

From: [Winslow, Frank \(ECY\)](#)
To: ["Shane Kostka"](#); [Preston, Bill](#)
Cc: [Piper Roelen](#)
Subject: RE: Tiger Oil Groundwater Sampling
Date: Wednesday, July 24, 2024 9:41:48 AM
Attachments: [image001.png](#)

Hi Shane,

Thank you for your email. Ecology defers to Landau on the locations and amounts of injectate for this third injection round. We assume injection will be taking place upgradient of all locations that had cleanup level exceedances in the last sampling round.

We look forward to the sampling results following the third injection round. We concur with waiting a period (not to exceed one year) following injection to sample the monitoring wells in order to allow for complete ISCO treatment as well as allow for any potential rebound. We request during that round to include field measurement and reporting of dissolved oxygen (DO) and oxidation-reduction potential (ORP) in order to provide some additional information of the longer-term effect of the ISCO on the aquifer geochemistry.

The need for additional post injection monitoring rounds will be assessed by Ecology following review of the post injection monitoring round, as well as following any subsequent events, since sufficient data to support a No Further Action (NFA) determination will be determined by Ecology following review of the data. There may also be potential to adjust locations for continued monitoring following monitoring events.

A brief technical memorandum could be prepared to summarize the injection work following injection. Once Ecology has reviewed the post-injection monitoring data, we can assess final reporting needs. We anticipate that preparation of a remedial action completion report summarizing the three injection rounds and monitoring could follow Ecology's determination of sufficient monitoring to support a NFA determination.

Thanks, Frank

Frank P. Winslow, LHG

WA Expedited VCP Site Manager
Department of Ecology – Toxics Cleanup Program
1250 W. Alder Street, Union Gap, WA 98903
(509) 424-0543 (cell)

Frank.Winslow@ecy.wa.gov

From: Shane Kostka <SKostka@landauinc.com>
Sent: Tuesday, July 23, 2024 1:51 PM
To: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>; Preston, Bill <Bill.Preston@yakimawa.gov>
Cc: Piper Roelen <proelen@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

External Email

Frank,

Thank you again for discussing the third ISCO injection round at Tiger Oil North First Street. The third ISCO injection is planned to be focused on:

- Locations at the site where gasoline range organic concentrations in groundwater were above MTCA Method A CULs following the second injection and
- Locations on the upgradient edge of the site, including the location of the highest pre-injection groundwater concentration (IW-18) to prevent rebound and promote contact with any remaining downgradient contamination.

We intend to inject 2,500 gallons of Klozur One (the same ISCO product and volume per well used in the previous two injections) into each of 10 injection wells IW-3, IW-8, IW-6, IW-15, IW-7, and IW-16 (on the eastern/downgradient area of the site where the highest concentrations remained following the second injection) as well as injection wells IW-2, IW-4, IW-10, and IW-18 (on the western/upgradient edge of the site).

The injection is currently planned to be conducted in late September. Post-injection groundwater performance sampling will take place up to one year following the injection to allow for the complete ISCO treatment period and allow for any potential rebound. As applicable to demonstrate compliance with cleanup standards, groundwater may be monitored quarterly for up to two years following the post-injection monitoring event.

Also, we had anticipated providing Ecology with an interim action report describing the monitoring well replacement, injection well installation, injection activities, and groundwater monitoring results following the three injection events. Would you prefer that this report is instead provided following additional quarters of monitoring?

Please let us know if you have any questions or comments on the proposed scope and schedule.

Thank you,

Shane Kostka, LG

ASSOCIATE GEOLOGIST

D: (509) 444-9428 | M: (208) 819-1965 | skostka@landauinc.com



From: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>

Sent: Tuesday, June 18, 2024 5:18 PM

To: Preston, Bill <Bill.Preston@yakimawa.gov>

Cc: Piper Roelen <proelen@landauinc.com>; Shane Kostka <SKostka@landauinc.com>

Subject: RE: Tiger Oil Groundwater Sampling

Sounds good. If Piper and Shane can keep me up to speed on their plans for a third injection round (and subsequent monitoring round), I would appreciate it.

Thanks, Frank

From: Preston, Bill <Bill.Preston@yakimawa.gov>

Sent: Tuesday, June 18, 2024 5:02 PM

To: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>

Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>

Subject: RE: Tiger Oil Groundwater Sampling

External Email

Frank,

The City would like to do the third injection. After that, we will accept whatever EC that remains. We've done all we can (and maybe even more).

Thanks

Bill Preston
Yakima City Engineer
Interim CED Director
W: 509-576-6754
C: 509-571-5570

From: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>

Sent: Wednesday, June 12, 2024 1:43 PM

To: Preston, Bill <Bill.Preston@yakimawa.gov>

Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>

Subject: RE: Tiger Oil Groundwater Sampling

Hi Bill,

Your choice how you proceed on things – it sounds like there is not a huge amount of time urgency on this site. If you want to proceed with planning another injection round, just let me know.

Thanks, Frank

From: Preston, Bill <Bill.Preston@yakimawa.gov>
Sent: Wednesday, June 12, 2024 1:25 PM
To: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

External Email

Frank,

Thanks for the reminder. I did contact him, twice I think. I haven't had any response. Would you like me to try again, or move ahead?

Technically they are not the owner, we still are. They are on a lease to own. If they aren't agreeable, we could just let the lease expire and then we put it up for sale with the condition. That works for us.

Thanks

Bill Preston
Yakima City Engineer
Interim CED Director
W: 509-576-6754
C: 509-571-5570

From: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>
Sent: Wednesday, June 12, 2024 11:01 AM
To: Preston, Bill <Bill.Preston@yakimawa.gov>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

Hi Bill,

I hope this email finds you well. I was not finding any more recent correspondence on the Tiger Oil First St since the below.

We had asked the City to contact the owner to assess whether or not they would object to an

environmental covenant (EC) on the Property prior to scheduling another injection round. An EC would prohibit drinking water use on the property and require contacting Ecology prior to performing intrusive work (i.e. excavation) within the contaminated area.

Do you know if that conversation has taken place?

If they do object to an EC, is there a preliminary schedule for a next injection round?

Thanks, Frank

Frank P. Winslow, LHG

WA Expedited VCP Site Manager
Department of Ecology – Toxics Cleanup Program
1250 W. Alder Street, Union Gap, WA 98903
(509) 424-0543 (cell)

Frank.Winslow@ecy.wa.gov

From: Winslow, Frank (ECY)
Sent: Thursday, April 4, 2024 11:13 AM
To: Preston, Bill <Bill.Preston@yakimawa.gov>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

Thanks Bill. I appreciate you doing that.

Regards, Frank

From: Preston, Bill <Bill.Preston@yakimawa.gov>
Sent: Thursday, April 4, 2024 11:09 AM
To: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

External Email

Understood. I told Landau to hold off until we hear something about the EC. I will let you know what they say.

And thank you for the approval to move ahead once we reach out.

Bill

From: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>
Sent: Thursday, April 4, 2024 11:06 AM
To: Preston, Bill <Bill.Preston@yakimawa.gov>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

Hi Bill,

I am not opposed to the third injection – I just want to ensure that we have asked the property owner. If they happened to have no objections to an EC, that could be a path to closing this Site out more quickly.

Yes, Valerie confirmed that she passed along the thumbs up – she just wasn't clear that we were asking for the one phone call first. Overall, it will be your take on the purchaser's response as to what makes sense for the next step.

Thanks, Frank

From: Preston, Bill <Bill.Preston@yakimawa.gov>
Sent: Thursday, April 4, 2024 10:59 AM
To: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>
Subject: RE: Tiger Oil Groundwater Sampling

External Email

Frank,

I apologize as I may have misunderstood Valerie. I was speaking with her on another issue this morning and asked if we could do the third injection. I interpreted her response as a yes, but maybe that was incorrect?

As for the EC on the property, I missed that request and have not inquired about that yet. I will reach out to them now. Do you want Landau to wait until both the EC is evaluated and we get something in writing from DOE? I assume the go-ahead would be from you?

Bill

From: Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>
Sent: Thursday, April 4, 2024 9:16 AM
To: Preston, Bill <Bill.Preston@yakimawa.gov>
Cc: Piper Roelen <proelen@landauinc.com>; 'Shane Kostka' <SKostka@landauinc.com>

Subject: RE: Tiger Oil Groundwater Sampling

Hi Bill,

I had made a request for the City to inquire with the purchaser regarding a potential environmental covenant (EC) on the Property. I did not receive any reply as to whether or not this was done. I understand that there has been some discussion between the City and Ecology's Section Manager. I have seen nothing in writing from Ecology that we concur with a third injection round. I am not of the opinion that there is a strong likelihood of a third injection round achieving Model Toxics Control Act (MTCA) cleanup levels in a relatively short timeframe. Rather, I do anticipate that cleanup levels will be achieved at the Site via natural attenuation, but over a relatively long period of time. A third injection round should shorten this timeframe. It may significantly shorten this timeframe, but it still could be an extended period of time, based on the observed responses to date.

Note that there are uncertainties with ISCO since there may be natural processes that may compete with the remaining petroleum for oxidation demand. Hence the performance of ISCO can vary from site to site. I would not likely concur with a fourth injection round, since there is likely a diminishing return and the costs may be disproportionately high relative to incremental benefits.

I am still requesting feedback as to whether or not the purchaser was contacted regarding a potential EC on the property. Restrictions on such an EC would include a prohibition on drinking water wells on the Property and a requirement to notify Ecology prior to conducting intrusive work within the area of remaining contamination. The purchaser may, or may not be resistant to such an EC, but it is certainly worth asking them.

I look forward to the City's response.

Thanks, Frank

Frank P. Winslow, LHG

WA Expedited VCP Site Manager
Department of Ecology – Toxics Cleanup Program
1250 W. Alder Street, Union Gap, WA 98903
(509) 424-0543 (cell)

Frank.Winslow@ecy.wa.gov

From: Preston, Bill <Bill.Preston@yakimawa.gov>

Sent: Thursday, April 4, 2024 8:51 AM

To: 'Shane Kostka' <SKostka@landauinc.com>

Cc: Piper Roelen <proelen@landauinc.com>; Mike Meskimen <mmeskimen@g-o.com>; Winslow, Frank (ECY) <fwin461@ECY.WA.GOV>

Subject: RE: Tiger Oil Groundwater Sampling



External Email

Shane,

Just received word from DOE that they are ok with doing a third injection. Please proceed.

Thanks

Bill Preston
Yakima City Engineer
Interim CED Director
W: 509-576-6754
C: 509-571-5570