

Corrective Measures Taken for Brunner Island LLC Ash Basin No. 6 per CFR §257.83(b)5
as identified in the Initial CCR Surface Impoundment Inspection Report dated December 11,
2015

§257.83(b)5 "If a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency as soon as feasible and prepare documentation detailing the corrective actions taken"

Items Identified in the Initial CCR Surface Impoundment Inspection Report with corrective actions taken:

1. *East Embankment: "The ditch, which was constructed as part of erosion and sedimentation control measures during original construction and effectively part of the embankment, was cleared in 2013 but has since become heavily overgrown."*

Response: During the week of August 22, 2016 the vegetation within the ditch along the east embankment has been cut to less than 6" high. This work was completed by Liberty Excavators Inc. LLC under contact 645355. Photos of the completed vegetation clearing:





2. *East Embankment: "Minor erosion rills were observed along the downstream edge of the crest as seen in Photo 36. The condition of the roadway crest was consistent around the entire ash basin."*



Photo 36 – Typical erosion rills observed at the top of the east and south embankments, where the crest was recently raised. This erosion rill is approximately located at STA. 18+40 on the east embankment.

Response: Minor erosion rills were repaired along the downstream edge of the crest in March 2016.

3. *"Vegetation along the upstream face of the west embankment, east embankment, and splitter dike has grown, as seen in Photo 29, and should be cut and removed or eliminated to prevent clogging of outlet structures."*



Photo 29 – Outlet structure between basin and polishing pond.

Response: Additional vegetation was cut along the upstream face of the embankments in the fall of 2015. Here is a photo of the embankment taken on March 22, 2016:



4. *Polishing Pond: “The upstream slope appeared to be in good condition, and the vegetation along the upstream slope had been trimmed recently, except along the waterline, as seen in Photos 15, 16, and 30.”*



Photo 30 – Median dike, metering station, and discharge structure to the polishing pond, looking north.

Response: During the week of October 10th, 2016 the vegetation along the waterline of the polishing pond was cut to less than 6" and removed from the site. Photos of the completed vegetation clearing:



5. *West Embankment: "The ditch adjacent to Sedimentation Basin No.1, located along the toe in the northwest corner of the basin, was heavily vegetated with flow in the ditch estimated at less than 1 gallon per minute."*



Photo 20 – Toe of the west embankment where significant disturbance was observed in 2011. The area has been regraded and reseeded. Wet soils and rutting were observed previously. A new gravel access road was installed along the toe in 2015.

Response: During the week of August 15, 2016 and August 22, 2016 the vegetation within the ditch along the toe of the North West embankment has been cut to less than 6" high. This work was completed by Liberty Excavators Inc. LLC under contact 645355. Photos of the completed vegetation clearing:





6. *Intake/Outlet Structures: "A stainless steel rod was observed resting against the low level outlet control gate, which was removed by the divers during the inspection."*

Response: The rod was removed on October 15, 2015 by a diver from Marion Hill Associates. Photo of the rod:



7. *"Missing nuts were observed on the bolts on the saddles of the discharge pipeline through the splitter dike, from the main basin to the polishing pond as seen in Photo 38. This is not typically a concern under normal or flood conditions but could result in movement or damage to the outlet pipe during earthquakes."*



Photo 38 – Missing nuts observed on most of the bolts on the saddles of the discharge pipeline to the polishing pond.

Response: On June 7, 2016 Brunner Island LLC employees tapped, chased studs, and installed new hardware.

8. *“The discharge pipe through the splitter dike was observed to be 2/3 blocked with a timber exit weir ash shown in Photo 39. Brunner Island LLC reported that this weir is in place to raise the water level in the pipe to allow chemistry and water quality testing but that it can be removed in the event of a flood to achieve full capacity”.*



Photo 39 – Discharge pipe through the median dike observed to be 2/3 blocked with a timber exit weir. The spillway adequacy analysis assumed this discharge structure to be at full capacity. Maintenance staff were aware that the weir needs to be removed during a flood.

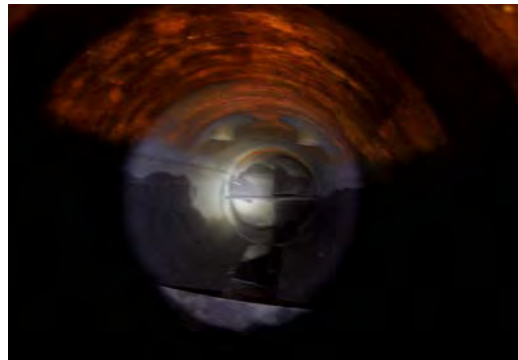
Response: Brunner Island LLC has removed the weir following the static mixer/pipeline cleaning in December 2015. The weir may need to be temporarily installed during periods of extreme low flow

and can be easily removed if necessary to safely pass a storm event. Here is a photo of the pipe without the weir:



9. *“Brunner Island LLC is developing a plan to clear the trash and sediment in the mixing chamber and pipe and has verified that removal of the weir is included in the basin and polishing pond operating plan, but is still in the process of assessing the impact of the mixing chamber on discharge capability and hydraulic capability.”*

Response: Brunner Island LLC cleared the trash and sediment from within the pipe on 12/16/2015. Photo of the cleaned pipe looking at the mixing chamber:



10. *“The flapper valve at the end of the discharge line, seen in Photo 35, appeared to have not been lubricated or exercised recently and was open on a skew.”*



Photo 35 – Flapper valve at the end of the polishing pond discharge line.

Response: On June 7, 2016 Brunner Island LLC employees rigged the flapper gate to a crane end exercised the gate through its full range of motion. The flapper gate was greased, the bottom of the pipe was cleaned, and completed the inspection.

11. *“Since removal of the stoplogs at the outlet structure between the main basin and the polishing pond, the basin water level is now below the base of the staff gage as seen in Photo 37.”*



Response: Additional staff gage was installed on 10/15/2015.

