TAURIAINEN ENGINEERING & TESTING

35186 Spur Hwy Soldotna, AK 99669 (907)262-4624 FAX 262-5777 engineeringalaska@gci.net

MEMORANDUM

Date: 9 July 2020 20048

To: Donna Ortiz, U.S. Environmental Protection Agency (EPA)
ortiz.donna@epa.gov

Copy: Carey Foster, North Star Paving & Construction, Inc.
carey.nspci@alaska.net

Pete Campbell, Alaska Department of Environmental Conservation (ADEC)
peter.campbell@alaska.gov

From: Clayton Spitler, Project Engineer CS

Subject: North Star Pit, 44485 Knight Drive Soldotna, Alaska
EPA File ID: AK122P5-30-13955
Injection Well Closure Plan
3 Pages + Attachments

The purpose of this Memo is to constitute a Closure Plan for the injection well serving North Star Paving & Construction Incorporated's (NSPCI's) welding and vehicle maintenance shop on subject parcel. This injection well has been classified as a Motor Vehicle Waste Disposal Well (MVWDW) by EPA.

Travis/Peterson Environmental Consulting, Inc. (Travis/Peterson) performed Phase I Environmental Site Assessment (ESA) Report, Phase II ESA Report, Site Characterization Work Plan, and Site Characterization Report for subject facility.

Per Site Characterization Report prepared by Travis/Peterson:

- Contaminants of potential concern (COPC) are diesel fuel, unleaded gasoline, hydraulic fluid, used oil, and solvents.
- Soil and groundwater samples were collected for laboratory analysis for diesel range organics (DRO), residual range organics (RRO), gasoline range organics (GRO), and Volatile Organic Compounds (VOCs) including benzene, toluene, ethylbenzene, xylene (BTEX) and Polycyclic Aromatic Hydrocarbons (PAH).
- Soil sample analyses results indicate no exceedance of ADEC cleanup levels.
- Groundwater sample analyses results indicate exceedance of ADEC cleanup levels for DRO and RRO in Monitor Well #1, VOC naphthalene in Monitor Wells #1, 2, and 4, and PAH naphthalene in Monitor Wells #1 and 2.
- Based on this information, any samples (liquid, soils, groundwater, other material) collected in conjunction with Injection Well Closure will be analyzed for DRO, RRO, and one or both (to be determined) of VOCs, and PAH.

Per facility owner, subject injection well system consists of a floor drain in the building's concrete slab, a concrete oil/water separator tank exterior to the building, approximately 10 linear feet of deep trench leachfield, and associated 4" diameter piping. All piping prior to the leachfield is solid.

The leachfield, along with soil cover, has been excavated- these soils have been stockpiled on the concrete pad to the north of the previous leachfield location. Piping from the floor drain to the oil/water separator, the oil/water separator itself, and piping exiting the oil/water separator remain. Temporary expandable pipe plugs have been installed at both the inlet and outlet of the oil/water separator tank, and in the pipe exiting the floor drain sump.

Subject welding and vehicle maintenance shop contains one floor drain. This floor drain consists of an approximately 6' long x 1' wide x 14" deep sump in the concrete floor with a 4" diameter ABS solid pipe exiting the sump sidewall. The 4" diameter ABS solid pipe is routed to the oil/water separator tank. See attached Existing Injection Well System Schematic Drawing for more information.

The following plan will be followed to accomplish proper closure of the injection well system.

1. Prior to initiating closure procedures, the piping between the floor drain and oil/water separator will be pressure tested to confirm 1) the floor drain is connected solely to the oil/water separator tank, and 2) the piping between the floor drain and oil/water separator tank is not leaking. If pressure test results confirm both of these conditions, it can be concluded that the piping between the floor drain and oil/water separator tank did not leak for the duration of the system's use, and no contamination was caused by leaks in the piping system, and can be further concluded that any contamination caused by the injection well is limited to within, beneath or adjacent to oil/water separator tank and connected leachfield. If pressure testing indicates leaks in piping or other unexpected configuration or circumstances, an amendment to this Closure Plan will be required.
2. All liquid, sludge, and solid waste in oil/water separator tank will be pumped to maximum extent feasible and containerized for proper disposal by NRC (National Response Corporation) Alaska. Empty oil/water separator tank will be carefully removed and disposed of properly. Tank will be visually observed for signs of leakage prior to disposal. Soils directly beneath and adjacent to oil/water separator tank will be visually observed for signs of staining and contamination. Groundwater level will be documented, if present in excavation. A photo-ionization detector (PID) will be utilized to investigate if soils beneath (as feasible given groundwater level) or adjacent to oil/water separator are contaminated. At least one representative soil sample will be collected from soils beneath (as feasible given groundwater level) the oil/water separator; more samples will be collected at locations of observed staining or contamination, if applicable.
3. Piping will be capped upstream of the oil/water separator tank. Piping between floor drain and capped end will then be pumped full with concrete slurry. The existing sump in the concrete slab will remain (for future snow-melt catchment area), but concrete slurry will fill all piping (to flush with sidewall of sump) to prevent any future discharge from the sump.
4. The leachfield will be re-excavated to remove all imported drain rock, perf pipe, and backfilled soils. Soils directly beneath and adjacent to leachfield will be visually observed for signs of staining and contamination. Groundwater level will be documented, if present in excavation. A PID will be utilized to investigate if soils beneath (as feasible given groundwater level) or adjacent to leachfield are contaminated. At least two representative soil samples (one near each end of perf pipe) will be collected from soils beneath (as feasible given groundwater level) the leachfield; more samples will be collected at locations of observed staining or contamination, if applicable.

5. All contaminated materials (liquids, soil, concrete tank, piping, and any other materials) will be removed from in and around the injection well until visibly clean soil is reached, or structural integrity of the excavation or buildings or other significant structures near the excavation may be compromised.

On-site storage of all wastes (liquids, sludge, soil, concrete tank, piping, and any other materials) associated with injection well closure will be as follows.

- Waste may be containerized (in sealed and clearly labeled containers) and temporarily stored on site for later characterization and proper disposal. Currently, two, 55-gallon sealed drums of liquid waste and four super-sacks of monitor well installation-associated solid waste exist on site from previous work performed by Travis/Peterson.
- Waste soil and other solids may be stockpiled and temporarily stored on existing concrete pad north of leachfield for later characterization and proper disposal. Stockpiled waste soil and other solids will be completely and securely tarped/covered with plastic to prevent precipitation from falling on solids and leaching contaminants off the concrete pad.

All wastes (liquids, soil, concrete tank, piping, and any other materials) associated with injection well closure will be characterized for disposal purposes, in accordance with applicable Federal, State, and local regulations. Soil characterization will be performed in accordance with ADEC *October 2019 Field Sampling Guidance.* Contaminated solids (soils, concrete tank, piping, etc.) are planned to be disposed of at the Kenai Peninsula Borough Central Peninsula Landfill (pending analyses results confirming materials meet landfill disposal requirements) or hauled to Alaska Soil Recycling at 2301 Spar Avenue Anchorage, Alaska for proper decontamination and/or disposal. Contaminated liquids are planned to be collected on site by NRC Alaska, and properly disposed of at NRC Alaska Kenai Facility at 44066 Kenai Spur Highway Kenai, Alaska.

All material used to backfill excavated areas associated with injection well closure will be clean/uncontaminated. Backfill soils will be pit run material from virgin mining area (pit wall) approximately 1,200' east of subject injection well location.

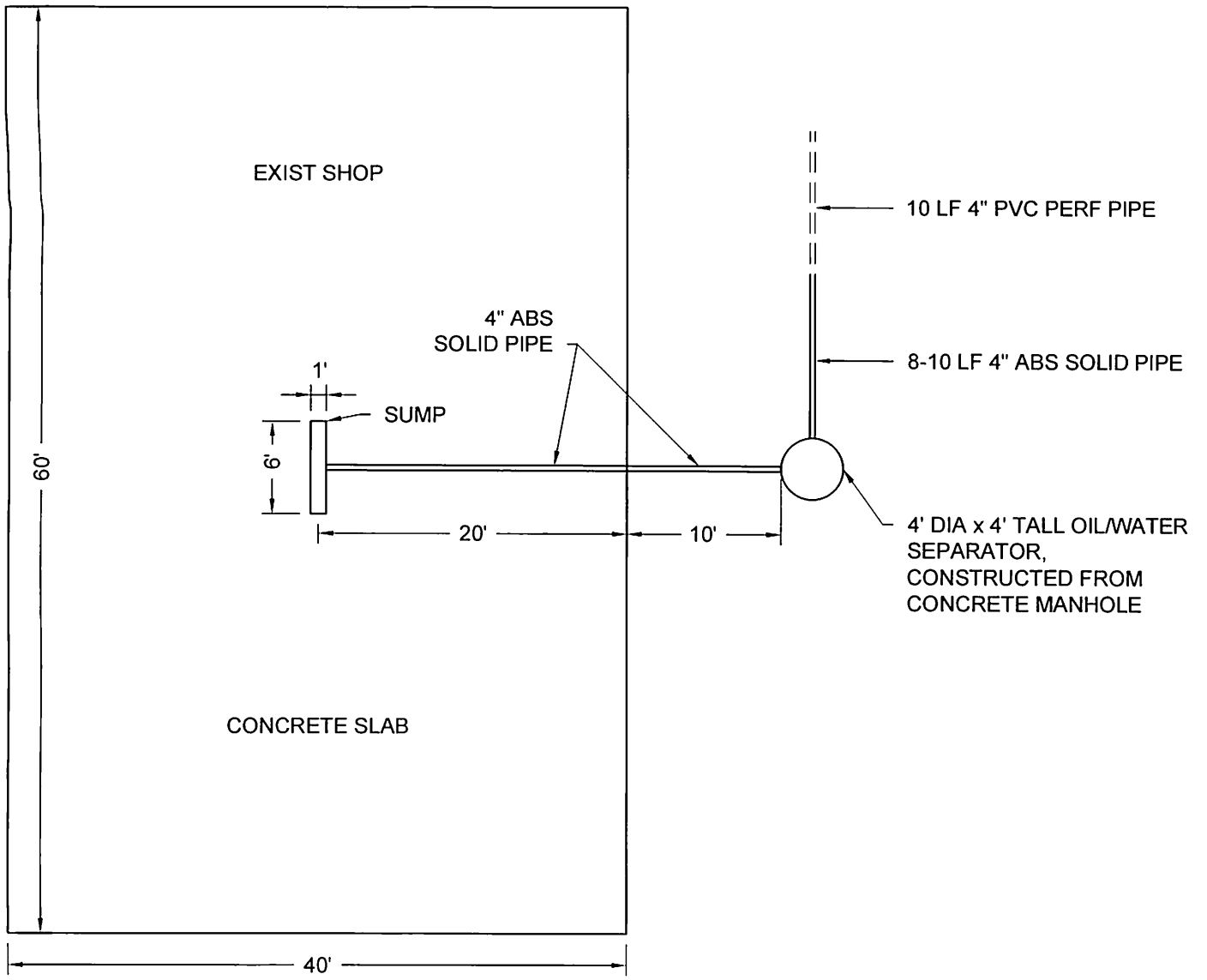
A final report outlining completed injection well closure procedures, including sampling and analyses results and waste disposal manifests will be submitted to EPA Region 10 Ground Water Unit and ADEC after well closure has been completed.

Based on the information provided, we request Injection Well Closure Plan approval be granted. Please contact our office if you have any comments or questions.

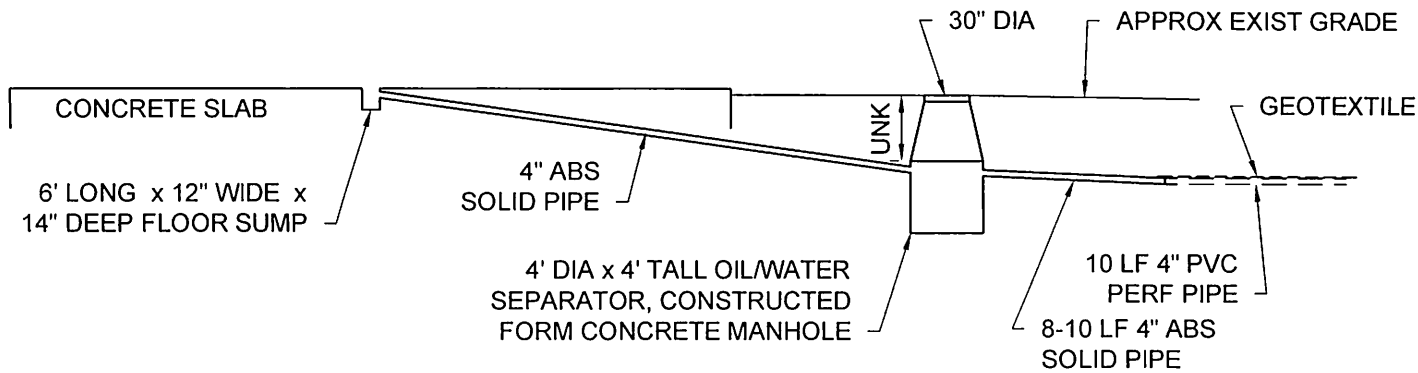
End of Memo Text

Attachments:

Existing Injection Well System Schematic Drawing



PLAN VIEW



PROFILE VIEW

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DATE:	JULY 2020
DRAWN:	HSW
CHECKED:	CS
SCALE:	NTS
PROJECT NO.:	20048

EXISTING
INJECTION WELL SYSTEM
SCHEMATIC DRAWING

SHEET 1 OF 1