THE EADS GROUP

ENGINEERING ARCHITECTURE and DESIGN SERVICES

December 29, 2009

Mr. Scott Hans, Chief
U.S. Army Corps of Engineers, Regulatory Branch
1834 Federal Office Building, 1000 Liberty Avenue
Pittsburgh, PA 15222

RE: Glacial Sand and Gravel Co. – Mine 47 - SMP
Worth Township, Butler County
Article I. Section 404 Permit Application

Dear Mr. Hans:

The following are our responses to comments presented in your October 19, 2009 letter regarding the permit application submitted by Glacial Sand & Gravel Company (Glacial) for the proposed Mine 47 site in Worth Township, Butler County, PA. Additional comments and clarifications were also received from you at our meeting on November 13, 2009, including a clarification that a "cost-benefit analysis" of the "need" to mine a portion of the esker would not be required but, instead, additional documentation was requested which would demonstrate that the proposed project (which includes some mining within the esker) will not cause an adverse impact to Wetland #1. Supplemental materials and revised permit application sections are included in the attached packet as follows:

- Alternatives Analysis and Drawings (A-1, A-2, A-3)
- Hydrology Report

Responses to each comment received during the Public Notice period (September 2-14, 2009) are also included below, and correspond to the original letter sequence present in your October 19th letter. Please note that a number of the comments, particularly those from "n" through "v," were recognized by the Corps and Glacial as cumulative of earlier comments and, therefore, Glacial's response to these comments is less extensive:

a.) USEPA: The Alternatives Analysis has been revised to include both off-site and onsite alternatives, including nearby upland sites and a minimal impact alternative. Compensatory stream mitigation was discussed with Tyler Bintrim of the USACE during a site visit on July 30, 2009, and he agreed that no suitable sites for mitigation exist within the proposed permit area. Glacial also examined offsite locations for stream mitigation, but no suitable sites could be identified that would represent "in-kind" replacement for the proposed impacts to UNT 3, since past disturbances have channelized the stream. Glacial does not believe offsite stream mitigation is warranted given the minimal ecological functions provided by this stream due to its low flow and incised/channelized nature. The relatively small amount of impacts to this stream would be better mitigated through the expansion of the proposed wetland mitigation area and the diverse functions and values that will be provided.

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As discussed in the attached Hydrology Report, no impacts to hydrology sources of Wetland 1 are anticipated. Concerns raised by the EPA related to potential "secondary impacts" including disturbance of springs feeding the wetland are not valid due to the fact that no springs exist within the proposed mining area north of West Liberty Road (Exhibit 6.2). In addition, mining is not proposed below the water table in this area, so impacts to springs would not occur even if they did exist in this area. Since impacts to the hydrology of Wetland 1 from mining activities are not anticipated, there is no reason to predict that changes to the composition of the vegetative community or functional performance of the wetland may occur. Given the natural succession of Wetland 1 from livestock pastures to a hydrophytic plant community, as evidenced by historical aerial photographs, the native plant community should continue to thrive since hydrology will be unaffected by the proposed project.

b.) [redacted] The original Alternative Analysis in Module 14.4 was not written as clearly as it could have been. The attached Hydrology Report adequately explains and eliminates any misunderstanding created by the original Alternatives Analysis in reference to the draw-down of the water table due to the use of the production well. The process water will be recycled and only make-up water is to be obtained from the Production Well (MW #1). A 48-hour pump test was conducted prior to the permit submittal. The original review from DEP did not request any additional hydrologic information in reference to the use of the well for make-up water. The attached Hydrology Report discusses the hydrology of Wetlands 1 and 2.

Alternative Sites for the plant are addressed in the revised Alternative Analysis. Although Glacial and an affilate of Glacial, Allegheny Mineral, Corp., own properties near the proposed Mine 47 site, these parcels are not suitable for a sand and gravel operation (which is the purpose of the project proposed by Glacial) due to the many reasons provided in the Alternative Analysis.

There has been some discussion between the township and Glacial regarding the re-alignment of Swope Road. However, there has been no agreement between the township and Glacial, nor has there been an engineering study initiated. It would be premature to include this proposal as part of this application.

c.) [redacted] of the WPA Conservancy has referred to Wetland #1 as a "fen". However, this wetland does not meet the unique water chemistry characteristics of "fens" based on water samples collected within the wetland. As discussed in the attached Hydrology Report, there will be no adverse impacts, direct or indirect, to Wetland #1 as a result of the proposed mining activities.

d.) DCNR: As outlined in the Hydrology Report, there will be no impact to the hydrology of Wetland #1 due to the mining activities. There is no regulatory basis for contacting [redacted] in reference to the esker. The hydrology of the esker has been defined and is discussed in the attached Hydrology Report. The discussion of the

evolution of Wetland 1, along with historic aerial photographs, show that Wetland 1 developed through natural succession and the vegetative community was created through natural seed dispersal and the existing historical seedbank. Wind patterns, wildlife, and numerous other natural factors distribute many varieties of seeds over wide areas. Washing of equipment at the adjacent site to "prevent any invasive species being introduced" is unrealistic and would serve no practical purpose. The seed mixes and species proposed in the mitigation area are comprised strictly of species native to the region and will not increase the risk of introduction of invasive species.

e.) [redacted] The hydrology of the wetland has been addressed in the attached Hydrology Report. Further, there is no evidence that there are 8.8 million gallons of water in the esker as "postulated" by [redacted] and his [redacted]. Although the esker is adjacent to Wetland 1 and lies within the watershed area contributing baseflow to this wetland, groundwater monitoring wells located within the esker and adjacent to Wetland 1 show that the portion of the esker proposed for mining is not saturated or "full of water," as suggested by others. Rather, this area lies above the groundwater table and removal of sand and gravel from this area will in no way reduce the watershed area that contributes baseflow to Wetland 1. In addition, the portion of esker where mining is proposed only contributes approximately 1.5% of the total upslope watershed to Wetland #1 (total Wetland 1 watershed is approximately 339 acres). After mining, the establishment of the mitigation wetland and grading of the disturbed areas north of West Liberty Road will ensure that surface runoff is restored so that it flows to Wetland 1 as it did prior to mining.

f.) [redacted] A Phase I Archeological Study was completed for the site and correspondence from the PA Historical and Museum Commission (PHMC) was included with the permit application. The PHMC letter dated August 29, 2008 clearly states, "no further archaeological work is necessary for this project."

g.) We are unsure of the issues to which [redacted] is referring. Glacial has not received any correspondence from [redacted] regarding threatened or endangered species. It is suggested that the report (dated May-June 2008) completed by Tetra Tech, Inc., which was provided to the Corps following surveys for the Eastern Massasauga Rattlesnake, be distributed to the PA Fish and Boat Commission and any other interested parties.

Tetra Tech did not document the presence or any other physical evidence of this species and concluded, "mining and related activities on the Mine No. 47 Site should not have an adverse impact on the massasauga."

h.) In reference to [redacted] comments, please see the attached Hydrology Report. Glacial currently operates a sand and gravel plant at the Elliott Mine and has not observed any impacts to wildlife species. In fact, employees have noticed increased waterfowl use since the inception of the site. Great blue herons, whitetail deer, and bald eagles have also been seen at the site by plant personnel. Concerns over potential

impacts to private water wells are effectively addressed by the attached hydrologic report but, in addition, we note that existing DEP regulations provide more than adequate protection to private water supply users in the event a mining operation adversely affects them.

i.) [redacted] As stated above, there has been no agreement between the township and Glacial related to the relocation of Swope Road, nor has there been an engineering study initiated. It would be premature to include this proposal as part of this application. There are also no federal statutes or regulations which "protect" eskers as such; and because Wetland 1 will not be affected either directly or indirectly (through loss of hydrology) if the esker is mined as proposed, there is also no basis for concern regarding impacts to threatened or endangered species.

j.) [redacted] Please see attached Hydrology Report. There will be no impacts to the hydrology of Wetland 1.

k.) [redacted] compliments of Glacial are appreciated. Please see the attached Hydrology Report discussing the relationship of the esker, Wetland 1, and Tamarack Lake. Although Wetland 1 provides a variety of ecological functions and values, it does not meet the unique water chemistry characteristics of "fens" based on water samples collected within the wetland. Because no impacts to Wetland 1 are proposed or anticipated as a result of the proposed mining, there is no basis for the assumption that threatened or endangered species will be impacted during or following mining.

l.) [redacted] A survey for the presence or evidence of the Eastern Massasauga has been completed by Tetra Tech, Inc. It is suggested that the report (dated May-June 2008), which was provided to the Corps be distributed to the USFWS and any other interested parties. Tetra Tech did not document the presence or any other physical evidence of this species and concluded, "mining and related activities on the Mine No. 47 Site should not have an adverse impact on the massasauga." The Alternatives Analysis has been revised to include off-site alternatives (see attached).

m.) [redacted] comments to DEP have been reviewed and included in DEP's comment and response letters dated December 24, 2007 and March 31, 2008. Glacial will adhere to all regulations that properly govern their permit(s) and accept, and comply, with all validly imposed permit conditions. It is worth noting that the reclamation of similar sand and gravel sites has resulted in enhanced wildlife habitat. The Western Pennsylvania Conservancy has purchased reclaimed sand and gravel mines in the past due to the enhancement of wildlife habitat. As a local example, the Elliott Mine has a seen an increase in the diversity of the wildlife communities, even during the extraction of sand and gravel.

n.) [redacted] Please see attached Hydrology Report and response to comment h.
o.) [redacted] Please see attached Hydrology Report and response to comment h.

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p.) [redacted] Please see attached Hydrology Report and response to comment h.

q.) [redacted] Please see attached Hydrology Report.

r.) [redacted] Please see attached Hydrology Report and response to comment d.

s.) [redacted] Tamarack Lake is a man-made lake and historic photos show a varied rise and fall of the water level over the years. The attached Hydrology Report addresses concerns regarding potential hydrologic impacts. Specifically, proposed impacts to UNT #3 will not have an adverse effect on Tamarack Lake because the stream does not flow to Tamarack Lake and never has in the past. Water sampling was conducted at a spring on the [redacted] property as part of the background collection prior to permit submittal.

t.) [redacted] Please see response to comment d.

u.) [redacted] The American Bittern it is not a federally listed species. In addition, correspondence with DCNR (3/13/09) and the survey completed by Tetra Tech, Inc. do not identify conflicts with this species and the proposed project. Also, please see attached Hydrology Report and response to comment h.

v.) [redacted] Please see attached Hydrology Report and response to comments d and h.

Regarding the recent letter received from DCNR dated December 23rd, there does not appear to be any new concern. The letter summarizes the history and once again reiterates their concern on the hydrologic balance with respect to possible impacts to wetland #1. Although the letter raises issues beyond DCNR's authority this submitted response package and specifically the hydrologic report should adequately addresses those concerns.

If you have any questions or require additional information, please call.

Sincerely,

The EADS Group, Inc.

Richard G. Tote, PLS
Project Manager

Encl.

THE EADS GROUP