

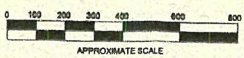
TWIN RIDGE

TWIN RIDGE CONNECTION POINT

TOWN OF PLAISTOW

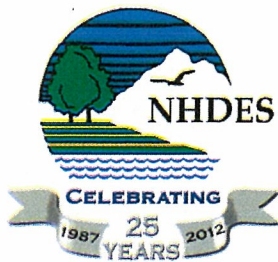


LEGEND	
	BEEDE AREA PROPERTIES
	8" WATER MAIN
	1" RESIDENTIAL SERVICE
	COMMERCIAL DOMESTIC SERVICE (DIAMETER T.B.D.)



REVISION	DATE	DESCRIPTION
3		
2		
1		

<p>25 Manchester Street Merrimack, N.H. 03084-1847 Tel 603-913-2300 Fax 603-913-2362 www.pennichuck.com</p>		<p>ATTACHMENT B BEEDE AREA WATERMAIN EXTENSION PLAISTOW, NEW HAMPSHIRE CONCEPTUAL LAYOUT</p>	
DRAFTER E. LEVESQUE	DRAWING DATE JANUARY 6, 2012	CONSTRUCTION DATE MONTH, YEAR	INSTALLED BY
DESIGNER J. BOISVERT	INSPECTOR	ASBUILT NO.	SCALE 1" = 400'
			SHEET NO. 1 OF 1



The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner



*Celebrating 25 Years of Protecting
New Hampshire's Environment*

June 22, 2012

Sean R. Fitzgerald
Town Manager
Plaistow Town Hall
145 Main Street
Plaistow, NH 03865

**SUBJECT: Dw 12-109 Pennichuck Water Works, Inc. /Beede Waste Oil Site, Plaistow
Request for Franchise and Rates**

Dear Mr. Fitzgerald:

The Department is in receipt of your letter dated June 20, 2012 and offers the following information in response to the questions posed in your letter:

How will the remediation affect the chemical plume with or without the alternative water option for the proposed 22 properties?

The first phase of remediation is to install groundwater extraction wells to prevent the further migration of contaminants from the site into the surrounding neighborhoods. A portion of the off-site contaminated groundwater will also be pulled back to the site for treatment in a groundwater treatment plant. This will occur whether or not the alternative water option is implemented. However, if the alternative water option is implemented and pumping from residential wells in the vicinity of the site is minimized, the ability to pull back a portion of the plume should be enhanced. Without the alternative water option, the pumping of wells designed to capture off-site migration will essentially compete with the residential wells for available water which will result in less than optimal performance.

How do all of the impaired wells impact the contaminated water shed and underground chemical plume?

While the migration of contaminants in groundwater would naturally migrate off-site, pumping from off-site residential wells appears to have resulted in 'pulling' the plume of contaminated groundwater toward those wells. Continued pumping of impacted wells could result in pulling the plume further into the neighborhood and impacting adjacent properties where we have not yet detected contamination.

What alternatives have been considered for filtration systems for the 22 residents?

Point of Entry (POEs) treatment systems that are designed to remove the chemicals of concern (volatile organic chemicals) typically use charcoal based activated carbon. However, these systems have demonstrated limited effectiveness in removing a new chemical of concern, i.e., 1,4-dioxane. Recent research found that coconut-based carbon was the most effective carbon source but its use at the Beede Site has still demonstrated limited effectiveness. The preferred treatment alternative used in full scale remedial efforts (advanced oxidation using either an ozone/peroxide process or an ultra violet/peroxide process) is considered either too dangerous (due to chemical handling requirements) or impracticable (due to constant maintenance requirements) to be applied in a home setting.

DES Web Site: www.des.nh.gov

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Could the Town's support for this alternative mitigate any cleanup levels for the Beede Site?

The Town's support for this alternative will not change the cleanup goals for the Beede site. The cleanup goals for groundwater were established in the Record of Decision (ROD) and are intended to make the groundwater suitable for consumption as required by State statute.

Are there additional factors that are posing threats to public health and safety that the existing water treatment systems are not adequately addressing?

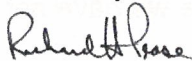
Because of the limited effectiveness of the activated carbon in removing 1,4-dioxane, bottled water is also being provided to the residents for consumption. When monthly sampling indicates the activated carbon is becoming less effective and contaminant concentrations have or may soon exceed drinking water standards, the activated carbon on the POEs is replaced with fresh carbon. The only additional potential factors that could pose a public health threat from exposure to the contaminants in groundwater would be via exposure through other pathways such as dermal contact from washing or inhalation during showering, etc. However, the concentrations that would be of concern for exposure via these pathways is significantly higher than the drinking water standard and are thus not seen as fresh carbon is applied well before these concentrations are seen.

Is it fair to have the Plaistow residents who have had their private wells impaired or destroyed pay additional costs for their water treatment systems?

The Department is not in the position to weigh in of the questions of fairness. The mission of the Department is to ensure that residents are provided with a clean source of water. The proposal under consideration is seen as a clean source of water that provides a degree of reliability that the existing mechanism does not provide and therefore is the Department's preferred option.

I hope this response to your questions will help the Board of Selectmen consider the subject request in their emergency meeting this afternoon.

Sincerely,



Richard H. Pease
Project Manager

cc: Michael J. Wimsatt, DES-WMD
Jim Brown, EPA
Mike Skinner, BSG



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

June 22, 2012

Sean R. Fitzgerald
Town Manager
Plaistow Town Hall
145 Main Street
Plaistow, NH 03865

Subject: DW 12-109 Pennichuck Water Works, Inc/Beede Waste Oil Site, Plaistow
Request for Franchise and Rates

Dear Sean:

As we discussed yesterday at our meeting in Plaistow this letter provides a written response to questions posed by the Town regarding the subject water line expansion request to serve the residents whose potable groundwater wells have been impacted by the Beede Waste Oil Superfund Site. Hopefully yesterday's discussions addressed the Selectman's concerns and I was very pleased to hear that an emergency meeting of the Board of Selectman has been scheduled for this afternoon.

The responses provided in this letter are the answers Dick Pease and I provided yesterday but a written response for the record for such an important project is always a good idea. The questions posed by the Town and my responses are provided below:

1. *How will the remediation affect the chemical plume with or without the alternative water option for the proposed 22 properties?*

The groundwater management of migration (MOM) component of the Beede cleanup plan has been designed to remediate the plume under current residential groundwater use conditions. Connecting those properties whose wells have been impacted by the site to a waterline and no longer extracting groundwater via their wells will not have a negative impact on the MOM system design. Also, discontinuing the extraction of groundwater at these locations will not increase the potential to affect private wells in the area that are not currently impacted by the Beede Site.

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2. *How do all the impaired wells impact the contaminated watershed and underground chemical plume?*

The current residential groundwater uses adjacent to the Beede Site particularly in the areas of the Howard Manor Condos and Shady Lane have caused the contaminated plume to migrate further east (toward Route 125) than would have happened under natural (no residential groundwater use) conditions. The EPA and NHDES continue to monitor the plume and as discussed during our meeting yesterday we will be performing a very comprehensive off-site sampling event next month to evaluate the extent of the plume.

3. *What alternatives have been considered for filtration systems for the 22 residents?*

Practical in-home treatment systems for the organic contaminants of concern identified in the residential wells impacted by the Beede Site is limited to filtration, i.e., granular activated carbon (GAC). Other technologies exist but are not considered practical or safe for in-home use. One of these technologies, advanced oxidation, will be used for the MOM system designed to treat the groundwater extracted from the Beede Site.

4. *Could the Town's support for this alternative mitigate any clean-up levels for the Beede Site?*

No. If the waterline is constructed it will have absolutely no impact on the cleanup levels established for the Beede Site in the January 2004 Record of Decision.

5. *Are there additional factors that are posing threats to public health and safety that the existing water treatment systems are not adequately addressing?*

Residents whose potables wells have been impacted by the Beede Site are currently provided with point of entry (POE) treatment systems (GAC) and/or bottled water. The combination of POE treatment systems and bottled water is preventing any public health concerns to the affected residents.

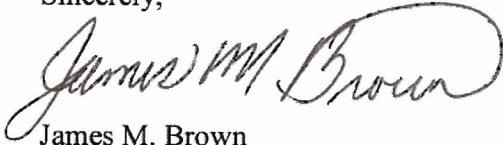
6. *Is it fair to have the Plaistow residents who have had their private wells impaired or destroyed pay additional costs for their water or treatment systems?*

If the EPA was funding the waterline construction we would not be allowed to pay water bills or offer compensation of any kind. The waterline is not a part of the Beede cleanup plan. The Beede Site Group (BSG) has recognized that the current POE treatment systems are not a good long-term strategy for providing potable water to the affected residents and are proposing to pay for the waterline construction and residential hookups. In addition the BSG has stated that they are willing to provide some compensation to the residents who choose to hookup to the water line.

Regarding treatment systems: The current POE treatment systems and bottled water are provided by the BSG at no cost to the residents.

I hope our discussions yesterday and the written responses in this letter will help to alleviate any concerns the Town has regarding the proposed waterline project and the impacts of the waterline project on the Beede cleanup.

Sincerely,

A handwritten signature in cursive script that reads "James M. Brown". The signature is written in black ink and is positioned above the printed name.

James M. Brown
Project Manager
NH/RI Superfund Section

Copy: Dick Pease, NHDES
Mike Skinner, BSG
Doug Gutro, EPA