TAURIAINEN ENGINEERING & TESTING

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

MEMORANDUM

Date: 5 Aug 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

In response to your 21 July 2020 e-mail comments (see attached), this Memo includes revisions made to the Injection Well Closure Plan we submitted to you on 9 July 2020.

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 work performed 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).
- Some of both soil and groundwater sample analyses results exceed ADEC cleanup levels.

Based on this information, and in accordance with EPA requirements, any samples (liquid, soils, groundwater, other material) collected in conjunction with Injection Well Closure will be analyzed for the following.

- VOCs (EPA Method 8260)
- Semi-volatile organic compounds (EPA Method 8270)
- DRO
- RRO

- GRO
- Arsenic, cadmium, chromium, and lead by a total metals analysis.

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 sanitary/septic system is completely separate from subject MVWDW injection well.

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. The injection well will be permanently closed, and will not be converted to a sanitary waste injection well (septic 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.

Current and potential new owners anticipate no washing of vehicles or floors in the Shop. The Shop is planned to be utilized for welding only, and not automotive services. The floor sump, which will remain, will be pumped out as necessary, with pumped fluids containerized and properly disposed of.

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:

21 July 2020 EPA E-mail Comments (2 pages)
Existing Injection Well System Schematic Drawing
Class V Well Pre-Closure Notification Form

Clayton Spitler

From: Ortiz, Donna <ortiz.donna@epa.gov>
Sent: Tuesday, July 21, 2020 7:50 AM
To: engineeringalaska@gci.net; 'Carey '; peter.campbell@alaska.gov
Cc: 'Clayton Spitler'
Subject: RE: EPA File ID: Ak122P5-30-13955
Attachments: Class V Pre-Closure Form w Instruct.pdf; uic_classv_r10_closure_plan_guidance.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Carey,

Thank you for sending the draft Closure Plan for the North Star site. I have reviewed the plan and have some questions and comments noted below. Also, I have attached a Pre-Closure Notification Form which must be submitted before closure of the well, however, as most of the information needed has already been supplied via the Travis/Peterson reports, the main question remaining is if this facility expects to convert the injection well from industrial to sanitary only. Please fill out the entire form and submit it as soon as possible.

Comments on the North Star Injection Well Closure Plan:

1) Reviewing the Memo, the section-Under the Site Characteristics report prepared by Travis Peterson- the third bulled states, "Soil sample analysis results indicate no exceedance of cleanup levels." This is misleading as the Site Characterization was focused on groundwater sampling. Soil samples collected during the Phase II Environmental Site Assessment noted several exceedances of ADEC cleanup levels within the soils sampled. Soil samples OW-1 and OW-2 collected from beneath the perforated pipe within the leachfield had observed laboratory results noting DRO concentrations in OW-1 collected from the oil/water separator site to be 54,300 mg/Kg, significantly greater than 250 mg/Kg, the ADEC cleanup level for DRO. RRO concentrations at the oil/water separator were found to be 333,000 mg/Kg, significantly greater than the ADEC cleanup level of 1,000 mg/Kg. Additionally, the Site Characterization report noted, "During the Phase II ESA, TPECI observed high concentrations of soil contaminants immediately surrounding the oil/water separator leach field. Sampling conducted during this site characterization effort in that area (MW1 and MW2) found limited soil contamination. However, site work during this investigation used a split spoon sample (Phase II ESA utilized trowel collection from an open excavation) and coarse, leach field rock is not conducive to split spoon sampling. During the Phase II ESA, significant efforts were made to collect fine soil particles around the leach field. The split spoon sampling during this work was not effective in accurately representing soil conditions at the MW1 and MW2 site. However, TPECI found that split spoon sampling worked well at MW3, MW4 and MW5 where native spoils were present." Please update the plan to accurately describe the soil and groundwater contamination. This will instill confidence that proper removal of contaminated soils will be implemented.

2) Requirements noted in the R10 Guidance document include sampling for volatile organic compounds (EPA Method 8260), semi-volatile organic compounds (EPA Method 8270), and arsenic, cadmium, chromium, and lead by a total metals analysis. Please update the plan to include these analyses.

3) In the memo submitted bullet 5 notes that samples will be analyzed for DRO, RRO and one or both (to be determined) VOC or PAH. Please follow the R10 Guidance and add DRI, RRO and GRO to the analyte list.

4) Conversion of the injection well from industrial to sanitary only. On the attached Class V Pre-Closure Form there is an option to convert the current industrial injection well to a sanitary well. It is important to mention this in the closure plan as there are requirements that must be met to do so. Mainly, the site must not allow sanitary flow through contaminants into groundwater. Once the sampling notes that the soils are clean (below ADEC cleanup standards) for confirmation samples, then sanitary wastewater could be discharged through new piping to the new leachfield. There was no note in the memo nor was there a sanitary line in the schematic. Please update the plan with information concerning the sanitary system including the schematic which would show the tie-in for the sanitary line.

5) Please describe what alternative will be used for future wastewater (potentially used by new purchaser) given the automotive drains will remain within the shop. If it will become a dry shop (no washing of vehicles or floors), please state this and also clarify if this building has the potential for use as an automotive shop in the future. If the current floor drains are expected to become sumps which will be pumped out regularly and containerized and properly disposed, please state this as well. If the sanitary system is completely separate from the oil/water separator and leachfield, please note that in the work plan.

Thank you,

Donna Ortiz

From: engineeringalaska@gci.net <engineeringalaska@gci.net>
Sent: Thursday, July 09, 2020 11:14 AM
To: Ortiz, Donna <ortiz.donna@epa.gov>; 'Carey ' <carey.nspci@alaska.net>; peter.campbell@alaska.gov
Cc: 'Clayton Spitler' <claytons@gci.net>
Subject: EPA File ID: Ak122P5-30-13955

Please see attached.

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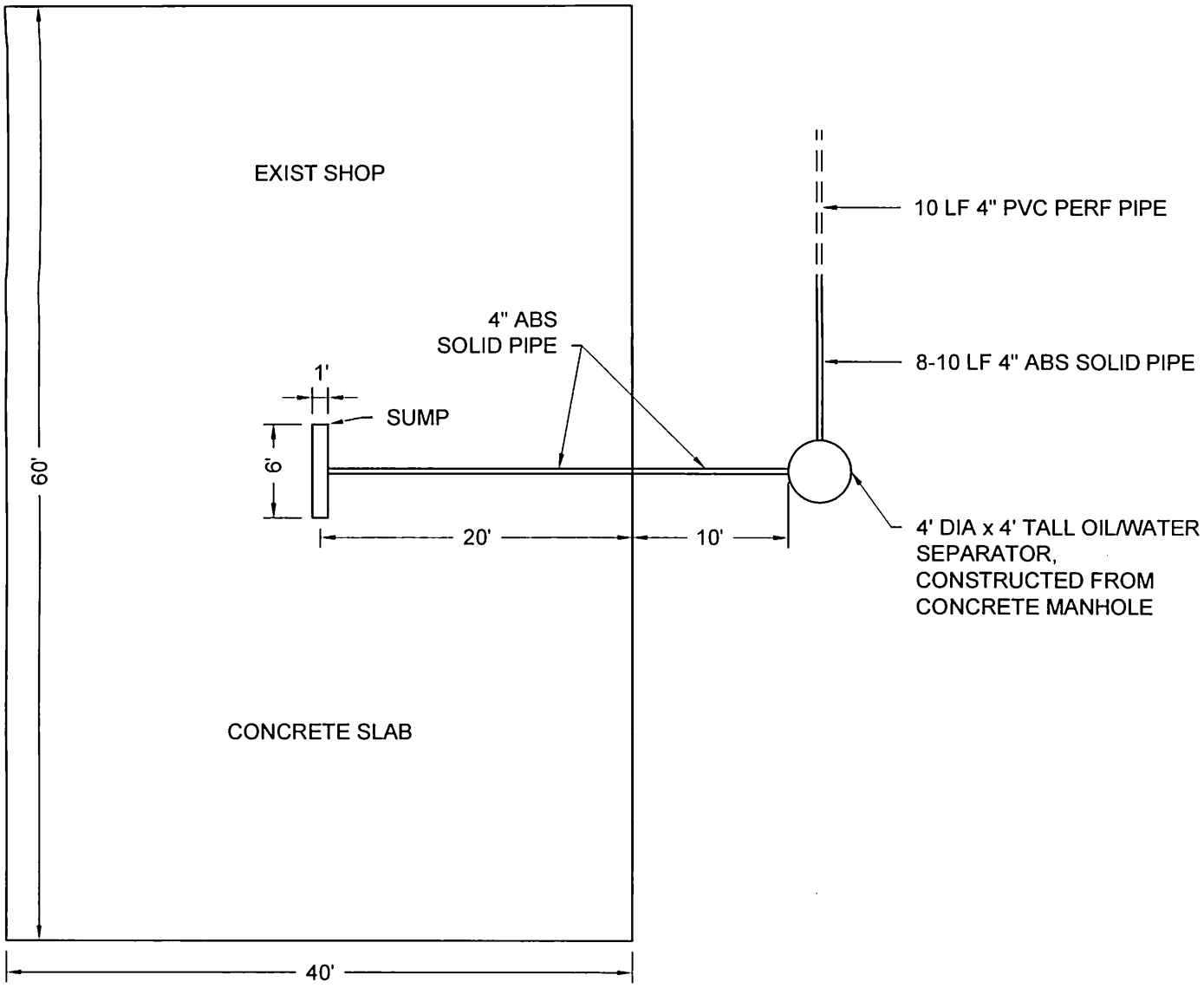
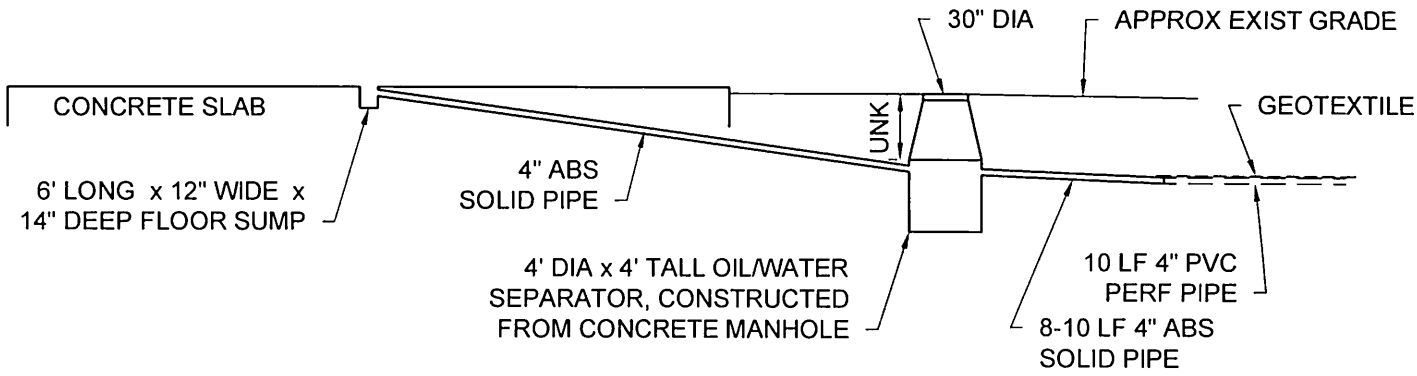


PLAN VIEW



PROFILE VIEW

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

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

EXISTING
INJECTION WELL SYSTEM
SCHEMATIC DRAWING

SHEET 1 OF 1

Type or print all information. See reverse for instructions — Form Adapted from OMB No. 2040-0214

United States Environmental Protection Agency
UIC Federal Reporting System

Class V Well Pre-Closure Notification Form

1. Name of facility: North Star Pit
   Physical address of facility: 44485 Knight Drive
   City/Town: Soldotna State: AK Zip: 99669
   County: Kenai Peninsula Borough Location: Lat/Long: 60.50099° N, -151.07151° W
2. Name of Owner/Operator: North Star Paving & Construction, Inc.
   Mailing address of Owner/Operator: 44484 Knight Drive
   City/Town: Soldotna State: AK Zip: 99669
   Legal Contact: Carey Foster Phone Number: 907-262-4603
3. Type of well(s): MVWDW Number of well(s): 1
   Operating Status: ☐ Active ☐ Under Construction ☒ Temporarily Abandoned ☐ Permanently Abandoned
4. Well construction (check all that apply):
   ☐ Drywell ☐ Septic tank ☐ Cesspool
   ☐ Improved sinkhole ☒ Drainfield/leachfield ☒ Other oil/water separator
5. Type of discharge: diesel fuel, unleaded gasoline, hydraulic fluid, used oil, solvents
6. Average flow (gallons/day): < 1
7. Year of well construction: 2000-2003
8. Type of well closure, check all that apply:
   ☐ Connect to holding tank (pump & haul fluids offsite) ☒ Install permanent plug
   ☒ Appropriate disposal of remaining fluids/sediments ☒ Sample fluids/sediments
   ☒ Remove well and any contaminated soils ☐ Conversion to other well type
   ☐ Other

Please describe in detail how you propose to close the well (i.e. if permanent plug: indicate pipe or floor sump will be cemented, etc.) and provide sketches if possible. Attach a separate sheet, if needed:
Closure procedure is detailed in Injection Well Closure Plan narrative, 5 Aug 2020.

9. Proposed date of well closure: Fall 2020
10. Name of preparers: Clayton Spitler & Carey Foster Date: 3 Aug 2020

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on m y inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false inform ation, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)	Signature	Date signed
Carey Foster	Carey Foster	8.3.20

EPA Form 7520-17