

May 6, 2020

Fairweather, LLC
301 Calista Court
Anchorage, Alaska 99518

Attn: Mr. Guy Miyagishma

**RE: GROUNDWATER MONITORING WELL DECOMMISSIONING, 151 WEST
100TH AVENUE, ANCHORAGE, ALASKA; ADEC FILE NO. 2100.38.539**

This letter report presents the decommissioning of three monitoring wells at 151 West 100th Avenue in Anchorage, Alaska. The project was conducted in general accordance with our April 24, 2020 *Work Plan for Groundwater Monitoring Well Decommissioning, 151 West 100th Avenue, Anchorage, Alaska* which was approved by Ms. Janice Wieggers of the Alaska Department of Environmental Conservation (ADEC) in the form of an email dated April 27, 2020. A site plan is included as Figure 1.

FIELD ACTIVITIES

Three groundwater monitoring wells, designated Wells MW30 through MW32, were decommissioned at the site. The monitoring wells were decommissioned in accordance with the Alaska Department of Environmental Conservation's (ADEC's) September 2013 *Monitoring Well Guidance* document. Photographs of the wells being decommissioned are included as Attachment 1.

On May 5, 2020 Discovery Drilling (Discovery) provided the equipment and personnel to decommission the monitoring wells. At each well location, the well monument was removed from the ground. Discovery lifted the well casings about 1 foot and separated the bottom well caps from the casings by driving a steel rod against the caps. The well casings and screens were lifted until the screened intervals were above the groundwater interface, allowing the aquifer material to collapse into the boreholes. Bentonite chips were placed in the casings and added as the casings were removed to keep the top of the bentonite chip columns within about 2 feet of the ground surface. For each well, the entire length of the well casing was removed. The top 2 feet of the boreholes were filled with pea gravel and the ground surface was repaired to match the existing material grade. The well casings and monuments were taken offsite by Discovery and disposed as unregulated waste.

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CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our client and their representatives. Shannon & Wilson has prepared the document in Attachment 2, Important Information About Your Geotechnical/Environmental Report, to assist you and others in understanding the use and limitations of our reports.

You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore has not, and will not, disclose the results of this study unless authorized by you or required by law.

We appreciate the opportunity to be of service. If you have questions or comments concerning this report, please call Dan P. McMahon or the undersigned at (907) 561-2120.

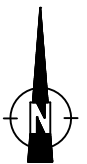
Sincerely,
SHANNON & WILSON, INC.

Alec Rizzo
Environmental Staff

Encl: Figure 1; and Attachments 1 and 2



Map adapted from aerial imagery provided by Google Earth Pro, reproduced by permission granted by Google Earth Mapping Service.



LEGEND

- MW30 Approximate Location of Decommissioned Monitoring Well MW30.

151 West 100th Avenue Anchorage, Alaska	
SITE PLAN	
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SHANNON & WILSON, INC. <small>Geotechnical and Environmental Consultants</small>	FIG. 1

ATTACHMENT 1

SITE PHOTOS



Photo 1: Looking south, decommissioning Well MW31. (May 5, 2020)



Photo 2: Decommissioning Well MW31. (May 5, 2020)

151 West 100th Avenue
Anchorage, Alaska

PHOTOS 1 AND 2

May 2020

103781-002



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Photo 3: Looking north, the Well MW30 casing removed from the ground. (May 5, 2020)



Photo 4: Looking south at Well MW32 following decommissioning. (May 5, 2020)

151 West 100th Avenue
Anchorage, Alaska

PHOTOS 3 AND 4

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Geotechnical & Environmental Consultants

ATTACHMENT 2

**IMPORTANT INFORMATION ABOUT YOUR
GEOTECHNICAL/ENVIRONMENTAL REPORT**



Date: May 2020
To: Fairweather LLC
151 West 100th Avenue, Anchorage, Alaska

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland