



Coward, Timothy <tcoward@blm.gov>

Fwd: Crescent Dunes

Seley, Wendy <wseley@blm.gov>
To: Timothy Coward <tcoward@blm.gov>

Fri, Nov 7, 2014 at 5:10 PM

Fyi - this was forwarded to Karen Endress.

Have a fun weekend!

----- Forwarded message -----

From: **Rob Howe** <Rob.Howe@solarreserve.com>
Date: Fri, Nov 7, 2014 at 4:09 PM
Subject: RE: Crescent Dunes
To: "Seley, Wendy" <wseley@blm.gov>
Cc: Vaughan Johnson <Vaughan.Johnson@solarreserve.com>

Hi Wendy,

Let's see if I can provide at least most of the answers.

1. Pond design reports: Attached is the pond design. It shows how the liner works as well as the leak monitoring.
2. Flow data & chemical make-up of discharge waters: The attached spreadsheet shows the expected chemical make-up of all the effluents going into the pond. I was mistaken when I indicated that the oily water separator discharge would go to ground. It will also go to the evaporation pond with the rest of the flows. I'll let Tracy Kipke know about that. It isn't a concern because the chemistry is basically the same as the well water.
3. Monitoring and maintenance plan: The 2012 Groundwater Monitoring Plan is what we are going by for now. Our Operations personnel are monitoring the pond on a daily basis for avian mortality, leaks, and pH. On a quarterly basis we are doing a chemical analysis for our NDEP quarterly report. We may end up doing this more often (like monthly).
4. I will get you the process flow diagrams (water balances) for the plant discharges. This is one Vaughan will be able to help with. This will enable you to at least approximate the flow volumes.
5. Permits: The only permit involving the ponds that I'm aware of is the Industrial Artificial Pond Permit which is attached.

The chemical excursion I alluded to was a very high pH effluent (approximately pH 13.0). We didn't test the effluent for other chemical constituents but since it came from the water treatment process it is unlikely there was anything hazardous in it (other than the high pH). The volume is unknown but estimated at less

than 2000 gallons. This was diluted by the approximately 150,000 gallons in the pond and the pH of the pond itself never got higher than 9.2. The water in the pond will be pumped into tankers and removed from site. It is not considered hazardous from an OSHA or EPA perspective but exceeds the Industrial Artificial Pond Permit limits and so must be removed from site to a location where safe disposal is allowed.

Hope this helps.

Thanks, Rob

Rob Howe

Cell: 1.828-335-2020 / Dir: 1.310.315.2270

From: Seley, Wendy [mailto:wseley@blm.gov]

Sent: Friday, November 07, 2014 3:46 PM

To: Rob Howe

Subject: Fwd: Crescent Dunes

Hi Rob,

Thank you for your email. I have looked through the reports that we have been receiving and am not able to find anything site specific to the following. Would Vaughn or ? be able to help me with the below request?

1. Pond design reports
2. Flow data and chemical make-up of discharge waters
3. Monitoring and maintenance plan

- I have a 2012 Groundwater Monitoring Plan, but I think we are needing something more than this.

4. Process flow sheet for water usage thru the plant
5. Permits

The following is from our hydrologist.

Would it be possible to h

ave a clearer explanation of the last "chemistry excursion" and for the current one

. We will also need to have a plan of how the removed water is to be handled and disposed of. The water chemistry numbers that were provided are not of releasable values and need to be contained and/or treated.

Even the Oily water discharge will need to be accounted for in discharge permits.

If you can please assist me, please let me know.

Thanks much and have a great weekend!

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Wendy Seley

Acting Assistant Field Manager, NR

Realty Specialist

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3 attachments

 **CDS-10-UGU-CDR-IDO-100 Rev B EVAPORATION PONDS CONSTRUCTION DRAWING.PDF**
952K

 **Effluents Characterization.xlsx**
16K

 **2011-03-16 Industrial Artificial Pond Permit.pdf**
299K