ALASKA DEMOLITION
Specializing in Demolition & Construction Services
Phone: 907-274-3366 Fax: 907-248-6065
2817 Rampart Drive Anchorage, AK 99501

April 23, 2024

Alaska Department of Environmental Conservation
Division of Environmental Health Solid Waste Program
555 Cordova Street
Anchorage, Alaska 99501
Via Email: reese.thieme@alaska.gov and kaylie.holland@alaska.gov

Subject: Inert Waste Monofill, Solid Waste Permit Application

Dear Sir or Madam:

Please accept this application from Alaska Demolition, LLC to obtain renewal of its permit for an inert waste monofill identified as Palmer Reclamation Site (PRS). This is an existing inert waste monofill and meets the facility requirements for re-certification. The area of inert landfill operations requested for renewal is the area approved by the Department in 2017 as Cell #2 (See attachment 9 of this application). Cell #2 includes the area defined as areas B-2 & B-3 in the City of Palmer Conditional Use Permit Dated August 19, 2021, with the newly established surveyed 500-foot well radius set back boundary locations (See attachment 7 and Figure 1 of this application).

The original application for this inert waste monofil was submitted on October 29, 2003, and was titled "Inert Waste Landfill Permit Application, Rebarcheck Farm, Palmer, Alaska". After the initial application, there were permit renewal applications submitted in 2009, 2014, and 2019; additionally, there was a cell expansion application approved in 2017. All re-certifications and cell expansions previously submitted have been approved by the Solid Waste Program.

The following offers a description as required under 18AAC 60.210(b)(1):

Site Topography: The site is an old gravel pit with an excavation on the subject property which covers approximately 13.5 acres, with portions of the excavation extending up to 60 feet below the natural grade of the subject and surrounding properties.

Geology: The monofill location is in Palmer Alaska and is located in the Matanuska Valley which is characterized by multiple glacial advances and retreats over time. Accordingly, the sediments in the vicinity of the project area consist of well-graded, dense glacial tills.

United States Geological Survey (USGS) investigations conducted in the general area indicate that the glacial till may extend up to 300 feet below the ground surface (bgs) at the project location. The Matanuska formation, located within the valley below the glacial till, consists of a sequence of complexly interbedded dark marine siltstone, sandstone, minor conglomerates, and claystone. Conglomerates and coal seams are also found within the Matanuska Formation.

The nearest earthquake fault is the Borders Ranges Fault, located about 7 miles Southeast of the site at its closest point. Based on the soil observed in the sidewalls of the subject gravel pit, the subsurface materials at the site consist of about 5 to 10 feet of sandy silt overlying slightly silty, sandy gravel with cobbles. Drilling logs for water wells installed in the project vicinity indicate that the sandy gravel material likely extends over 125 feet bgs.

Climate: The average temperature in Palmer ranges from 4 to 21 degrees Fahrenheit in January and 44 to 67 degrees Fahrenheit in July. Average precipitation is 16.5 inches, with about 50 inches of snowfall.

Surface Hydrology: The nearest lake or surface water body is McLeod Lake which is located about 1 mile southwest of the subject property. The Matanuska River is the closest creek or river to the subject property located about 1.7 miles east at its closest point.

Groundwater Hydrology: Shannon & Wilson provided a letter in October 2003 with the initial application that described groundwater hydrology at the site, the letter is attached. The regional water table near the subject site reportedly trends from north to the south, according to a groundwater study performed by the State of Alaska Department of Natural Resources and referenced in prior submittals. However, the study also stated that localized groundwater may vary from the regional groundwater flow direction (S&W, 2003).

The groundwater level in the immediate project vicinity is estimated using an abandoned water well 350 feet west of the gravel pit. An August 2003 groundwater measurement from this well indicated a groundwater elevation of 94.8 feet above mean sea level. Based on surveyed elevations, the lowest point of the excavation is located about 121 feet above mean sea level. Therefore, there was an approximately 26-foot separation between the excavation base and the underlying groundwater in August 2003 (S&W, 2003). The 1978 well log for this well (Well ID 83862) shows a static water elevation of 86 feet below the ground surface. Assuming an approximate 182 foot above mean sea level ground surface elevation at the well, the groundwater elevation in this well in 1978 would be calculated at 96 feet above mean sea level. Well log 83682 is attached.

Historical groundwater records were also obtained for a USGS water well located about 0.25 miles southeast of the proposed monofill. Groundwater level measurements collected from the well from 1950 through 1992 generally fluctuated within a 4-foot range, with a maximum 8-foot variance (4 feet below average low groundwater) observed once during the 43-year period. Based on geological and groundwater studies conducted in the Palmer area, the USGS water quality well is likely installed in the same aquifer as the aquifer underlying the subject property. Given the groundwater level measured in the "on-site well" in 2003 and the 8-foot groundwater variance observed in the USGS well, a conservative estimate of the highest groundwater level that might be expected beneath the excavation is about 103 feet above mean sea level. That would provide an 18-foot separation between the excavation base and the groundwater exceeding the minimum 10-foot separation required by regulation (S&W, 2003).

Ordinances and Zoning: I am aware of local ordinances and zoning requirements. Currently the Site is operating under a City of Palmer Conditional Use Permit #14-001 that was modified in 2018 and 2020 and includes a rezoning action approved by the City Council as described in Ordinance #18-007-Z-1. These documents are provided in the permit application under Attachment 7.

I certify, under penalty of perjury, that all of the information and exhibits in this cover letter and application are true, accurate, and complete.

Respectfully submitted,

Justin T.F. Green
Owner

Enclosures:

- Shannon & Wilson, Inc. (S&W, 2003). Inert Waste Landfill Permit Application, Rebarcheck Farm, Palmer, Alaska. October 29, 2003.
- Well Log 83862
- Letter from a registered engineer in accordance with 18 AAC 60.210(c)
- Permit Application with attachments and figures.