that minimizes loss through erosion and allows for use in reclamation.
8. Unused and unneeded areas within the permitted area will be reclaimed prior to opening new areas within the same permitted area.

9. BLM staff will provide input to the permittee/contractor's mining and reclamation plan(s), when received 30 days in advance, in an effort to speed soil and vegetative recovery.
10. If the permittee/contractor chooses to have their employees camp on BLM land, a permit will be needed for camping. A permit request must be submitted to the BLM no less than 90 days prior to the start of work to allow for the time needed to process the camping permit.
11. The permittee/contractor shall prominently mark the work area boundary.
12. The permittee/contractor shall not expand or work outside of the area permitted under this authorization.
13. Activities shall be conducted in such a manner as to not cause damage or disturbance to any historical or archaeological sites and artifacts. The Antiquities Act (1906), Archaeological Resources Protection Act (1979), Federal Land Policy and Management Act (1976), and general United States property laws and regulations, all prohibit the appropriation, excavation, damage, or destruction of any historic or prehistoric ruin or monument, or any other object of antiquity situated on lands owned or controlled by the United States (16 USC 470; 16 USC 432; 43 U.S. 1733(a); 18 U.S.C. 1361; 18 U.S.C. 641; 43 CFR 8365.1). Such items include both prehistoric stone tools and sites, as well as historic log cabins, remnants of such structures, refuse dumps, and other such features. Should any such site be discovered during the permitted activity, the permittee should avoid impacting such materials, and immediately notify the Authorized Officer.
14. The permittee /contractor shall immediately report to the BLM all paleontologic and cultural materials encountered during your mining operation.
15. The permittee /contractor must stop all operations in the area of these discovered paleontologic and cultural materials until the resources are evaluated and mitigation measures to prevent the loss of significant cultural or scientific resources are developed by a BLM archeologist.
16. The permittee /contractor shall pay all the costs, as determined by the BLM archeologist, associated with the evaluation and mitigation of the paleontologic and cultural resources.
17. The permittee/contractor shall slope the side of the active work pit to prevent erosion and provide for the safety of humans and animals.
18. The permittee/contractor shall slope the pit floor to prevent erosion or create ponds to prevent the degradation of the water quality of adjacent streams.

19. The permittee/contractor shall not “take” migratory birds, their nests, or their eggs.
20. A site Spill Prevention Control and Countermeasure Plan (SPCC) shall be written for the site if the amount of petroleum products stored or potential to store exceeds 1,320 gallons. The plan will be submitted to the Authorized Officer Representative (Darrel VandeWeg) for review and approval prior to storage of petroleum products greater than 1,320 gallons.
21. Transportation and storage of petroleum, oil and lubricants (POLs) shall be handled in a manner to ensure the products minimize the effects to the environment and human health. Gasoline, diesel, oils, greases and hydraulic fluids are a few of the most common POLs. All containers that are transferred to remote locations for everyday operations are to be stored within a containment area which has been constructed to contain 110% of the volume of the largest container. The containment area should be lined with an impermeable liner which is free of cracks or gaps and sufficiently impervious to contain leaks or spills. The containers shall be covered to eliminate the collection of rainwater within the containment area throughout the storage period.
22. Transfer of POLs to equipment shall be completed in a secure manner to minimize the possibility of contamination to the surrounding environment. At a minimum POL type absorbent pads shall be placed under the location to catch overflow or assist the operator in containing a spill, if one occurs. Fuel storage within 100 feet of a waterbody should be avoided where possible. If a refueling site is within 100 feet of a waterbody the holder shall exercise caution to ensure no release of POLs. Equipment that has been identified as having a fluid leak should have a drip basin under the leak area to ensure no release to the surrounding environment.
23. All hazardous materials storage containers must be labeled with the following information: permittee’s/contractor’s name, contents of the container (name of the product that you put in the container, if not in the original container from the manufacturer), date the product was purchased/put in the container. (e.g. Northern Guides, Diesel Fuel, 2009)
24. Equipment repair by the permittee/contractor is allowed on the basis of the necessity to operate equipment on the site located within this permit. Equipment repair that has the potential to release fluids should be completed over an impermeable liner to ensure fluid migration to the environment does not occur.
25. All spills shall be contained and cleaned up as soon as the release has been identified. The release of POLs to any water body is to be reported to the Alaska Department of Environmental Conservation (ADEC) as soon as the person has knowledge of the release (in Fairbanks 457-2121 or 1-800-478-9300 outside normal business hours). Within 48 hours of a spill on public lands the

permittee/contractor shall contact the Authorized Officer Representative, Darrel VandeWeg (907-474-2325) or Joseph Sanchez (907-474-2355).

26. Attracting wildlife to food and garbage is prohibited. The permittee/contractor shall keep garbage or other wildlife attractants secured while awaiting their use or incineration. Specifically, it is recommend that they use bear-proof containers, elevated caches or, where possible, suspend attractants from a tree or structure 10 feet up in the air and 12 feet away from the tree if attractants are stored on site.
27. Wildlife will not be harassed by the permittee/contractor, any of their employees or contractors.
28. Burial of garbage on public lands is not authorized. All solid waste (garbage), including incinerated ash shall be removed by the permittee/contractor from public lands and disposed of in an Alaska Department of Environmental Conservation (ADEC) approved waste disposal facility, unless otherwise specified. Solid waste combustibles may be incinerated in a contained and controlled manner.
29. Areas of operation shall be kept in a neat and sanitary condition at all times. Specific written instructions will be provided by the authorized officer's representative should it be required.
30. The permittee/contractor will follow the best management practices for dust abatement to keep dust at an acceptable level.
31. The permittee/contractor is responsible for familiarizing him/herself and affiliates with the identification of invasive plant species that may occur in the area, particularly the ones listed in this document. The permittee/contractor will promptly report to the BLM, the location and extent any invasive plant infestations observed at, or near, the permitted mineral site.
32. The federal government shall not be held responsible for protection of the permittee/contractors structures or their personal property from wildfire. The permittee/contractors will be held financially responsible for any actions or activity that results in a wildfire. Costs associated with wildfire include but are not limited to; Damage to natural resources and costs associated with suppression action taken on the fire.
33. Permittee/contractor will meet with BLM staff for a clear understanding of what the visual resource management objectives are prior to start of project.
34. In consultation with BLM, any perennially flooded areas of the pit floor will be reclaimed to create wetland habitat as described in the North Slope Gravel Pit Performance Guidelines (Alaska Department of Fish & Game Technical Report No. 93-9) booklet under the section: Non-floodplain Material Sites.

35. In an effort to lessen visual impacts, heavy equipment used in association with the material extraction operations will be well hidden from view during the life of the material extraction project.
36. Permittee/contractor will meet with BLM Staff at the end of the life cycle of the material extraction project prior to final reclamation to define final configuration of the material extraction site.

ATTACHMENT # 2

ADOT &PF Development Guidelines

Attachment # 3
COMPLIANCE WITH ANILCA SECTION 810
EVALUATION AND FINDING

Applicant: Alaska Department of Transportation and Public Facilities
(ADOT&PF)

Serial No.: FF092995 (362113)

EA No.: DOI-BLM-AK-03000-2011-0034-EA

Proposed Action: reauthorize a material site at milepost 76 of the Dalton Highway.

Location: Dalton Highway Mile Post 76, Alaska; T15N, R12W, Sec 31, Fairbanks Meridian

Description of Proposed Action: The Alaska Department of Transportation and Public Facilities (ADOT&PF) has submitted a request to reauthorize the existing mineral material site along the Dalton Highway at mile post 76, to conduct road maintenance projects along the Dalton Highway for the next 10 years. Access to the proposed mine site would be from the Dalton Highway, along the existing access road to the mineral material pit.

Date: 28 September 2011

EVALUATION

Effect of proposed action on subsistence uses and needs

Fisheries:

Activity at this mineral material site is not expected to result in an impact to any aquatic habitat or resources given the provided mitigation. As a result, it is anticipated that there will be no reduction to harvestable fisheries resources available for subsistence uses. For the same reason, the proposed action is not expected to alter the distribution, migration or location of harvestable fisheries resources. The pit location and gated entrance do not create any legal or physical barriers that would limit access by subsistence users of fisheries resources.

Wildlife:

The proposed area is within Game Management Unit (GMU) 20F approximately 20 miles north of the Yukon River. Large mammals such as moose, black bears, and grizzly bears occur in the area and may temporarily avoid the area when human activity is present. Small game and upland birds occupy the landscape and may also avoid disturbance when humans are in the area. However, the long-term existence of human habitation and other facilities in nearby areas indicate that local game and upland birds may already be habituated to humans. Although temporary displacement of wildlife will occur with the extraction of gravel from the pit by reducing habitat, long-term effects may be mitigated when human activity ceases and vegetation recolonizes the area. There are no legal or physical barriers that would limit access by subsistence users of wildlife resources. Therefore, the proposed action will not significantly affect subsistence uses and needs.

Other Resources:

The proposed action is not anticipated to change or impact any other harvestable resources such as wood, water, berries or vegetation because the applicant would be working within a previously developed material site that has existing access.

Availability of other lands for the purpose sought to be achieved:

No other lands were considered for this use because the proposal is to reauthorize an existing material site.

Other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes:

There is no substantial evidence that would indicate a significant impact on subsistence resources would result from the proposed action. No other alternatives were evaluated.

FINDING:

The proposed action will not significantly restrict subsistence uses. No reasonably foreseeable and significant decrease in the abundance of harvestable resources or in the distribution of harvestable resources, and no reasonably foreseeable limitations on harvester access have been forecasted to emerge as a function of the action that is analyzed in this document.

Prepared by: Robert Karlen - Fisheries Biologist
Merben R. Cebrian - Wildlife Biologist

References Cited or Reviewed:

Seaton, C.T. 2008. Units 20C, 20F, and 25C moose. Pages 373-385 *in* P. Harper, editor. Moose management report of survey and inventory activities 01 July 2005 through 30 June 2007. Project 1.0. Alaska Department of Fish and Game, Juneau, Alaska.

Attachment # 4

ESSENTIAL FISH HABITAT ASSESSMENT

Applicant: Alaska Department of Transportation and Public Facilities (ADOT&PF)

Serial No.: FF092995 (362113)

EA No.: DOI-BLM-AK-03000-2011-0034-EA

Proposed Action: reauthorize a material site at milepost 76 of the Dalton Highway.

Location: Dalton Highway Mile Post 76, Alaska; T15N, R12W, Sec 31, Fairbanks Meridian

Description of Proposed Action: The Alaska Department of Transportation and Public Facilities (ADOT&PF) has submitted a request to reauthorize the existing mineral material site along the Dalton Highway at mile post 76, to conduct road maintenance projects along the Dalton Highway for the next 10 years. Access to the proposed mine site would be from the Dalton Highway, along the existing access road to the mineral material pit.

Date: 02 December 2011

On October 11, 1996, the Sustainable Fisheries Act (Public Law 104-297) became law which, among other things, amended the habitat provisions of the Magnuson Act. The re-named Magnuson-Stevens Act calls for direct action to stop or reverse the continued loss of fish habitats. Toward this end, Congress mandated the identification of habitats essential to managed species and measures to conserve and enhance this habitat. The Act requires federal agencies to consult with the Secretary of Commerce regarding any activity, or proposed activity, authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH).

For this assessment, essential fish habitat means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (Magnuson-Stevens Act, 16 U.S.C. 1801 et seq). For the purpose of interpreting the definition of essential fish habitat: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and spawning, breeding, feeding, or growth to maturity covers a species' full life cycle (50 CFR § 600.10).

The National Marine Fisheries Service (NMFS) recognizes fresh waters cataloged as being used by salmon under the State of Alaska's *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* as essential fish habitat. There are no streams in the vicinity of the proposed mining area that meet the criteria (ADF&G 2011). In addition, activity at this mineral material site is not expected to result in any impacts to aquatic habitat or resources. As a result, it is anticipated that there will be no impacts to fisheries resources beyond the mined area.

EFH Finding: Based on the finding that there are no salmon species catalogued by the State of Alaska present in the area to be used or impacted by the permit holder, it is anticipated that the proposed action will not have any deleterious effects on salmon or their habitat. Therefore, the proposed action is assigned the EFH determination: *No affect*. EFH consultation with NMFS is not required.

Literature Cited:

Alaska Department of Fish and Game. 2011. Fish distribution database. Internet website at: <http://www.sf.adfg.state.ak.us>.

Robert Karlen
Fisheries Biologist
Central Yukon Field Office

Attachment # 5

Fairbanks District Office, Bureau of Land Management

ASSESSMENT OF ARCHAEOLOGICAL AND HISTORIC RESOURCES

Serial Number	FF092995
NEPA Number	DOI-BLM-AK-03000-2011-00034-CX
Applicant	Alaska Department of Transportation and Public Facilities
Quadrangle	Bettles
Date	10/3/11

Location:

Dalton Highway MP 76, T150N, R12W, Sec. 31, FM.

Description of Proposed Action:

The Alaska Department of Transportation and Public Facilities (ADOT&PF) has submitted a request to reauthorize the existing mineral material site along the Dalton Highway at mile post 76, to conduct road maintenance projects along the Dalton Highway for the next 10 years. The ADOT&PF basic mining plan text follows. Figure 1 shows the MTP currently approved boundary.

Access to the proposed mine site would be from the Dalton Highway, along the existing access road to the mineral material pit.

Equipment to be used at the proposed mineral material site is best described as standard excavating equipment. This includes bulldozers, front end loaders, excavators, dump trucks (side or belly dump), crushing and screening equipment, and support equipment for maintenance and refueling. There may also be a processing or sorting plant on site to sort the usable material from the waste material.

Operations could be conducted 24 hours a day during the mining at the material site. The noise and dust will probably not be noticeable along the Dalton Highway. Since the material is being removed from an alluvial fan, it is pre-broken and no blasting is needed.

The mineral material site will be authorized for use by ADOT&PF to mine pit run material for incidental use on minor projects up to 5,000 cubic yards per year without any further NEPA review. When ADOT&PF prepares to go out for bid to conduct major mining operations, they will be required to submit for approval and possible NEPA analysis the mining plan submitted by

their selected contractor. Mining will not start until the contractors mining plan is reviewed and approved by the BLM.

OFFICE REVIEW

Results of Office Review and Recommendation

A review of the AHRS database reveals no known cultural resources in the vicinity of the material source. This material source has been subjected to previous on the ground reconnaissance associated with the TAPS as well as subsequent gas line projects. It is recommended that the proposed action proceed with no further Section 106 Review.

FIELD EXAMINATION

Description of the area surveyed

NA

Survey methodology

NA

Results of survey

NA

RESULTS

Anticipated impacts to cultural resources

None

National Register eligibility

NA

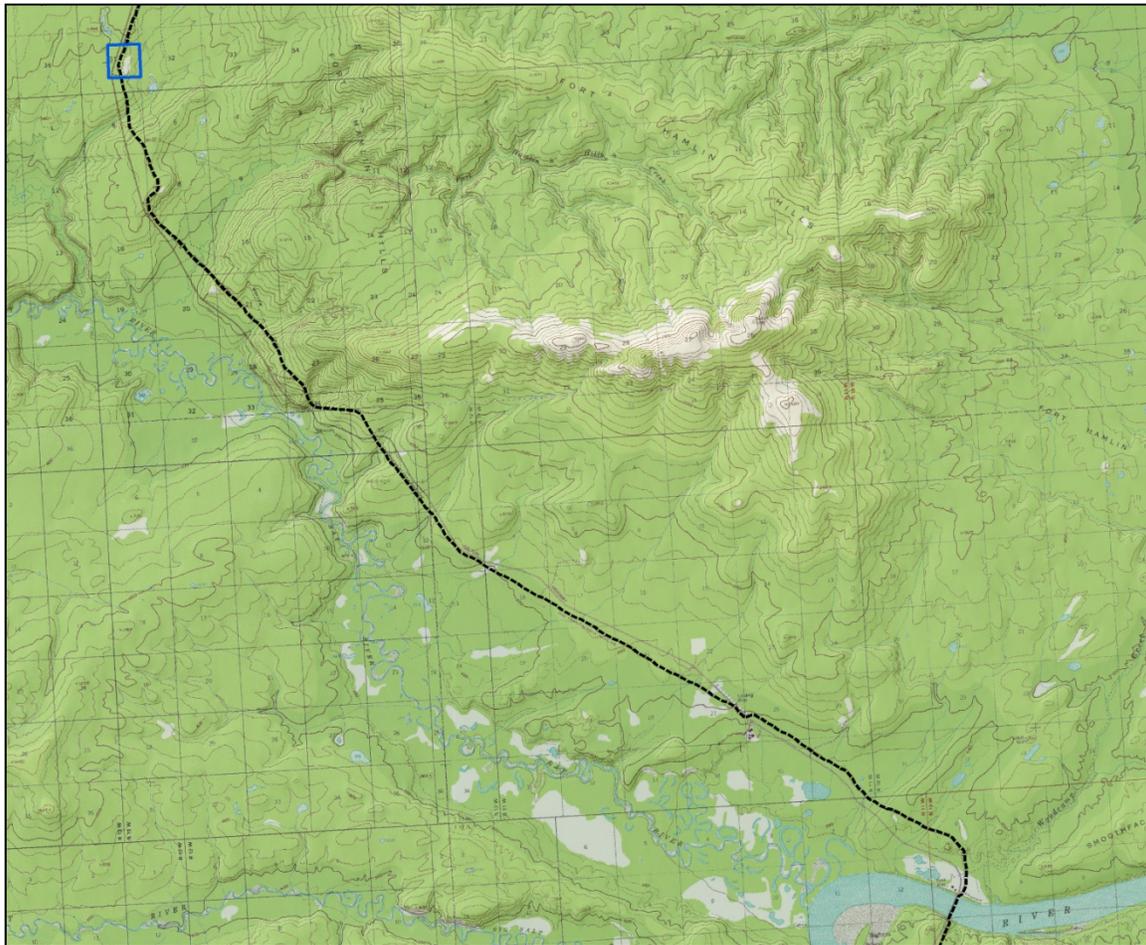
Conclusions & Recommendations

Upon insertion of the stipulations listed below, no significant impacts to cultural resources are anticipated as a result of the proposed action, and it is recommended that the undertaking **proceed**.

- 1.) Activities shall be conducted in such a manner as to not cause damage or disturbance to any historical or archaeological sites and artifacts. The Antiquities Act (1906), Archaeological Resources Protection Act (1979), Federal Land Policy and Management Act (1976), and general United States property laws and regulations, all prohibit the appropriation, excavation, damage, or destruction of any historic or prehistoric ruin or monument, or any other object of antiquity situated on lands owned or controlled by the United States (16 USC 470; 16 USC 432; 43 U.S. 1733(a); 18 U.S.C. 1361; 18 U.S.C. 641; 43 CFR 8365.1). Such items include both prehistoric stone tools and sites, as well as historic log cabins, remnants of such structures, refuse dumps, and other such features. Should any such site be discovered during the permitted activity, the

permittee should avoid impacting such materials, and immediately notify the Authorized Officer.

William H. Hedman, Archeologist
BLM-FDO CYFO



Attachment 5, Figure 1. Location of the subject material source located approximately 15 miles north of the Yukon River at mile post 76 of the Dalton Highway.

Attachment # 6

Boundary Risk Assessment

We have reviewed the EA document for the referenced proposed action, and find no significant risks to existing boundaries and monumentation. The apparent intended land description for the FUP is the S1/2NE1/4, N1/2SE1/4 Section 31, T. 15 N. R. 12 W., F.M., AK.

At the time the applicant provides a Site Boundary as required in item 1. of the Project Mining and Reclamation Plans, it is recommended that the drawings be provided for a brief office review of the methods of survey and land description adequacy.

I have attached an SDMS (Figure 1) and Google-Earth (Figure 2) plots for your use. The nearest monument is the SW township corner, more than ¼ mile from the proposed activity.

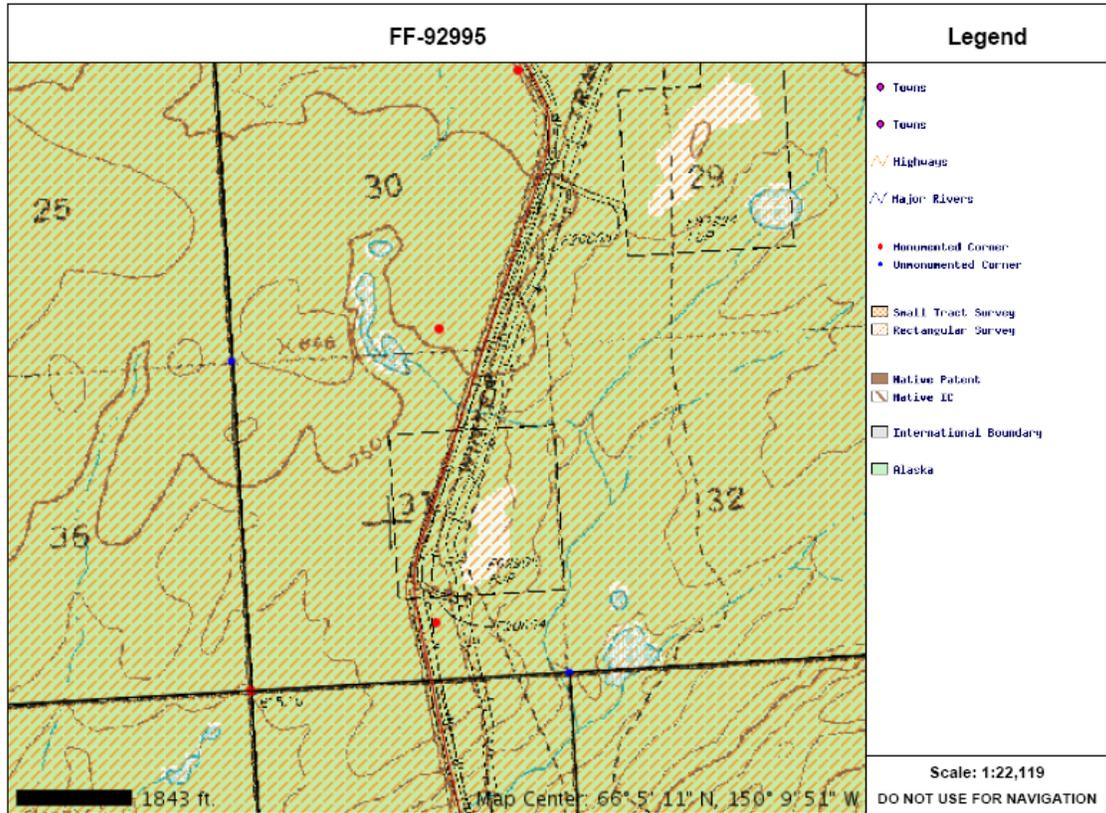
This email should serve notice that the requirements of IM 2011-122 have been met as and no further boundary evidence products are required. A copy of this email should be placed in the serialized case file as documentation that the Boundary Risk Assessment has been issued by Cadastral Survey.

As a reminder Action Code AC 662 (CAD REVIEW NOT REQUIRED) should be entered into ALIS when the transaction is approved and coded.

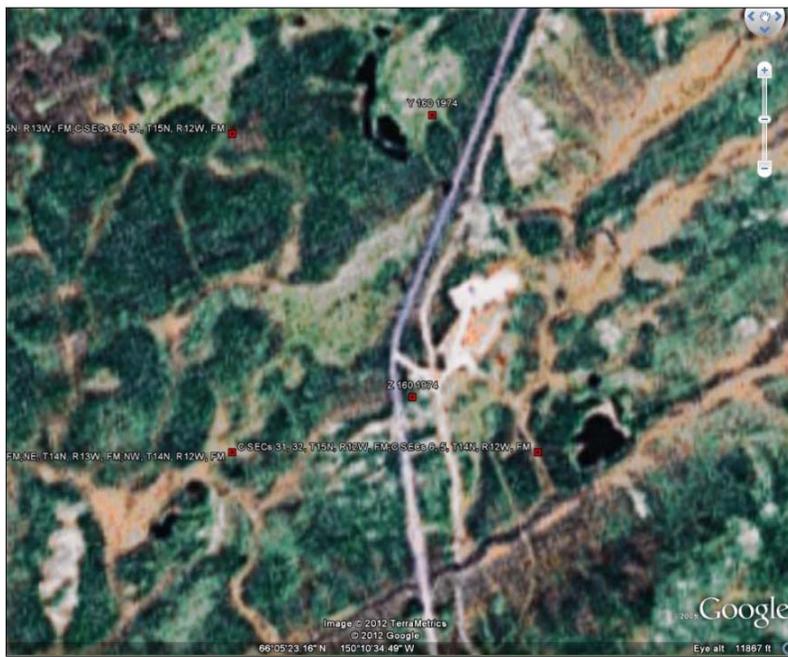
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Michael H. Schoder, PLS

BLM Alaska State Office
Deputy State Director AK-920
Alaska Cadastral Survey Chief
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Attachment 6, Figure 1: SDMS figure



Attachment 6, Figure 2: Google Earth plot

Attachment # 7

WILDERNESS CHARACTERISTICS ASSESSMENT

DOI-BLM-AK-03000-2011-0034-EA

Environmental Assessment – Existing Mineral Material Pit at Dalton Highway Milepost 76.

FF092995 (362113)

Applicant

Alaska Department of Transportation and Public Facilities (ADOT&PF)

Proposed Action

ADOT&PF has requested to continue the use of the existing gravel pit at about Dalton Highway milepost (MP) 76. The material mined from the mineral material pit will be used to conduct road upgrade and maintenance projects to the Dalton Highway for the next 10 or more years. These projects are needed to allow safe travel along the highway for the hauling of material to and from the northern portions of Alaska.

Purpose and Need

The BLM will decide whether or not to issue ADOT&PF a Free Use Permit to expand the existing gravel pit at about Dalton Highway MP 76. The BLM will also determine the mitigation necessary to prevent undue and unnecessary degradation of the resources.

Evaluation

The basis for this evaluation is Instruction Memorandum (IM) 2011-154 which directs offices to continue to conduct and maintain inventories regarding the presence or absence of wilderness characteristics, and to consider identified lands with wilderness characteristics in land use plans and when analyzing projects under the National Environmental Policy Act (NEPA).

The 1980 Nonwilderness Assessment was a special project approved by the Director, BLM and conducted by BLM along portions of the trans-Alaska oil pipeline system (TAPS) corridor (U.S. Department of Interior, BLM, 1980). The assessment identified lands under BLM administration that lacked wilderness characteristics as defined in the Wilderness Act of 1964 and was conducted in a manner that met the requirements of Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA).

The Yukon Segment of the Assessment covers the area from T14N R12W/13W Fairbanks Meridian (Milepost 76 (approximate) Dalton Highway) into T3N R2W/3W Fairbanks Meridian. BLM management authority in this segment occurs between approximately Milepost 76-56 (Yukon River) of the Dalton Highway and extends to the east/west limits of BLM managed land.

Portions of this segment meet the 5,000 acre minimum size. Lands identified within the nonwilderness boundary line were deemed as not meeting naturalness standards due to roads, camps, airfields, pipelines and material sites. The presence of the Yukon River bridge affects the naturalness of the area. These disturbances bisect the entire length of the segment. The proposed action is located within the nonwilderness portion of this segment.

Type of Assessment/Sources

U.S. Department of Interior, BLM, 1980. Nonwilderness Assessment: The Alaska Natural Gas Transportation System. Final Decision. Anchorage, Alaska; personal knowledge of the area; maps; aerial photos.

FINDING

The proposed action will occur in an area that does not have wilderness characteristics. More recent observations have confirmed that the 1980 assessment is still valid. In addition, the lands that were determined to be nonwilderness are reserved as a Utility and Transportation Corridor under PLO 5150, so would not be suitable for management as wild lands.

Prepared by: Lisa Shon Jodwalis

Date: 12 January 2012