**To:** KHanson@ldftribe.com[KHanson@ldftribe.com]; Saari, Christopher A - DNR[Christopher.Saari@wisconsin.gov]; Egan, Robert[egan.robert@epa.gov]
**Cc:** Swimm, David E - DNR[David.Swimm@wisconsin.gov]; Kamke, Sherry[Kamke.Sherry@epa.gov]
**From:** Dave Larsen
**Sent:** Fri 6/3/2016 9:00:06 PM
**Subject:** RE: Tower MIP/HPT
removed.txt

Hello All – just got the quote from Cascade and have compared it to Matrix's and while they are not a true "apples to apples" comparison, the costs are very close (< 10%). Cascade seems to have some very desirable options that Matrix does not offer, mainly the ability to run MIP/HPT concurrently which for me is the biggest advantage. If Matrix has to run a separate HPT boring for each MIP location the time it would take to complete that work would more than offset the initial savings in the quotes and that does not include any REI/EPA/LDF or DNR time.

Cascade also has availability the week of July 11th. They are offering up technical support from their office staff to interpret the output as the work is being performed so we can get daily interpretations/recommendations from the tech crew at Cascade (in addition to the advice from the drillers). In this instance I feel Cascade is the better of the two options. I would like to finalize the contractor choice early next week if possible and would like feedback from EPA/LDF and DNR.

## Variance Request

**Tower Standard**

**MIP Contractor**

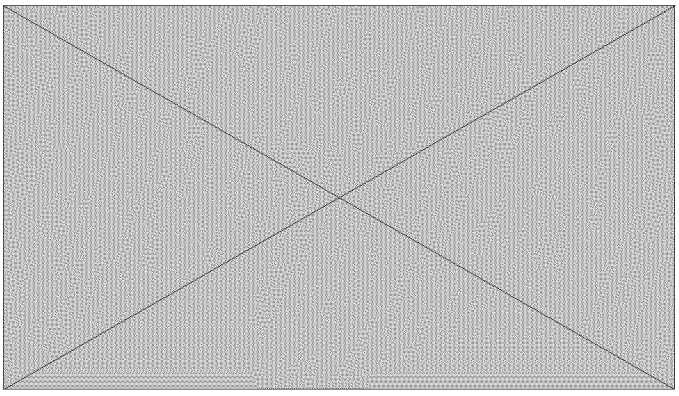
| Description | Units | Quantity | Unit Cost | Event | Events | Total Cost | Subtotal |
|---|---|---|---|---|---|---|---|
| **Drilling Contractor (Matrix)** | | | | | | | |
| Daily Rate | day | 4 | $4,500.00 | $18,000.00 | 1 | $18,000.00 | |
| Mobilization | lump | 1 | $2,500.00 | $2,500.00 | 1 | $2,500.00 | |
| Abandonment (based on actual footage) | ft | 960 | $1.00 | $960.00 | 1 | $960.00 | |
| Per Diem (2 man crew) | day | 5 | $350.00 | $1,750.00 | 1 | $1,750.00 | |
| 3-D Visualization Report | lump | 1 | $5,000.00 | $5,000.00 | 1 | $5,000.00 | |
| | | | | | | **Total** | **$28,210.00** |
| **Drilling Contractor (Cascade)** | | | | | | | |
| Daily Rate | day | 4 | $3,900.00 | $15,600.00 | 1 | $15,600.00 | |
| Project Set-up | lump | 1 | $500.00 | $500.00 | 1 | $500.00 | |
| Level 1 Report | lump | 1 | $400.00 | $400.00 | 1 | $400.00 | |
| MiHPT Footage Charge | ft | 960 | $2.50 | $2,400.00 | 1 | $2,400.00 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mobilization - GeoProbe Unit | lump | 1 | $3,100.00 | $3,100.00 | 1 | $3,100.00 | |
| Mobilization - MiHPT Unit | lump | 1 | $3,550.00 | $3,550.00 | 1 | $3,550.00 | |
| Mobilization - UVOST (LIF) Unit | lump | 1 | $1,500.00 | $1,500.00 | 1 | $1,500.00 | |
| Abandonment | bag | 10 | $25.00 | $250.00 | 1 | $250.00 | |
| Per Diem (2 man crew) | day | 5 | $300.00 | $1,500.00 | 1 | $1,500.00 | |
| 3-D Visualization Report | lump | 1 | $1,360.00 | $1,360.00 | 1 | $1,360.00 | |
| | | | | | | **Total** | **$30,160.00** |

Thank you,

David N. Larsen P.G

Hydrogeologist / Professional Geologist



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**From:** Hanson, Kristen [mailto:KHanson@ldftribe.com]
**Sent:** Friday, June 03, 2016 2:34 PM
**To:** Saari, Christopher A - DNR <Christopher.Saari@wisconsin.gov>; Egan, Robert <egan.robert@epa.gov>; Dave Larsen <dlarsen@reiengineering.com>
**Cc:** Swimm, David E - DNR <David.Swimm@wisconsin.gov>; Kamke, Sherry

<Kamke.Sherry@epa.gov>
**Subject:** RE: Tower MIP/HPT

We are available the for the earlier deployment option, wich also would be beneficial for the tight schedule .

Sent from my Verizon Wireless 4G LTE smartphone

-------- Original message --------
From: "Saari, Christopher A - DNR" <Christopher.Saari@wisconsin.gov>
Date: 06/03/2016 2:11 PM (GMT-06:00)
To: "Egan, Robert" <egan.robert@epa.gov>, Dave Larsen <dlarsen@reiengineering.com>, "Hanson, Kristen" <KHanson@ldftribe.com>
Cc: "Swimm, David E - DNR" <David.Swimm@wisconsin.gov>, "Kamke, Sherry" <Kamke.Sherry@epa.gov>
Subject: RE: Tower MIP/HPT

I agree. Unless there is a ***significant*** increase in cost to use the Cascade equipment, I'd rather see the probing done concurrently.

By the way, here are my draft notes from our call this morning. Please use Track Changes to make any suggestions for edits, and get them back to me by June 10. I will finalize and share them with the larger group at that time. Thanks!

Have a good weekend.

**We are committed to service excellence.**

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Chris Saari

Phone: (715) 685-2920

Christopher.Saari@Wi.gov

**From:** Egan, Robert [mailto:egan.robert@epa.gov]
**Sent:** Friday, June 03, 2016 1:56 PM
**To:** Dave Larsen; Saari, Christopher A - DNR; KHanson@ldftribe.com
**Cc:** Swimm, David E - DNR; Kamke, Sherry
**Subject:** RE: Tower MIP/HPT

I think there is a definite advantage to having both technologies advanced at the same time, and the use of a more powerful rig may be beneficial for reaching bedrock, as Dave noted.

Bob Egan

Corrective Action Manager

Underground Storage Tanks Section

RCRA Branch

EPA Region 5

(312) 886-6212

(312) 692-2911 (fax)

**From:** Dave Larsen [mailto:dlarsen@reiengineering.com]
**Sent:** Friday, June 03, 2016 1:52 PM
**To:** Egan, Robert <egan.robert@epa.gov>; Saari, Christopher A - DNR (Christopher.Saari@Wisconsin.gov) <Christopher.Saari@Wisconsin.gov>; KHanson@ldftribe.com
**Cc:** Swimm, David E - DNR <David.Swimm@wisconsin.gov>
**Subject:** Tower MIP/HPT

I have spoken with Matrix and reserved the week of July 18-22. As a follow-up to today's discussion - MIP does not react well with LNAPL and probably should be avoided. Matrix offered to mobilize with UVOST (LIF technology) to hopefully identify any LNAPL areas (they should be shallow and won't take too long to map out). Biggest issue is that Matrix cant advance MIP and HPT concurrently. They advance each technology independent of the other – double the borings and double the time???

I spoke to Chris about this issue and he forwarded me Cascade's contact info and I gave them a call and they have the ability to advance both technologies at same time in same borehole and they perform this work routinely and would bring out a 7200 series probe, which is more powerful than Matrix's 6600 series probe – which may be important at depth. They also have availability the week of July 11 and 18. They will need to mobilize out of the NY office and will be submitting a cost proposal to me either later today or 1st thing Monday morning. Matrix was offering up about 150' of drilling per day and Cascade was at about 250' per day.

Does anyone have any feelings one way or the other on these 2 options?

Thank you,

David N. Larsen P.G

Hydrogeologist / Professional Geologist

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