

STATEWIDE MATERIAL SITE INVENTORY

MATERIAL SITE
INSPECTION REPORT

Federal Project No. STP-000S(530)
AKSAS Project No. 76174

DALTON HIGHWAY

MS 65-9-029-2
Shooting Range

November 25, 2009

<u>CONTENTS</u>	<u>PAGE</u>
COVER SHEET.....	1
LOCATION MAP	2
SITE MAP	3A & 3B
INSPECTION FORM.....	4 thru 10

CATEGORY:

ACTIVE – OPEN

According to information found in the DOT&PF EDMS system in January 2009 and BLM case file abstracts, this site lies on Federal lands managed by BLM. The site (MS 79-2) was originally developed for construction of the Dalton Highway and Alyeska Pipeline in the 1970's. It was proposed for use as a solid waste disposal site (SWDS 62-3) but there is no evidence that it was approved. However, there was reported evidence of buried trash in the pit. Construction debris was noted in the eastern portion of the site in 2009. It is presently a joint-use material site, used for Alyeska operations and maintenance (OMS-79-2) and for DOT&PF Dalton Highway maintenance and reconstruction (MS 65-9-029-2). Generally, the site is operated under a mining plan prepared by Alyeska dated 2002 that shows working areas for both Alyeska and DOT&PF. The Alyeska contract (F-95099) presently expires on June 4, 2012. DOT&PF is operating under a FUP (F-92993) which currently expires December 31, 2010. The permit limits were expanded in 2007. Access Road 79-APL/AMS-2 connects the site to the Dalton Highway. The access road is included in the DOT&PF permit. The site appeared to contain significant quantities of weathered rock and should be retained by DOT&PF for future use.

LOCATION MAP



**MS 65-9-029-2
SHOOTING RANGE**

OMS 79-2

DALTON HIGHWAY

GPS COORDINATES FROM GOOGLE EARTH
 UTM (WGS84-METERS)
 ZONE 6: N7,318,799 E367,445
 AK STATE PLANE (NAD83-US SURVEY FT.)
 ZONE 4: N4,372,028 E1,652,780

U.S.G.S. QUADRANGLE: BEAVER (A-6), BETTLES (A-1), LIVENGOOD (D-6) & TANANA (D-1)

ACTIVE - OPEN



GRAPHIC SCALE IN MILES

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
STATEWIDE MATERIAL SITE INVENTORY			
MS 65-9-029-2			
SCALE AS SHOWN	DESIGNED CHECKED P.K.H. C.H.R.	DRAWN DATE A.T.B. MAY 2009	PAGE 2

Prepared By:
R&M CONSULTANTS, INC.

BASE MAP CREATED WITH TERRAIN NAVIGATOR PRO

Z:\project\1443.03\65_Dalton_Highway\MS 65-9-029-2\acad\geo\acad_MS_Topo_Map_65-9-029-2.dwg

Plotted 1/25/2010 11:51 AM by Aaron Banks

SITE MAP



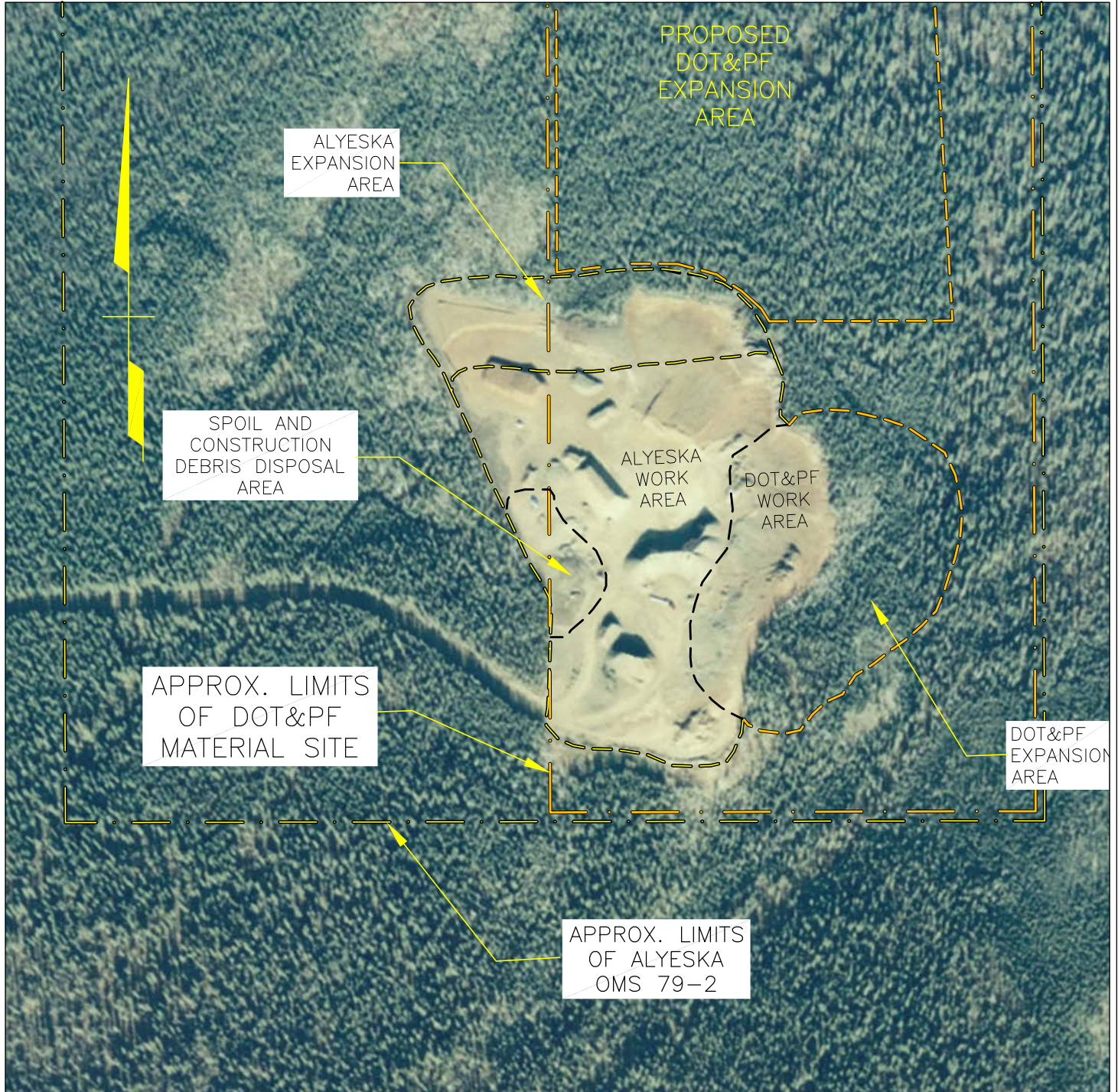
BASE MAP IS 2008 AERIAL PHOTOGRAPHY. THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
STATEWIDE MATERIAL SITE INVENTORY			
MS 65-9-029-2			
SCALE AS SHOWN	DESIGNED P.K.H. CHECKED C.H.R.	DRAWN P.K.H. DATE JUNE 2009	PAGE 3A

SITE MAP



BASE MAP IS 2008 AERIAL PHOTOGRAPHY. THIS IS A PLANNING DOCUMENT ONLY. THE MATERIAL SITE BOUNDARIES SHOWN ON THIS DRAWING ARE APPROXIMATE. OWNERSHIP OF THE LANDS ADJACENT TO THIS SITE ARE UNKNOWN. THE ACCESS ROW SHOULD BE VERIFIED.

ACTIVE - OPEN



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
STATEWIDE MATERIAL SITE INVENTORY			
MS 65-9-029-2			
SCALE AS SHOWN	DESIGNED P.K.H. CHECKED C.H.R.	DRAWN P.K.H. DATE JUNE 2009	PAGE 3B

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

THIS REPORT IS BASED ON A REVIEW OF EXISTING DATA AND BRIEF FIELD INSPECTIONS. THUS THE DATA CONTAINED HEREIN SHOULD BE CONSIDERED PRELIMINARY AND USED FOR PLANNING PURPOSES ONLY. USERS OF THIS DATA SHOULD VERIFY THE INFORMATION PRIOR TO USING IT FOR DESIGN OR CONSTRUCTION PURPOSES.

**IF OTHER IS SELECTED FOR A SECTION, EXPLAIN IT IN SECTION 44. NOTES.
IF AN ANSWER IS UNKNOWN SELECT "UNKNOWN" OR LEAVE BLANK**

1. **MS_ID** 65-9-029-2
Enter the full material site number e.g.. 65-9-045-2
2. **DATE_INSPECT** 8/9/2009
Date of field inspection
3. **FLD_INSPEC_ORG** AARON BANKS / R&M CONSULTANTS
Name of inspector / Organization or Company

4. **REGION** NORTHERN
5. **LOCATION** DALTON HIGHWAY
Name of Highway Enter Name of Facility or Secondary Route Name
(i.e.Kotzebue Airport, Nash Road, etc.)

6. **MILEPOST** 64
List the closest main highway milepost

7. **NAME** SHOOTING RANGE, MS 79-2, OMS 79-2
Enter commonly used name (s), e.g. Hess pit, Gobblers Knob, Midway. List all that apply separated by commas.

8. **MAINT_DIST/STAT** District INTERIOR/DALTON Station SEVEN MILE
Highway Maintenance District and Station, for locations not on highways select other.

9. **QUAD** LIVENGOOD D-6
U.S.G.S. Quad. Map

10. **TOWNSHIP /RANGE** T#S R#E T13N R11W Meridian FM
Section 8

- | | | | |
|---------------------------|--------------------|-----------------------------|--|
| 11. COOR_UTM | ZONE <u>5</u> | 12. COOR_STATE_PLANE | ZONE <u>4</u> |
| NORTHING <u>7,318,799</u> | | NORTHING <u>4,372,028</u> | |
| EASTING <u>367,445</u> | | EASTING <u>1,652,780</u> | |
| | UTM WGS84 - Meters | | Alaska State Plane NAD83 - Survey Feet |

13. **BOROUGH** UNORGANIZED **TAX ID NO.** _____

14. **DNR_LAND_USE_PLAN** DALTON HIGHWAY MASTER PLAN

15. **CATEGORY** (To be filled in the office)

- 15a. **CLASSIFICATION** ACTIVE

- 15b. **STATUS** OPEN

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

22. **ACCESS_TYPE** EXISTING ROAD / OPEN

NONE	No access road has been built.
EXISTING ROAD / OPEN	Drivable. May have gate.
EXISTING ROAD / REVEG	Can be reopened with little effort.
EXISTING ROAD / CLOSED W/BERMS	Can be reopened with little effort.
EXISTING ACCESS / REMOVED	Can be reopened with much effort.
SNOW ROAD	Can only be accessed during winter.
ICE ROAD	Requires crossing river or lake ice in the winter.
BARGE	Material can only be moved by barge.
OTHER	The site does not fit any of the categories above. Describe in Section 44, Notes.

23. **ACCESS_LENGTH** 4,300
Approx. length from edge of pit to highway/secondary route (ft.)

24. **VEGETATION**

Vegetation in the undeveloped areas was dominated by mature stands of spruce to 40 ft. high by 12 in. diameter with some intermixed stands of aspen.

25. **TYPE_1** QUARRY 26. **TYPE_2** _____

Dominant type	Subordinate type
General Types of Materials Available	Enter data in Type_2 only if two types of material site available
QUARRY	Bedrock sources requiring blasting
BORROW PIT	Soils or soft bedrock (rippable), above water table
BAILING	Requires production below the water table
RIVER BAR	Sand/gravel bars in active channels

27. **OB_CLASS_1** <3 FT. 28. **OB_CLASS_2** <3 FT.

New Site or expansion Area	Existing Pit (Spoil)
A site may have both. Data should be based on actual subsurface exploration, otherwise unknown.	
Estimated average depth over the area.	
NONE	3 TO 6 FT.
<3 FT.	>6 FT.
	UNKNOWN
	OTHER

29. **OB_TYPE_1** COLLUVIUM 30. **OB_TYPE_2** SPOIL

New Site or expansion Area	Existing Pit (Spoil)
A site may have both.	
SILT	PEAT
COLLUVIUM	SPOIL
	SOLID WASTE
	OTHER
	UNKNOWN

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

<p>31. MAT_TYPE_1 Dominant type</p>	<p>WEATHER. BEDROCK</p>	<p>32. MAT_TYPE_2 Subordinate type</p>	<p>BEDROCK</p>
	<p>BEDROCK Bedrock sources requiring blasting</p> <p>WEATHER. BEDROCK Bedrock sources requiring ripping</p> <p>FLUVIAL Water deposited sand and gravel, includes glaciofluvial</p> <p>GLACIAL Glacial till</p> <p>COLLUVIAL Talus slopes, etc.</p> <p>EOLIAN Sand Dunes, etc.</p> <p>SILT Silt deposits, loess, fluvial, etc.</p>		
<p>33. PERMAFROST_1 New Site or Expansion Area</p>	<p>DETECTED IN NO TEST HOLES OR PITS</p>		
<p>34. PERMAFROST_2 Existing Site</p> <p>DETECTED IN MOST TEST HOLES</p> <p>DETECTED IN SOME TEST HOLES</p> <p>DETECTED IN IMMEDIATE VICINITY</p> <p>DETECTED IN NO TEST HOLES</p> <p>DATA OUTDATED</p> <p>UNKNOWN</p> <p>OTHER</p>	<p>DATA OUTDATED</p>		
<p>35. GROUNDWATER</p>	<p>The depth to groundwater underlying the pit is unknown.</p>		

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

36. LITHOLOGY_1

BASALT

37. LITHOLOGY_2

SHALE/MUDSTONE

Dominant type

Subordinate type

IGNEOUS ROCK	Undifferentiated Igneous Rocks
GRANITIC	Granite/Monzonite/Granodiorite
DIORITE/GABBRO	Diorite/Gabbro
BASALT	Dark colored fine-grained Igneous Rocks
GREENSTONE	Altered Volcanic Rocks w/green tint
METAMORPHIC ROCK	Undifferentiated Metamorphic Rocks
SCHIST/PHYLLITE	Includes rocks ranging from slate to schist
GNEISS	Includes hard schistose rocks
MARBLE	
CATACLASTIC	Incl. Valdez Formation Rocks, Kenai Penn.
MÉLANGE	Incl. McHugh Formation Rocks, Kenai Penn.
SEDIMENTARY ROCK	Undifferentiated Sedimentary Rocks
CONGLOMERATE	
SANDSTONE	Includes greywacke, etc.
SHALE/MUDSTONE	
LIMESTONE	
FLUVIAL	River and stream deposits (floodplain), includes outwash.
ALLUVIAL	Alluvial / Debris Fan deposits
GLACIOFLUVIAL	Eskers, kames, etc.
GLACIAL	Till
COLLUVIAL	Talus, etc.
EOLIAN	Sand Dunes, etc.
SILT	Loess, fluvial silts, etc.
OTHER	Explain in Section 44.

38. MATERIAL_CLASSIFICATION

ASTM Classification, generally they should range from coarse to fine.

38a. _____	38c. _____	38e. _____	38g. _____
38b. _____	38d. _____	38f. _____	38h. _____

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

39. COBBLES_AND_BOULDERS

Test Boring Callout / ASTM Classification, either a. or b. and c. (Can use ranges i.e. 0 to 20)

- 39a. CONTAINS _____
- 39b. Est. % by VOL. _____ (Est. From Visual Observations)
- 39c. MAX. SIZE (in.) _____ (Observed Size)

40. AGG_TEST_RESULTS

Year of test or report- Test result / Year of test or report- Test Results

- 40a. SG APP COARSE _____
- 40b. SG APP FINE _____
- 40c. ABSORPTION CRSE _____
- 40d. ABSORPTION FINE _____
- 40e. NORDIC ABRASION _____
- 40f. L.A. ABRASION _____ 2002- 21, 11, 16, 14, 11, 16
- 40g. DEGRADATION (T-13) _____ 2002- 21, 75, 70, 24, 33, 19
- 40h. NASO4 LOSS COARSE _____ 2002- 23.8, 0.7, 4.2
- 40i. NASO4 LOSS FINE _____ 2002- 63.0

41. POTENTIAL_USABILITY

CRUSHED PRODUCTS PRODUCED

Best known potential use of the material, based on records, exploration and laboratory data.

- | | |
|---------------------------------|--|
| CONCRETE AGGREGATE PRODUCED | The site has produced concrete aggregate |
| PAVING AGGREGATE PRODUCED | The site has produced paving aggregate |
| CRUSHED PRODUCTS PRODUCED | Base, Surface Coarse, Subbase, etc. has been produced. |
| TYPE A AND B MATERIAL AVAILABLE | 0 to 10 percent passing 200 |
| TYPE C AVAILABLE | Compactable material |
| TYPE C NOT AVAILABLE | Uncompactable material (Lower Kuskokwim and Yukon River, etc.) |
| UNKNOWN | |
| OTHER | Explain in Section 44. |

42. SPECIAL_PROBLEMS

OTHER

Special problems encountered or anticipated with use of the material, based on records, exploration and laboratory data.

- | | |
|----------------------------|---|
| ORGANIC CONTENT | The material is very difficult to compact. |
| HIGHLY WEATHERED GRAVEL | The gravel is highly weathered and may break down when handled. |
| BREAKS DOWN UNDER USE | Material breaks down on grade. |
| SENSITIVE TO WATER CONTENT | Material is sensitive to water content, i.e.. some glacial tills, soft bedrock. |
| VARIABLE MATERIAL | Deposit contains mixture of suitable and unsuitable material. |
| POSSIBLE CONTAMINATION | Site may be contaminated by petroleum products or hazardous materials. |
| CONTAINS ASBESTOS | Site contains naturally occurring asbestos. |
| POTENTIAL ASBESTOS | Site in area where naturally occurring asbestos is mapped. |
| ACID ROCK DRAINAGE | Site contains rock susceptible to producing acid rock drainage. |
| OTHER | Explain in Section 44, Notes. |

**STATEWIDE MATERIAL SITE INVENTORY
MATERIAL SITE INSPECTION FORM**

43. RIPRAP

NOT POSSIBLE

Class II or larger. Does not include production for erosion control riprap for ditches or culverts.

PREVIOUS PRODUCTION

There is a record of production.

POSSIBLE FURTHER INVESTIGATION NEEDED

The site is a bedrock quarry containing hard rock

NOT POSSIBLE

The site has soft rock or soil.

UNKNOWN

OTHER

Explain in Section 44, Notes.

44. NOTES

Note number of item being discussed.

17b. During the 2009 site inspection, DOT&PF was actively hauling material from stockpiles for the road re-surfacing project between MP 80 to 84.

42. The site appeared to contain a basaltic dike intruding into a softer sedimentary rock striking from the southeast to the northwest. The basalt was hard and has reportedly been used for aggregate production. The sedimentary rock was soft and generally used only for fill.

43. None of the rock exposed in the pit appeared to be suitable for riprap production. It did not produce large enough stones. The basalt may have been used to produce small (Class I) low water crossing rock.