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COLORADO

EnviroScan - DNR, OGCC &lt;dnr\_ogcc.enviroscan@state.co.us&gt;

**Fwd: CS-47B\_Backfill**

1 message

**Neidel - DNR, Kris** <kris.neidel@state.co.us>

Mon, Oct 1, 2018 at 4:16 PM

To: "EnviroScan - DNR, OGCC" &lt;dnr\_ogcc.enviroscan@state.co.us&gt;

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Kris Neidel  
 Environmental Protection Specialist Northwest Area  
 Colorado Oil and Gas Conservation Commission  
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**COLORADO**  
 Oil & Gas Conservation  
 Commission  
 Department of Natural Resources

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From: **Lucyk, Brent** <Brent.Lucyk@stantec.com>

Date: Mon, Oct 1, 2018 at 2:41 PM

Subject: CS-47B\_Backfill

To: Neidel - DNR, Kris &lt;kris.neidel@state.co.us&gt;

Cc: Adriane Gifford &lt;AGifford@chevron.com&gt;

Hello Kris,

Thank you again for participating in our call this morning. As an FYI, Chevron's Field Management Team has agreed to allow us to blend the gravel we encountered in the bottom 1-2 feet of the excavation with other soils being transported to the Chevron Landfarm. With that said, we are moving forward excavating to groundwater which is about 1 foot lower than design.

Also, I wanted to summarize our conversation we had on September 12, 2018 regarding backfill. As a reminder, Chevron currently has a stockpile of material it generated from its recent river bank stabilization project. Stantec analyzed the material early this year to determine its suitability to use as backfill at CS-47. I have tabulated the data and attached for reference (**Chevron Stockpile CS39-STPL**). In summary, the Chevron soil stockpile did not exceed for any VOCs or semi-volatile parameters, but did exceed for Electrical Conductivity, SAR, and Arsenic. During our conversation, we agreed that this material can be used to backfill the CS-47 excavation to surface and used the following rationale:

1. Electrical Conductivity: COGCC Table 910-1 cleanup criteria is <4 mmhos/cm or 2x background. This is within the 2X background as shown by Non-Impacted soil from MW-4, MW-5, and Urie's Sand and Gravel Barrow Pit Sample (located less than 1-miles down the road from CS-47).
2. SAR: While SAR exceeds the COGCC Table 910-1 cleanup criteria, I believe the SAR in this area is relatively high as shown by the SAR values at MW-3/MW-4. Since this area is non crop-land and will remain an active O&G facility in the foreseeable future, using this material to backfill to surface will not cause negative impact to the environment and is representative of the background concentrations immediately adjacent to CS-47b.
3. Arsenic: While concentrations of Arsenic exceed Table 910-1 cleanup criteria, it remains well below the State Average background concentration and is consistent with the Arsenic concentrations at adjacent background concentrations at MW-3/MW-4 and Urie's barrow pit.

We anticipate starting backfilling operations at CS-47b this week and would like your concurrence on the above summary. If you could, please send me an email back with your concurrence on the above summary which provides approval to use Chevron's Soil Stockpile as backfill.

If you have any questions, please feel free to give me a call.

Thank you,

**Brent Lucyk**

Senior Geologist

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