DRAGON PRODUCTS COMPANY

P.O. Box 191, U.S. Route 1 • Thomaston, Maine 04861 • 207-593-0100

June 23, 2023

Mr. Michael Parker
Department of Environmental Protection
Bureau of Remediation and Waste Management
Division of Solid Waste
17 State House Station
Augusta, Maine 04333

Re: Dragon Products Company, Inc.
Quarry 5 Wastewater Reroute Project
Response

Dear Mr. Parker:

On December 9, 2022, Dragon Products Company, Inc. (Dragon) requested approval from the Maine Department of Environmental Protection (Department) to reroute sanitary wastewater that currently flows to the Quarry 5 Pumphouse into the southwestern end of the Cement Kiln Dust (CKD) Pile interceptor trench toe drain system. Rerouting the wastewater stream will eliminate the need for the continuous use of the Quarry 5 Pumphouse.

On March 1, 2023, the Department responded via E-mail (Parker to Martunas) requesting additional information on the installation design of the new piping. The following paragraphs address the Department's requests and provide additional details of the installation.

Department Request:

The narrative in the December 9, 2022 letter states that approximately 240 feet of 6-inch sewer line will be installed and connected to the southwestern end of the interceptor toe drain, with 75 feet of 6-inch High Density Polyethylene (HDPE) pipe under the onsite railroad tracks. Figure 1 shows a proposed 8-inch diameter PVC wastewater pipe (versus 6-inch) and the drawing also doesn't include the HDPE pipe under the railroad tracks or give a detail on how the two pipe types (PVC and HDPE) will be connected. Clarification should be provided.

Dragon Response:

The narrative provided on December 9, 2022 correctly identifies the piping size to be connected to the interceptor toe drain. Dragon will install a 6" line from the existing sewer pipe and connect to the existing 6 inch interceptor trench pipe. Figure 1 inadvertently indicates an 8 inch pipe connecting to the 6 inch interceptor trench. Figure 1 does show where the new piping will cross under the railroad tracks, however the tracks are not clearly labeled. A revised Figure 1 has been included with this submittal.

The existing sewer pipe is an 8 inch PVC ASTM D 3034 "green" pipe. A section of this pipe will be removed and a sanitary "Y" section installed. Downstream of the "Y" an 8" valve will be installed to prevent flow to the existing pump station. After the installation of the "Y" the 8" sewer pipe will be reduced to 6" and a 6" valve will be installed in the new section of pipe to prevent flow to the interceptor trench if needed. See Figure 1.

Dragon will install a short section of ASTM D 3034 sewer pipe to connect to the piping being directionally bored under the railroad tracks. The piping to be installed under the tracks is High Density Polyethylene (HDPE) DR 11 pipe. This is the same piping material used in the interceptor trench. The end of the HDPE pipe will be fitted with a 6 inch stainless steel male threaded fitting. See Attachment No. 1, Photo 1. A female threaded PCV fitting will connect the sewer pipe to the HDPE pipe.

The remainder of the pipe will consist of 6 inch HDPE pipe and will connect to the 6" interceptor trench pipe. Since both pipes are made of the same material, electrofusion couplings will be used to make the final connection. See Attachment No. 1., Photo 2. The interceptor trench pipe terminates with a 6 inch cleanout and Dragon will remove the cleanout, install a new HDPE "Y" section and connect the new HDPE pipe to the "Y". The cleanout will be reinstalled and remain functional. Additional information on the valves and pipe connections is detailed in Figure 2.

Department Request:

According to a drawing the DEP has on file, the Sections and Details drawing C-300 dated 2012 Revised West Interceptor Trench Connection, the toe drain detail shows a perforated pipe surrounded by drainage stone and wrapped with woven geotextile. The pipe trench is also shown, as well as an anti-seep 12-inch minimum clay collar.

If the sewer pipe connects to the perforated pipe, confirmation should be provided that the installed toe drain interceptor trench with clay collar is appropriate for sanitary wastewater to be introduced and will provide sufficient containment.

Dragon Response:

Dragon consulted with Sevee & Maher Engineers Inc., the engineering firm who designed the interceptor trench system, and confirmed that the system will provide sufficient containment. The HDPE pipe currently installed is sufficient to transport the sanitary water. In addition, the system is designed to collect and contain the high pH leachate generated from the Waste CKD Pile. Water levels in the interceptor trench are typically above the trench system and designed to flow into the pipe. The design of this system prevents the outward flow or migration of water within the trench system.

Department Request:

Additional clarification should be provided on how the gate valves will be accessed and whether, in the long term, there are any plans to plug the existing wastewater pipe section that currently

flows to the sump/pumphouse or will it remain just valved if the proposed rerouting is successful.

Dragon Response:

Dragon will install steel risers over the gate valves that will extend approximately 12" above grade. See Attachment No. 1, Photo 3. The risers will provide access to the valves that can be manually opened or closed via a "T" handled valve tool. The risers will be barricaded for protection.

Dragon does not intend to plug the existing pipe to the pump station. Dragon intends to maintain the functionality of the pump station in the event the sanitary water must be rerouted from the interceptor toe drain system.

Department Request:

Please provide an estimate of the additional volume of inflow to the toe drain system attributed to the proposed reroute.

Dragon Response:

Dragon maintains a flow meter and totalizer in the Quarry 5 pump station and annually reports the total flow from the pump station. The following table shows the last three (3) years of annual flow data.

YEAR	QUARRY 5 ANNUAL VOLUME (GALS.)
2020	5,969,000
2021	4,111,000
2022	3,410,000

Dragon will install a flow meter to maintain accurate flow volumes of sanitary water into the interceptor trench toe drain system. A battery operated paddle-wheel type flow meter will be installed in an existing sewer manhole located upstream of the new piping connection. The existing manhole will provide access to the flow meter for routine data collection and meter cleaning. An example of the type of flow meter to be used can be seen in Attachment No. 1, Photo 4.

Conclusion:

Dragon appreciates the Department's attention to this matter. If you have any additional questions or concerns regarding the Quarry 5 wastewater rerouting project please contact me at (207) 593-0144.

Sincerely,

Michael Martunas
Environmental Manager
Dragon Products Company, Inc.

Enclosures

c.c	Jason Goins	(Dragon)
	Michael O'Connor	(MEDEP)
	Kathy Tarbuck, P.E.	(MEDEP)
	Brian Pierce, P.E.	(SME)

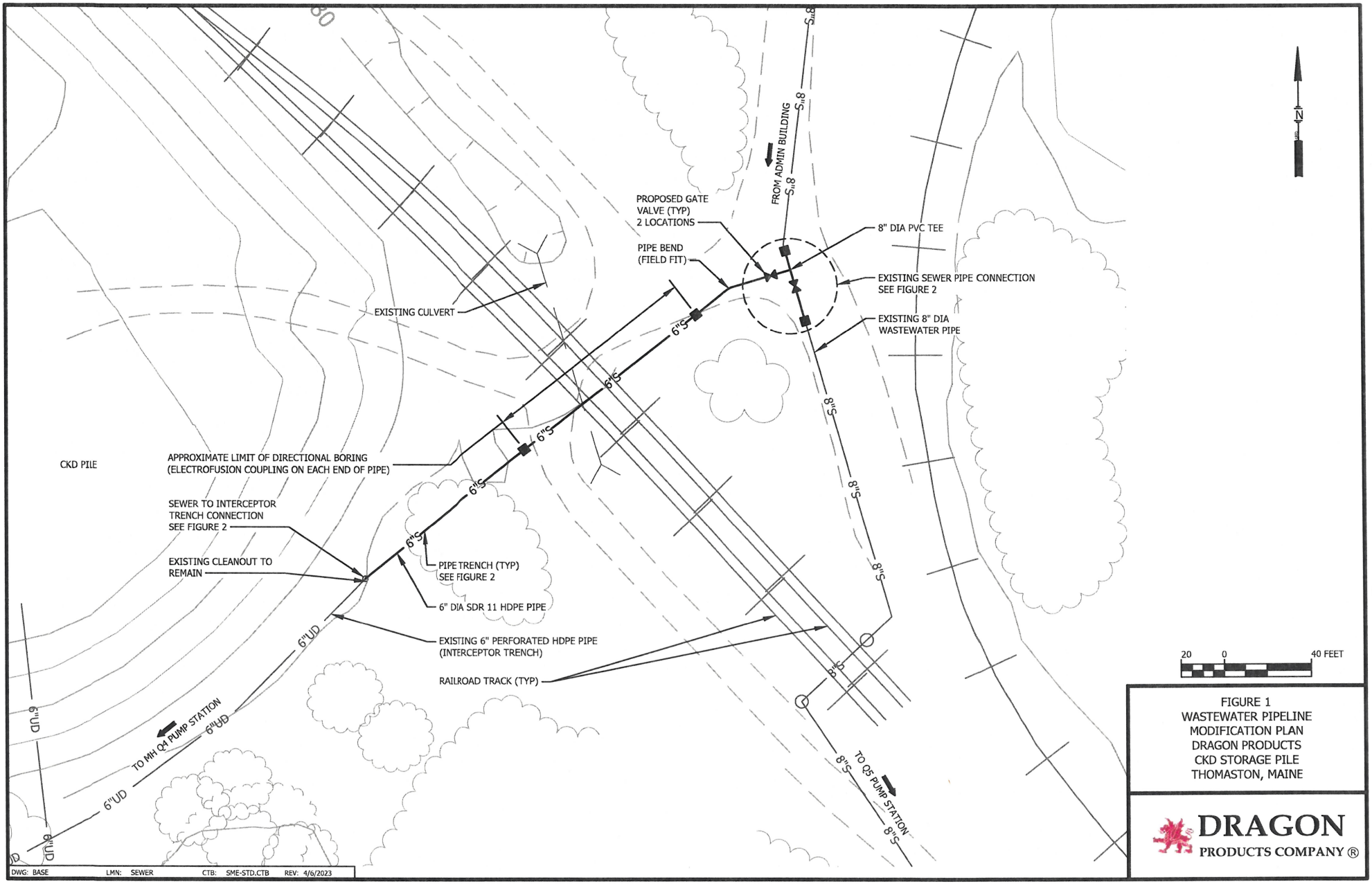
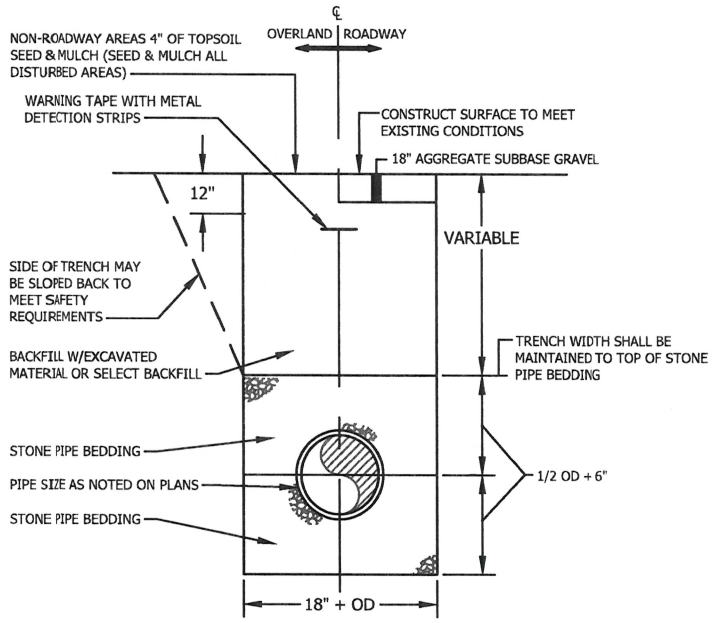


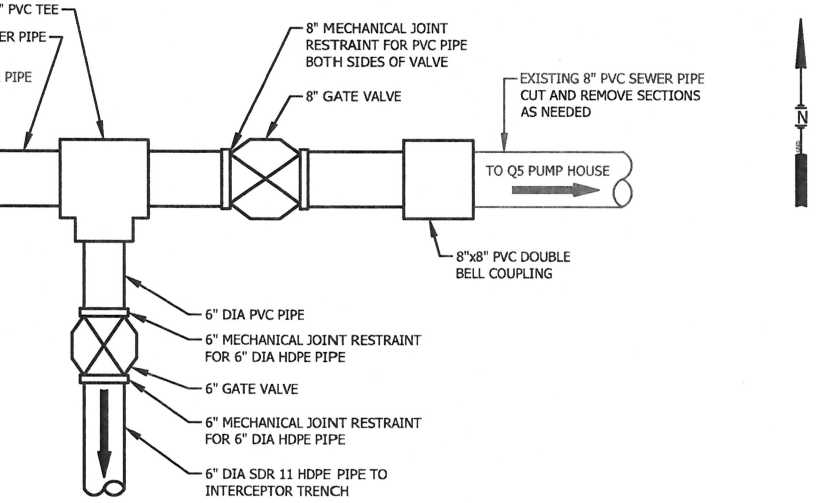
FIGURE 1
WASTEWATER PIPELINE
MODIFICATION PLAN
DRAGON PRODUCTS
CKD STORAGE PILE
THOMASTON, MAINE

DRAGON
PRODUCTS COMPANY ®



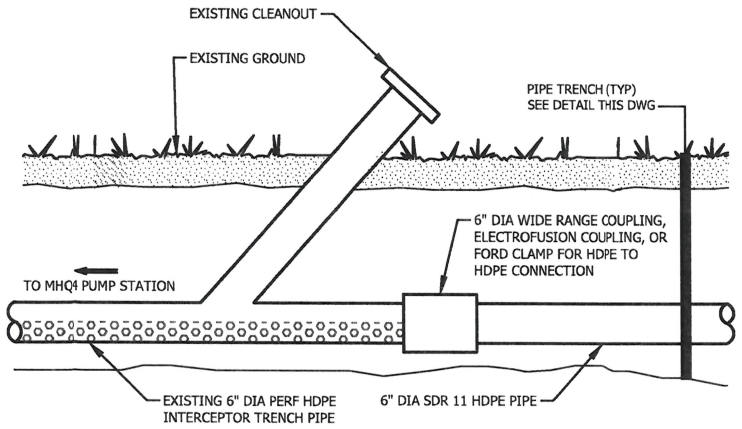
PIPE TRENCH

NTS



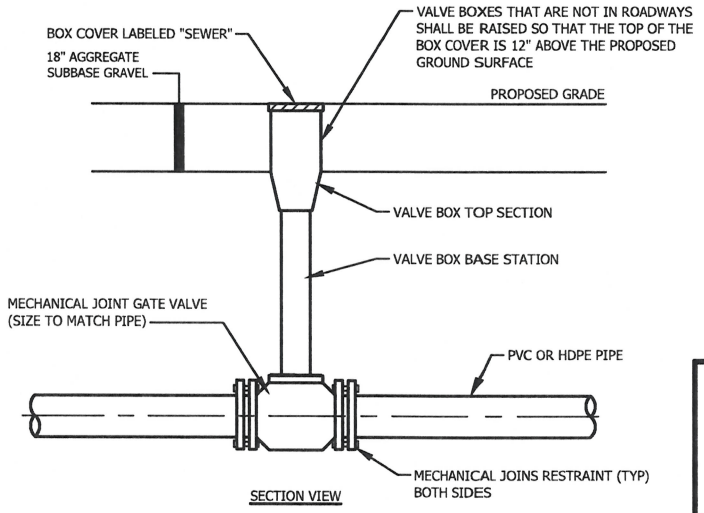
EXISTING SEWER PIPE CONNECTION

NTS



SEWER TO INTERCEPTOR TRENCH CONNECTION

NTS



NOTE: BACKFILL WITH STONE PIPE BEDDING TO 18" BELOW GROUND SURFACE.

GATE VALVE

NTS

20 0 40 FEET

FIGURE 2
WASTEWATER PIPELINE
MODIFICATION DETAILS
DRAGON PRODUCTS
CKD STORAGE PILE
THOMASTON, MAINE

DRAGON PRODUCTS COMPANY ®

DWG: BASE LMN: SEWER CTB: SME-STD.CTB REV: 4/6/2023

ATTACHMENT No. 1
PHOTOS

Photo No. 1

HDPE Stainless Steel Fitting

Photo No. 2

Electrofusion Coupling

ATTACHMENT No. 1 PHOTOS CONT.

Photo No. 3

Steel Risers

ATTACHMENT No. 1 PHOTOS CONT.

Photo No. 4

Paddle-Wheel Flow Meter