

# TECHNICAL MEMORANDUM

То:	Nevada Environmental Response Trust
Cc:	Nevada Division of Environmental Protection
From:	David Bohmann and Bounkheana Chhun
Date:	May 9, 2019
Subject:	AP-5 Operation and Maintenance Summary – February and March 2019 Nevada Environmental Response Trust Site; Henderson, Nevada

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Tetra Tech, Inc. (Tetra Tech) has prepared this summary of the operation and maintenance (O&M) activities performed during February and March 2019 for the AP-5 Pond Phase III sediment mixing, Phase IVa solids washing, and decant water transfer. The system was operated and maintained in accordance with the AP-5 Pond Sediment Washing Treatment Process Operations & Maintenance Manual.

## SUMMARY OF O&M ACTIVITIES

Tetra Tech continued operation and maintenance activities associated with the AP-5 sediment mixing and washing system in February and March 2019 to provide mixing of the AP-5 slurry to keep the sediment in suspension and facilitate extraction of ammonium perchlorate. Operation and maintenance activities associated with solids washing and decant transfer operations were also ongoing during February and March 2019.

## SOLIDS WASHING AND DECANT WATER TRANSFER

Throughout February and March 2019, routine procedures for washing the solids and transferring decant water were followed. Mixers were run periodically to wash solids while reducing mechanical wear on system components. Approximately 127,768 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in February 2019 and approximately 113,581 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in February 2019 and approximately 113,581 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in March 2019. A summary of daily AP-5 wash water volumes that were decanted from the Process Tanks and transferred to the Day Tank in February and March 2019 are provided in the attached Tables 1a and 1b. The cumulative total of AP-5 wash water volumes that were decanted from the Process Tanks and transferred to the Day Tank is presented in Table 2a. The cumulative total of Stabilized Lake Mead Water (SLMW) added to the Process Tanks for sediment washing is presented in Table 2b. Note that the SLMW flowmeter readings presented in the routine inspection forms (Attachment A) include both the volume of SLMW added to the Process Tanks for sediment washing and for dilution of AP-5 wash water during transfer (discussed below) and flushing of the lines following each batch transfer.

Once the AP-5 wash water has been decanted from the Process Tanks and transferred to the Day Tank, Envirogen Technologies, Inc. (ETI) transfers the water to the Receiving Tank and subsequently blends the AP-5 water with extracted groundwater for treatment by the Fluidized Bed Reactors. ETI controls and operates the transfer of the AP-5 wash water from the Day Tank to the Receiving Tank, which includes an option to dilute the AP-5 wash water with SLMW to achieve a consistent concentration at the Receiving Tank. The dilution setting is adjustable and has a default setting of 3% perchlorate. During the months of February and March 2019, ETI adjusted the dilution parameters to achieve a lower concentration in the Receiving Tank as a conservative measure to control influent concentrations to the fluidized bed reactors (FBRs). The AP-5 wash water was diluted to an average batch concentration of 1.95% in February and March 2019.

In an effort to provide AP-5 wash water to the FBRs at consistent perchlorate and ammonia concentrations during the summer season, Tank T-203 was used as the source of all decant water transferred to the FBRs beginning in March 2019. The process was initiated in March to stabilize concentrations ahead of the seasonal ammonia limit going into effect on April 1. AP-5 wash water from solids washing in Tanks T-201 and T-202 was transferred to Tank T-203 during March 2019. The perchlorate and ammonia concentrations in Tanks T-201 and T-202 are lower than those in T-203.

## **Perchlorate Mass Removal Estimates**

Prior to the start of solids washing, the Process Tanks were sampled to provide an estimate of the starting mass of perchlorate in the Process Tanks. The average starting perchlorate mass estimate is provided on Tables 3a and 4. Following residual solids transfer, the Process Tanks were resampled on July 26 and July 27, 2018 to determine the mass transferred and the resulting mass in the Process Tanks. The updated perchlorate mass estimate is also provided on Tables 3b and 4.

Two methods are used to estimate subsequent perchlorate mass removal resulting from the solids washing process. Due to differing constraints associated with each method, the two methods are intended to provide a range of reasonable estimates for perchlorate mass removal. The first mass removal estimate method uses monthly grab samples from the Process Tanks to estimate the mass of perchlorate removed from each Process Tank and the remaining perchlorate mass in each tank (Tables 3a and 3b, Figure 1). In February 2019, one grab sample was collected from each tank for analysis of perchlorate. In March 2019, four grab samples were collected from each tank for analysis of perchlorate. March samples were collected at four separate locations along the mixer bridge (5, 20, 40, and 55 feet from the sidewall). Four samples were collected in March 2019 to improve concentration estimates over those obtained from a single-point sample. The perchlorate mass estimate for each tank in February and March 2019 as determined by the sampling method is provided on Table 3b. As noted above, AP-5 wash water from solids washing in Tanks T-201 and T-202 was transferred to Tank T-203 during March 2019. As a result, the perchlorate mass in Tank T-203 slightly increased due to the volume of wash water that was transferred from the other two Process Tanks (Table 3b and Figure 1).

The second mass removal estimate method uses the average concentration of each batch of decant water transferred by ETI from the Day Tank to the Receiving Tank. The average batch concentration is estimated by an in-line mass flow meter that continuously measures fluid density and flow rate. The density is converted to perchlorate concentration based on a density-to-perchlorate concentration curve developed from laboratory analysis. An estimate of the total mass of perchlorate removed from the Process Tanks based on the mass flow meter readings is presented in Table 4. Table 4 also includes an estimate of the perchlorate mass added to the Process Tanks from May – July 2018 as part of final pond closure activities based on single-point samples from each Process Tank.

The estimated total perchlorate mass remaining using both methods described above is presented on Figure 2. The deviations in the total mass removal using the two methods is believed to be primarily the result of the use of limited monthly grab samples from each Process Tank. The initial and subsequent comprehensive perchlorate mass estimates developed for the Process Tanks revealed significant variability in individual perchlorate sample

results within each tank. Therefore, the mass estimates calculated from the monthly grab samples are subject to this variability. The mass removal approach using the mass flow meter also has limitations that likely contribute in part to the observed deviation in mass estimates. The mass flow meter approach relies on a density-to-perchlorate concentration curve previously developed from laboratory analysis but does not utilize laboratory data each month. This method also does not include the mass in AP-5 wash water in the Day Tank that has been decanted from the Process Tanks but not yet processed through the mass flow meter. Therefore, the perchlorate mass removal using these two approaches, as summarized in Figure 2, is intended to provide a range of reasonable estimates for perchlorate mass removal.

## **Ammonia Mass Removal Estimates**

The Process Tanks were sampled on November 1, 2017 to provide an estimate of the mass of ammonia in the tanks at that time. Similar to the sampling for the starting perchlorate mass estimate, the starting ammonia mass estimate incorporates data obtained from sampling of the Process Tanks. The average ammonia mass estimate as of November 1, 2017 is provided as the starting mass on Table 5a. The tanks were resampled on July 26 and July 27, 2018 to determine the ammonia mass transferred during pond solids removal and the resulting mass in the Process Tanks. The updated ammonia mass estimate for each tank is shown on Table 5b and Figure 3. Monthly tank grab samples were completed in February and March 2019 for estimating the mass of ammonia removed from each Process Tank and the remaining ammonia mass in each tank. As noted above, AP-5 wash water from solids washing in Tanks T-201 and T-202 was transferred to Tank T-203 during March 2019. As a result, the ammonia mass in Tank T-203 slightly increased due to the volume of wash water that was transferred from the other two Process Tanks (Table 5b and Figure 3).

## **Treatment Timeline**

As part of evaluating the long-term treatment approach for perchlorate and ammonia, a projected treatment timeline was developed using the estimated mass loading to the Process Tanks and expected treatment rates. This treatment timeline projection is routinely updated with operational data (flow rates and concentrations). The treatment timeline projections beyond this reporting period are also routinely updated with actual recent treatment rates as the basis for estimating future treatment rates. The estimated FBR feed rates used for projections are 2 gpm at 2% perchlorate in the summer season and 10 gpm at 2% perchlorate in the winter season. The original and updated projected treatment timelines are provided in the attached Figure 4. The updated projection remains generally consistent with the previous O&M summary report. Based on current information, solids treatment is expected to be completed in the first quarter of 2020. The projected ending date will periodically change since this is a dynamic treatment process with many variables affecting actual treatment rates and mass estimates used to project the treatment timeline.

## **ROUTINE INSPECTIONS**

Routine inspections were conducted throughout February and March 2019. Routine inspections are intended to proactively identify potential issues or concerns with key infrastructure, identify and perform routine maintenance tasks, and confirm process equipment is ready for service. During the inspections, Tetra Tech staff visually inspected the Process Tanks, Day Tank, piping, secondary containment, and the liner system for damage and leaks; confirmed mixer operation; and recorded findings on the inspection forms. Inspections, testing, and maintenance of the dilution lines, transfer lines, and Receiving Tank are under the responsibility of ETI as of July 17, 2017. Copies of routine inspection forms are provided in Attachment A. Summaries of the primary inspection activities are included below.

## **Process Piping**

The piping within the AP-5 Process Area secondary containment area was inspected on a routine basis. AP-5 sediment wash water was decanted from the Process Tanks and transferred to the Day Tank routinely throughout the months of February and March 2019. The findings of the inspections are provided below:

• No visible damage to, or leaks from, the AP-5 process piping were observed.

## **Secondary Containment**

The AP-5 Process Area secondary containment liner was inspected by 360-degree perimeter inspections on a routine basis. The findings of the inspections are provided below:

- No damage to the secondary containment liner was observed.
- Stormwater accumulated on the secondary containment liner and in equipment pad sumps and was pumped to the Process Tanks on February 2 through February 6, February 14 through February 18, March 2 through March 3, March 6 through March 7, March 12, and March 21, 2019.

## **Tanks and Equipment**

Process Tanks T-201, T-202 and T-203, and Day Tank T-204 were inspected on a routine basis in February and March 2019. The findings of the inspections are provided below:

- No visible damage to, or leaks from, Process Tanks or the Day Tank were observed.
- Precipitate on the interior sides of the Process Tanks and impeller shafts was routinely washed down in all three tanks.

## **MONTHLY INSPECTION**

The February and March 2019 monthly inspections were conducted on February 28, 2019 and March 29, 2019. Monthly inspections are conducted to provide a more thorough investigation of major equipment and parts and to confirm functionality of key control and interlock components. The monthly inspection form is provided in Attachment B. A summary of the findings is provided below:

- Spare parts for operation of the AP-5 slurry treatment system were present and stored on site.
- Air operated double diaphragm pumps were tested, and all were found to be in good working order.
- High-high level alarms for the Process Tanks and Day Tank were tested. All of the level sensors were observed to be functional at the time of the testing.

#### CERTIFICATION

#### AP-5 Operation and Maintenance Summary – February and March 2019

#### Nevada Environmental Response Trust Site (Former Tronox LLC Site) Henderson, Nevada

#### Nevada Environmental Response Trust (NERT) Representative Certification

I certify that this document and all attachments submitted to the Division were prepared at the request of, or under the direction or supervision of NERT. Based on my own involvement and/or my inquiry of the person or persons who manage the systems(s) or those directly responsible for gathering the information or preparing the document, or the immediate supervisor of such person(s), the information submitted and provided herein is, to the best of my knowledge and belief, true, accurate, and complete in all material respects.

Office of the Nevada Environmental Response Trust

Le Petomane XXVII, not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Signature:

Not Individually, but Solely as President of the Trustee

not individually,

but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

**Name:** Jay A. Steinberg, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Title: Solely as President and not individually

**Company:** Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Date:

## **CERTIFICATION**

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been prepared in a manner consistent with the current standards of the profession, and to the best of my knowledge, comply with all applicable federal, state, and local statutes, regulations, and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

*Description of Services Provided:* Prepared AP-5 Operation and Maintenance Summary for February and March 2019.

yled. Hansen

May 9, 2019

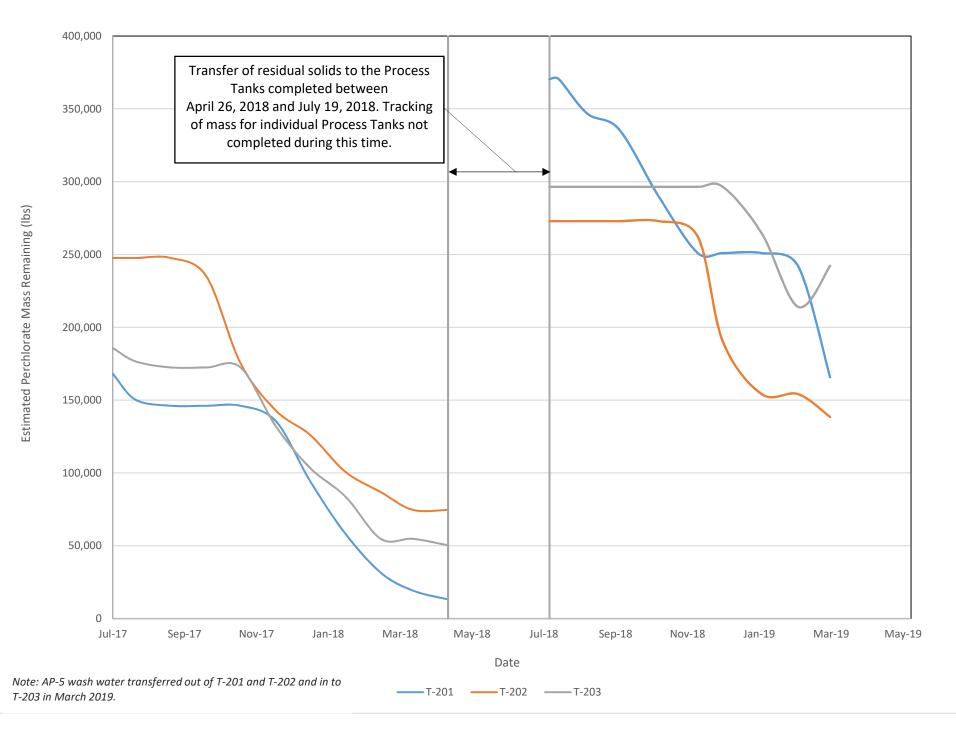
Date

**Kyle Hansen, CEM** Field Operations Manager/Geologist Tetra Tech, Inc.

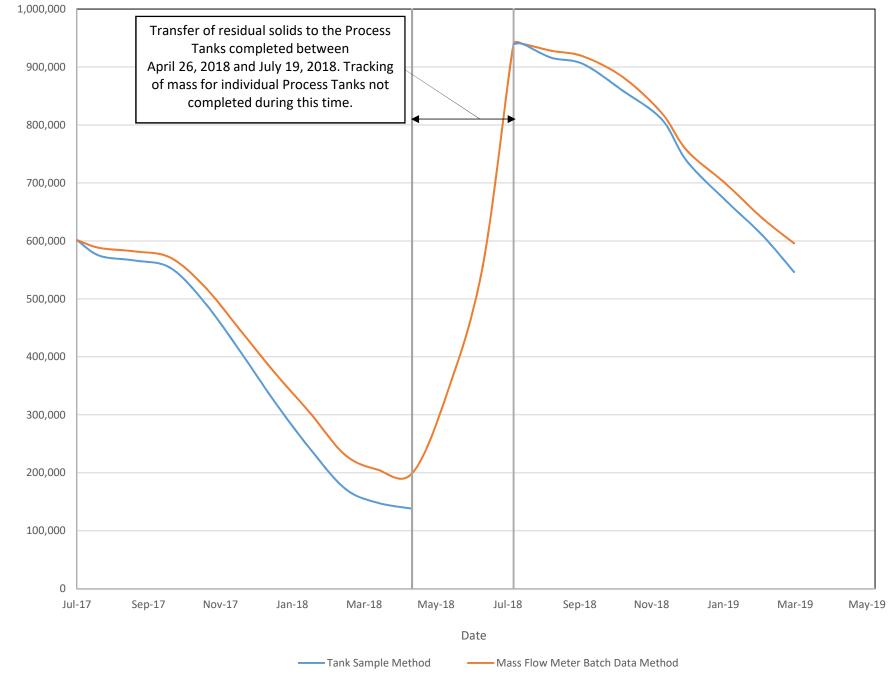
Nevada CEM Certificate Number: 2167 Nevada CEM Expiration Date: September 18, 2020

## **Figures**

### Figure 1. Estimate of Perchlorate Mass Remaining in Process Tanks

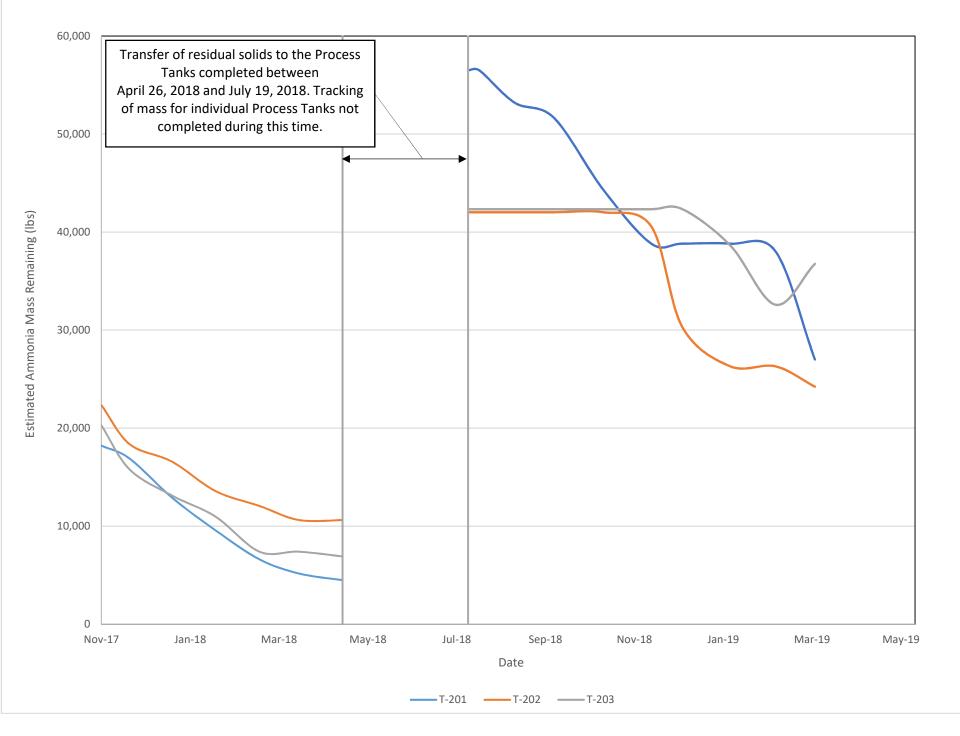






Estimated Perchlorate Mass Remaining (lbs)

## Figure 3. Estimate of Ammonia Mass Remaining in Process Tanks



#### NO AMMONIA NO AMMONIA NO AMMONIA NPDES LIMIT NPDES LIMIT NPDES LIMIT 16,000 16% **Residual solids** removal Ammonia (dashed) 14,000 14% 12,000 12% Perchlorate Concentration (%) Ammonia Concentration (mg/L) 10,000 10% Perchlorate (solid) 8% 8,000 6,000 6% 4% 4,000 1% perchlorate 2% 2,000 treatment target 0 0% Sep-17 Nov-17 Jan-18 Mar-18 May-18 Jul-18 Sep-18 Nov-18 Jan-19 Mar-19 May-19 Jul-19 Sep-19 Nov-19 Jan-20 Mar-20 Jul-17 Date

## Figure 4. Projected AP-5 Solids Treatment Timeframe

Notes: Orange lines depict November 2017 treatment estimates; Green lines depict current treatment estimates.

This model uses simplified assumptions regarding AP-5 decant water treatment feed rate and addition of SLMW for wash water.

## **Tables**

#### Table 1a. February Monthly AP-5 Wash Water Decant Records

Data	T-201	T-202	T-203	Daily Total
Date	(Gallons)	(Gallons)	(Gallons)	(Gallons)
2/1/2019	-	-	-	-
2/2/2019	-	-	-	-
2/3/2019	-	-	-	-
2/4/2019	-	-	22,143	22,143
2/5/2019	-	-	-	-
2/6/2019	-	-	-	-
2/7/2019	-	-	-	-
2/8/2019	-	-	20,656	20,656
2/9/2019	-	-	-	-
2/10/2019	-	-	-	-
2/11/2019	-	-	-	-
2/12/2019	-	-	-	-
2/13/2019	-	-	21,775	21,775
2/14/2019	-	-	-	-
2/15/2019	-	-	-	-
2/16/2019	-	-	-	-
2/17/2019	-	-	12,460	12,460
2/18/2019	-	-	-	-
2/19/2019	-	-	-	-
2/20/2019	-	-	20,848	20,848
2/21/2019	-	-	-	-
2/22/2019	-	-	-	-
2/23/2019	-	-	-	-
2/24/2019	-	-	-	-
2/25/2019	21,090	-	-	21,090
2/26/2019	-	-	-	-
2/27/2019	-	-	-	-
2/28/2019	8,796	-	-	8,796
Total	29,886	-	97,882	127,768

Notes:

1 - Decant volumes presented are based on the starting and ending volumes in the Day Tank during decant operations, plus the volume that was transferred by ETI to the Receiving Tank during the time decant operations were occurring.

#### Table 1b. March Monthly AP-5 Wash Water Decant Records

Data	T-201	T-202	T-203	Daily Total
Date	(Gallons)	(Gallons)	(Gallons)	(Gallons)
3/1/2019	17,897	-	-	17,897
3/2/2019	-	-	-	-
3/3/2019	-	-	-	-
3/4/2019	-	-	20,648	20,648
3/5/2019	-	-	-	-
3/6/2019	-	-	-	-
3/7/2019	-	-	-	-
3/8/2019	-	-	20,334	20,334
3/9/2019	-	-	-	-
3/10/2019	-	-	-	-
3/11/2019	-	-	-	-
3/12/2019	-	-	22,376	22,376
3/13/2019	-	-	-	-
3/14/2019	-	-	-	-
3/15/2019	-	-	-	-
3/16/2019	-	-	11,516	11,516
3/17/2019	-	-	-	-
3/18/2019	-	-	-	-
3/19/2019	-	-	20,810	20,810
3/20/2019	-	-	-	-
3/21/2019	-	-	-	-
3/22/2019	-	-	-	-
3/23/2019	-	-	-	-
3/24/2019	-	-	-	-
3/25/2019	-	-	-	-
3/26/2019	-	-	-	-
3/27/2019	-	-	-	-
3/28/2019	-	-	-	-
3/29/2019	-	-	-	-
3/30/2019	-	-	-	-
3/31/2019	-	-	-	-
Total	17,897	-	95,684	113,581

Notes:

1 - Decant volumes presented are based on the starting and ending volumes in the Day Tank during decant operations, plus the volume that was transferred by ETI to the Receiving Tank during the time decant operations were occurring.

Table 2a.	<b>Cumulative AP-5</b>	5 Wash Water	Decant and	Transfer Records
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Month	T-201 (Gallons)	T-202 (Gallons)	T-203 (Gallons)	Monthly Total (Gallons)
July 2017	38,377		20,906	59,283
August 2017	8,868		9,454	18,322
September 2017		22,819		22,819
October 2017		117,200		117,200
November 2017	26,567	65,048	98,171	189,786
December 2017	88,449	43,485	71,600	203,534
January 2018	95,673	81,036	59,577	236,286
February 2018	108,564	55,620	122,012	286,196
March 2018	75,262	76,737	-	151,999
April 2018	44,177	-	27,290	71,467
May 2018	71,329	-	22,579	93,908
June 2018	49,982	-	-	49,982
July 2018	50,583	-	-	50,583
August 2018	49,377	-	-	49,377
September 2018	23,094	-	-	23,094
October 2018	96,653	-	-	96,653
November 2018	100,315	20,276	-	120,591
December 2018	-	146,407	-	146,407
January 2019	-	88,720	62,425	151,145
February 2019	29,886	-	97,882	127,768
March 2019	17,897	-	95,684	113,581
Cumulative Total	975,053	717,348	687,580	2,379,981

Notes:

1 - Stabilized Lake Mead Water (SLMW) volume added to tanks does not include the volume used to routinely wash down precipitate on the interior sides and mixer impellar shafts. The volume of wash down water is approximately 2,000 gallons per tank per month.

2 - The volume of SLMW added to the tanks does not include stormwater that accumulates in the lined secondary containment and equipment pads that is pumped to the Process Tanks.

Month	T-201 (Gallons)	T-202 (Gallons)	T-203 (Gallons)	Monthly Total (Gallons) <sup>1</sup>
July 2017	22,775		6,150	28,925
August 2017	13,970		7,860	21,830
September 2017		20,010		20,010
October 2017		131,247		131,247
November 2017	27,360	65,435	75,440	168,235
December 2017	43,570	39,585	5,485	88,640
January 2018	24,135	30,685	64,205	119,025
February 2018	92,020	22,475	126,845	241,340
March 2018	81,685	79,270	-	160,955
April 2018	465	-	18,805	19,270
May 2018	825	-	390	1,215
June 2018	860	-	-	860
July 2018	480	-	-	480
August 2018	280	-	-	280
September 2018	220	-	-	220
October 2018	1,490	-	-	1,490
November 2018	220,212	310	-	220,522
December 2018	-	2,780	-	2,780
January 2019	-	96,270	950	97,220
February 2019	630	-	1,630	2,260
March 2019	270	-	1,110	1,380
Cumulative Total	531,247	488,067	308,870	1,328,184

Table 2b. Cumulative Stabilized Lake Mead Water Volume Added for Sediment Washing

Notes:

1 - Stabilized Lake Mead Water (SLMW) volume added to tanks does not include the volume used to routinely wash down precipitate on the interior sides and mixer impellar shafts. The volume of wash down water is approximately 2,000 gallons per tank per month.

2 - The volume of SLMW added to the tanks does not include stormwater that accumulates in the lined secondary containment and equipment pads that is pumped to the Process Tanks.

		Mass in T-201 (lbs)	Mass in T-202 (lbs)	Mass in T-203 (lbs)	Total Monthly Mass Removed (lbs)	Total Perchlorate Mass In Process Tanks (lbs)
Initial P	erchlorate Mass <sup>1</sup>	168,055	247,579	185,745		601,380
	July 2017 <sup>2</sup>	17,828	-	9,189	27,017	574,363
	August 2017	4,120	-	4,155	8,275	566,088
	September 2017	-	12,547	-	12,547	553,540
рə	October 2017	-	59,663	-	59,663	493,878
Approx. Mass Removed	November 2017	10,605	32,571	40,418	83,594	410,284
Rer	December 2017	41,090	16,693	28,582	86,365	323,919
ass	January 2018	36,195	25,360	19,639	81,195	242,724
Υ.	February 2018	26,727	13,925	29,020	69,672	173,051
kora	March 2018	12,248	12,168	-	24,415	148,636
Api	April 2018	6,083	-	4,441	10,524	138,112
	May 2018 <sup>3</sup>					
	June 2018	INDIVIDUAL PI		ASS CALCULATION S TRANSFER CON	NS WERE SUSPEN	DED UNTIL PUND
	July 2018		SOLID	S TRANSI EN COM		
Ending	Perchlorate Mass					138,112

#### Table 3b. Estimate of Perchlorate Mass in Process Tanks Based on Tank Samples after Residual Solids Transfer

		Mass in T-201 (lbs)	Mass in T-202 (lbs)	Mass in T-203 (lbs)	Total Monthly Mass Removed (lbs)	Total Perchlorate Mass In Process Tanks (lbs)
Initial P	erchlorate Mass <sup>₄</sup>	370,459	272,873	296,418		939,750
R	August 2018⁵	23,717	-	-	23,717	916,033
ove	September 2018	10,889	-	-	10,889	905,144
ema	October 2018	46,380	-	-	46,380	858,764
Mass Removed	November 2018	38,510	10,660	-	49,170	809,594
Ma	December 2018	-	72,088	-	72,088	737,507
	January 2019	-	36,002	31,779	67,781	669,726
	February 2019	9,026	-	50,646	59,671	610,055
	March 2019 <sup>6</sup>	76,234	15,700	(28,139)	63,795	546,260
Ending I	Perchlorate Mass	165,703	138,423	242,133		546,260

#### Notes:

1 - The initial perchlorate mass estimate presented is based on an average of laboratory results. The 95% confidence

interval for starting perchlorate mass in all three Process Tanks is 422,491 to 776,030 pounds.

2 - The approximate mass removed for July 2017 is based on the starting concentrations in the Process Tanks. Subsequent mass removal calculations are based on both the starting (prior month) and ending (current month) perchlorate concentrations resulting from grab samples from each tank.

3 - Individual tank mass calculations were suspended until pond closure activities were completed. Following pond closure, a more comprehensive sampling of the Process Tanks was completed to establish new mass estimates.

4 - The perchlorate mass estimate after pond solids transfer is based on an average of laboratory results. The 95%

confidence interval for the perchlorate mass in all three Process Tanks is 814,953 to 1,064,163 pounds.

5 - Mass removal estimates on individual tanks resumed in August 2018.

6 - AP-5 wash water was transferred out of Process Tanks T-201 and T-202 into Process Tank T-203 in March 2019 to provide consistent concentrations and perchlorate to ammonia ratios for feed to the FBRs.

Table 4. Estimate of Perchlorate Mass in Process Tanks Based on	Batch Transfers
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		Estimated Monthly Mass Added (lbs) <sup>3</sup>	Total Monthly Mass Removed (lbs)	Total Perchlorate Mass In Process Tanks (lbs)
Initial P	erchlorate Mass <sup>1</sup>			601,380
	July 2017 <sup>2</sup>		13,520	587,860
	August 2017 <sup>2</sup>		6,000	581,860
	September 2017		10,706	571,154
bə	October 2017		49,990	521,163
лои	November 2017		74,231	446,933
Rer	December 2017		73,066	373,867
ass	January 2018		69,363	304,504
Approx. Mass Removed	February 2018		73,247	231,257
orox	March 2018		25,321	205,935
Apt	April 2018		7,030	198,905
	May 2018 <sup>4 5</sup>	151,078	11,126	338,857
	June 2018⁵	227,250	9,337	556,770
	July 2018⁵	341,180	9,343	888,608
Perchlo	rate Mass After Pon	d Solids Removal <sup>5</sup>		939,750
-	August 2018		11,710	928,040
рало	September 2018		9,777	918,264
emc	October 2018		35,943	882,320
ss R	November 2018		61,959	820,361
Mas	December 2018		64,395	755,966
Approx. Mass Removed	January 2019		57,196	698,770
uda	February 2019		59,301	639,469
A	March 2019		43,614	595,855
Ending	Perchlorate Mass			595,855

#### Notes:

 The initial perchlorate mass estimate presented is based on an average of laboratory results as summarized in the August 11, 2017 technical memo AP-5 Tank Sampling Activities and Mass Estimate Summary. The 95% confidence interval for starting perchlorate mass in all three Process Tanks is 422,491 to 776,030 pounds.
 Individual batch data not available from ETI for July and August 2017. Values presented for these months are based on ETI's estimates. Subsequent monthly estimates are based on ETI records for batch volumes and average batch concentrations transferred from the Day Tank T-204 to the Receiving Tank T-205.

3 - From May to July 2018, estimates of the perchlorate mass added as part of final AP-5 pond closure activities were developed based on single point samples from each Process Tank. Monthly mass added were estimated using a single point sample from each Process Tank and may underestimate the mass contribution from settled residual solids.

4 - The May 2018 estimate of mass added from AP-5 Pond closure activities represents the period from April 26, 2018 through May 31, 2018

5 - The perchlorate mass estimate after pond solids transfer is based on an average of laboratory results. The 95% confidence interval for the perchlorate mass in all three Process Tanks is 814,953 to 1,064,163 pounds.

		Mass in T-201 (lbs)	Mass in T-202 (lbs)	Mass in T-203 (lbs)	Total Monthly Mass Removed (lbs)	Total Ammonia Mass In Process Tanks (lbs)	
Initial A	mmonia Mass <sup>1</sup>	18,217	22,343	20,277		60,837	
	November 2017	1,323	3,979	4,490	9,792	51,045	
ed	December 2017	3,974	1,778	2,659	8,411	42,634	
Removed	January 2018	3,353	3,009	2,163	8,526	34,108	
	February 2018	2,945	1,509	3,564	8,017	26,091	
Approx. Mass	March 2018	1,445	1,441	-	2,886	23,206	
×.	April 2018	682	-	490	1,172	22,034	
proy	May 2018 <sup>2</sup>						
Ap	June 2018	INDIVIDUAL PR	INDIVIDUAL PROCESS TANK MASS CALCULATIONS WERE SUSPENDED UNTIL PC SOLIDS TRANSFER COMPLETED.				
	July 2018		502105				
Ending	Ammonia Mass					22,034	

#### Table 5a. Estimate of Ammonia Mass in Process Tanks after Initial Pond Transfer

#### Table 5b. Estimate of Ammonia Mass in Process Tanks after Residual Pond Solids Transfer

		Mass in T-201 (Ibs)	Mass in T-202 (Ibs)	Mass in T-203 (lbs)	Total Monthly Mass Removed (Ibs)	Tanks (lbs)
Initial A	mmonia Mass <sup>3</sup>	56,496	42,023	42,335		140,854
T	August 2018 <sup>4</sup>	3,294	-	-	3,294	137,560
ove(	September 2018	1,561	-	-	1,561	135,999
Mass Removed	October 2018	7,340	-	-	7,340	128,659
ss R	November 2018	5,483	1,455	-	6,939	121,720
Ma	December 2018	-	10,263	-	10,263	111,457
	January 2019	-	3,998	3,699	7,697	103,760
Approx.	February 2019	773	-	6,045	6,818	96,942
4	March 2019 ⁵	11,041	2,074	(4,173)	8,942	88,000
Ending	Ammonia Mass	27,003	24,232	36,764		88,000

Notes:

1 - The initial ammonia mass estimate presented is based on an average of laboratory results for slurry and accumulated solids samples collected on November 1, 2017. Ammonia mass estimates are not available prior to this date.

2 - Individual tank mass calculations were suspended until pond closure activities were completed. Following pond

closure, a more comprehensive sampling of the Process Tanks was completed to establish new mass estimates.

3 - The ammonia mass estimate after pond solids transfer is based on an average of laboratory results. The 95%

confidence interval for the ammonia mass in all three Process Tanks is 118,994 to 162,598 pounds.

4 - Mass removal estimates on individual tanks resumed in August 2018.

5 - AP-5 wash water was transferred out of Process Tanks T-201 and T-202 into Process Tank T-203 in March 2019 to provide consistent concentrations and perchlorate to ammonia ratios for feed to the FBRs.

## Attachment A Phase III O&M Routine Inspection Forms

Dat	te: 2/1/19 Time: 0725 Inspector Initi	als: <u>K</u>	-9#
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary conta	inment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of F Flowmeter: 3, 716, 120 (gallons)	rocess Tanks	i.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	tear.	2
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No

If Yes, pump storm water into one of the Process Tanks.6. Is there storm water accumulation in equipment pad sumps?:YesIf Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		Т-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	res	No*	Nes	No*	NA	NA
Are transfer pumps ready for service?	Nes	No*	Ves	No*	es	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-201		T-202		T-2	203 🧹
Visible oil leaks from gear box?	Yes*	No	Yes*	NO	Yes*	(No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	<b>Fee</b>	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Nor
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature 4.5 Oil temperature	4	2 °F	4	אר ∠	Ц	₹ F

Date: Z 19

Time:

Inspector Initials: \_\_\_\_KSt(

bearing

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NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

run intermitently to reduce

yled. Hansu **Operator Signature:** 

Miters

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: 2/2/19 Time: 0840 Inspector Initials: <u>K4H</u>
PR	DCESS PIPING INSPECTION
1.	Observe piping between Process Tank secondary containment and FBR secondary containment.
	Any leaks, punctures, damage, bulges visible? Yes* No
2.	Observe piping in Process Tank secondary containment area.
	Any leaks, punctures, damage, bulges visible? Yes* No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: $3,723,(949)$ (gallons)
SE	ONDARY CONTAINMENT INSPECTION
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear.
	Any leaks, punctures, or other damage visible? Yes (No)

Yes

Res

No

No

- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks. pumped

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	NO	Yes*	No	Yes*	No	Yes*	
All decant valves and transfer valves locked out?**	Ves	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	Yes	No*	Yes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-201		T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	Nø
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Ves	No	Yes	No	Te	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	0 °F	5	ſ∕°F	5	0 °F

0,10 rah

Date:

Time: \_\_\_\_\_

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce intermittent XILT bearing o remove rainwa sumps, +

yled. Hanson

**Operator Signature:** 

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	- N
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date: 2/3/19 Time: 1355 Inspector I	nitials:	KG(
PROCESS PIPING INSPECTION		
1. Observe piping between Process Tank secondary containment and FBR Any leaks, punctures, damage, bulges visible?	secondary con Yes*	tainment.
<ol><li>Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?</li></ol>	Yes*	No
3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east Flowmeter: <u>ろ, 740, 590</u> (gallons)	of Process Tan	ks.
SECONDARY CONTAINMENT INSPECTION		
4. Perform 360 perimeter walk to observe liner system for potential wear Any leaks, punctures, or other damage visible?	and tear. Yes	No

- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Ves	No	<b>A</b>	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	es	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	Not	Yes	(No*)	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	4 °F	5	5°F	5 5	5°₽,

No

No

Rain 0.32 Inchestala

Date:

Inspector Initials: \_\_\_\_ K-SH

**NOTES:** 

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

Time:

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

VINA.

**Operator Signature:** 

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:	2/4/	19	Time: <u>/ 320</u>
	1 1		

Inspector Initials: \_\_\_\_

Yes\*

**VAS** 

Yes

#### **PROCESS PIPING INSPECTION**

- 1. Observe piping between Process Tank secondary containment and FBR secondary containment.

   Any leaks, punctures, damage, bulges visible?
   Yes\*
- Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?
- Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks.
   Flowmeter: 3, 747, 150 (gallons)

#### SECONDARY CONTAINMENT INSPECTION

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes\_
- Is there storm water accumulation greater than 1 foot?
   If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	(Yes	No*	Yes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	(No)	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Ves	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*)	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	(Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>59</u> Oil temperature	5	<i>8</i> °F	59	°F	5-0	Ĵ °F

Tetra Tech, Inc.

No

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KGH

Date:

Time: \_\_\_\_\_

Inspector Initials: <u>K-54</u>

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

MHUM to reduce ) urf erus Deanny wear containment water rulo T-201. condary;

led. Hange **Operator Signature:** 

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:	2/5/19	
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Time: 1600 Inspector Initials: K4H

Yes\*

Yes

Yes

#### **PROCESS PIPING INSPECTION**

- 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* No
- 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 3,761,380 (gallons)

#### SECONDARY CONTAINMENT INSPECTION

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes
- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	Т-2	202	Т-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No)	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	M	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>50</u> Oil temperature	4	°F	4	8°F	48	₿°F

Tetra Tech, Inc.

No Pumpine

19 Date:

Time: \_\_\_\_\_

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to recluce bearing wear. · Mikers intermittenth water into T-201 & T-202 From

C.S. Hansu **Operator Signature:** 

EMERGENCY CONTACTS:

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	te: 2/6/19 Time: 1700	Inspector Initials:	1K511
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containme	nt and FBR secondary	containment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area	•	6
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: 3, 768, 640 (gallons)	meter east of Process	Tanks.

#### SECONDARY CONTAINMENT INSPECTION

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: Yes If Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	ves	No*	Yes	No*	Yes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	Т-2	201	T-2	202	T-2	203 🦰
Visible oil leaks from gear box?	Yes*	NO	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No	Yes	No*)	Yes	Ng*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	4	<b>∛</b> °F	47	°F	- 49	°F



19 Date:

Time: \_\_\_\_\_

Inspector Initials: KGN

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

4. to remane rainwater munt recluse bearing Mi Hen inter

**Operator Signature:** 

I.J. Hansu

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:	21	2	19
	1		

Time:	0	84	0	

Inspector Initials: \_\_\_\_\_

Yes\*

KGH

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#### PROCESS PIPING INSPECTION

- 1. Observe piping between Process Tank secondary containment and FBR secondary containment.

   Any leaks, punctures, damage, bulges visible?
   Yes\*
- Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?
- Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks.
   Flowmeter: 3,776, 890 (gallons)

#### SECONDARY CONTAINMENT INSPECTION

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes
  5. Is there storm water accumulation greater than 1 foot? Yes
  6. Is there storm water accumulation in equipment pad sumps?: Yes
  - If Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	Т-2	202	T-2	203	Т-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	N6	Yes*	No	Yes*	No	Yes*	Nø
All decant valves and transfer valves locked out?**	es	No*	Tes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-201		T-2	202	T-2	.03
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	es	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Tes	No	res	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	Not	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureOil temperature	3	└ °F	3	Z °F		33 °F

19 Date:

Time:

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixing run memittently to reduce kearing wear

**Operator Signature:** 

Uled. Hansen

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

#### KSH Time: 080 Inspector Initials: Date: 7 **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Yes\* Any leaks, punctures, damage, bulges visible? No 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes\* 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 3,783, 810 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear.

**K05 PHASE III O&M ROUTINE INSPECTION FORM** 

 Any leaks, punctures, or other damage visible?
 Yes

 5. Is there storm water accumulation greater than 1 foot?
 Yes

 If Yes, pump storm water into one of the Process Tanks.
 Yes

 6. Is there storm water accumulation in equipment pad sumps?:
 Yes

 If Yes, pump storm water into one of the process tanks.
 Yes

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	Т-2	202	Т-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Nø
All decant valves and transfer valves locked out?**	es	No*	Yes	No*	Yes	No	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Nes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	Т-:	201	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	Na
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	3	4 °F	30	) °F	28	°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_KG/(

**NOTES:** 

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mikers run intermittenth to reduce bearing wear

Lel Stanen

**Operator Signature:** 

**EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:	2/9/19	Time:

Inspector	Initials:	124H

Yes\*

Nor

PROCESS PIPING INSPECTION

1.	Observ	e pipin	g betv	veen P	rocess	Fank seo	condary o	ontair	iment and	FBR secor	ndary cor	ntainment.
	An	y leaks,	punc	tures, (	damage	, bulges	visible?				Yes*	No
-	-											

1420

 Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?

3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east	of Process Ta	inks
	Flowmeter: <u>3, 799, 970</u> (gallons)		

#### SECONDARY CONTAINMENT INSPECTION

4.	Perform 360 perimeter walk to observe liner system for potential we	ar and tear.	
	Any leaks, punctures, or other damage visible?	Yes	(
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-2	203	T-2	.04
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	(ves)	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	es	No*	(Yes)	No*	NA	NA

	T-2	.01	T-202		T-2	.03
Visible oil leaks from gear box?	Yes*	(No)	Yes*	NO	Yes*	(No)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	es	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Nes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste //// Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>59</u> Oil temperature	5	7 °f	5	5°F	56	, °F

Date:

Time: \_

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

# COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixers run metermittently to reduce beauing wear. U.S. Han **Operator Signature: EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: 2/10/19 Time: 1310	Inspector Initials:	K-4H
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment	nt and FBR secondary co	ntainment
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
2.	Observe piping in Process Tank secondary containment area Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: <u>3,806,310</u> (gallons)	meter east of Process Ta	nks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pote	ential wear and tear.	a
	Any leaks, punctures, or other damage visible?	Yes	(NO

Yes

(No

٧o

If Yes, pump storm water into one of the Process Tanks.6. Is there storm water accumulation in equipment pad sumps?:YesIf Yes, pump storm water into one of the process tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

5. Is there storm water accumulation greater than 1 foot?

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201 🥂	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	(No)	Yes*	No
All decant valves and transfer valves locked out?**	Ves	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	ves	No*	NA	NA

	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	(No)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	(lot)
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste ///+Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>bZ</u> Oil temperature	6	∂ °F	5	9°F	5	9 °F

Z/10/19 Date:

Time: \_\_\_\_\_

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittently to reduce burning wear. - MILVG run l. 1 Han **Operator Signature: EMERGENCY CONTACTS:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

#### **K05 PHASE III O&M ROUTINE INSPECTION FORM** Inspector Initials: \_\_\_\_ KGH Time: \_\_\_\_\_ 0900 Date: **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Yes\* No Any leaks, punctures, damage, bulges visible? 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes\* No 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 3,813, (e10 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks.

6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		Т-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	es	No*	NA	NA

## 8. Visual inspection from top of each Process Tank:

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	/No/	Yes*	(No/	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	res	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*)	Yes	No*	Yes	(No*)
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>42</u> Oil temperature	1	57 °F	3	5°F	3	(ĵ °F

piruped

/es

Date:

Time: \_\_\_\_\_

Inspector Initials:

KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittenthe to reduce bearing wear Mikling rulu gl. J. Hansen

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

		tor Initials:	14411
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and	FBR secondary cor	ntainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		0
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: <u>3, 8, 7, 420</u> (gallons)	east of Process Tar	nks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential w	vear and tear.	
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No

6. Is there storm water accumulation in equipment pad sumps?: Yes No If Yes, pump storm water into one of the process tanks.

If Yes, pump storm water into one of the Process Tanks.

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		Т-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Ves	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	NO	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Fes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	3	°₽	3	() °F	-32	°F

12/19 Date:

Time:\_\_\_\_\_

Inspector Initials: \_\_\_\_\_KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Miture run intermittenthe to recluse bearing wear yl J. Hanon

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	te: <u>2/13/19</u> Time: <u>1345</u> Inspector Initials:	12GH	
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR secondary co Any leaks, punctures, damage, bulges visible? Yes*	ntainment No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes*	Na	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Ta Flowmeter: 3, 837, 220 (gallons)	nks.	
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear.	A	
	Any leaks, punctures, or other damage visible? Yes	CNR	
5.	Is there storm water accumulation greater than 1 foot? Yes	(Ng	
	If Yes, pump storm water into one of the Process Tanks.	$\widehat{\mathcal{A}}$	
6.	Is there storm water accumulation in equipment pad sumps?: Yes If Yes, pump storm water into one of the process tanks.	No	

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	IT-2	202	T-2	03
Visible oil leaks from gear box?	Yes*	No)	Yes*	(No)	Yes*	(No)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Ves	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	(Yes)	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	(No*)	Yes	(NO*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>54</u> Oil temperature	5	ZPF	5	_/ °F	5	/ °F

Date:

Time:

Inspector Initials:

KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce NEXEUR bearing wear 'nл mermi

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager 1011	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	0.000 0.000
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>Z/14/19</u> Time:	134	0		Inspecto	r Initials	:	K41	4	
PR	OCESS PIPING INSPECTION									
1. Observe piping between Process Tank secondary containment and FBR secondary containment.										
	Any leaks, punctures, damage,	bulges visi	ble?			Y	es*I	I (N	ý –	
2.	Observe piping in Process Tank sec	ondary cor	ntainme	ent area.				7	<b>~</b>	
	Any leaks, punctures, damage,	bulges visi	ble?			Y	es*			
3.	Record reading on Stabilized Lake N	Nead Wate	er (SLM	W) flowr	neter ea	st of Pro	cess Tan	ks.		
	Flowmeter: 3,850,0	00	(gallon:	s)						
SEC	ONDARY CONTAINMENT INSPECTION									
					164 I.					
4.	Perform 360 perimeter walk to obs		•	for pote	ntial wea			6	2	
	Any leaks, punctures, or other o	Jamage vis	ible?			Y	es	INC	Ŷ	
5.	Is there storm water accumulation	greater tha	an 1 foc	ot?		(Y	es	No	0	
	If Yes, pump storm water into c	ine of the l	Process	Tanks.						
6.	Is there storm water accumulation	in equipme	ent pad	sumps?	1	(Y	es)	No	, p	unping
	If Yes, pump storm water into c	ne of the p	process	tanks.		C			Ċ	55 indus
PRO	CESS TANKS AND DAY TANK INSPE	CTION							-	
7.	Perform 360 degree walk around of	each tank	to insp	ect for d	lamage c	or leaks a	ind lock o	out of va	lves:	
		T-20	1	T-2	202	T-2	203	T-2	.04	]
Vis	ible damage or leaks/stains?	V*		V*		¥*		Veek	5	A set
(inspect all welds and nozzles/valves) Yes* No Yes* No Yes* No Yes* No							1110			
All decant valves and transfer valves ves No* ves No* ves No* NA NA										

#### Yes No\* No\* Yes No\* (es) locked out?\*\* 4 Are transfer pumps ready for Yes No\* No\* No\* Yes Yes service?

# 8. Visual inspection from top of each Process Tank:

i i z i i i	T-2	T-201		T-202		203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No II	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste NA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature $\underline{50}$ Oil temperature	5	Û°F	4	9 °F	- 51	∕) °F

NA

NA

Date:	2/14/19	

Time:

Inspector Initials:

KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

equinut ranuater row bearing wear. culture mikery reduce Holermittent

Kyle I. Haven **Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date: 2/15/19 Time: 0655 Inspector Initials: KGH	
PROCESS PIPING INSPECTION	
<ol> <li>Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible?</li> <li>Yes*</li> </ol>	
2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes* No	
3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>3,955,580</u> (gallons)	

#### SECONDARY CONTAINMENT INSPECTION

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes
- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	T-2	202	Т-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Ves	No*	es	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

## 8. Visual inspection from top of each Process Tank:

LK.	T-201		T-202		T-2	.03
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Ves	No	res	No	les	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>4</u> 8 Oil temperature	4	Z_°F	4	3°F	44	°F

No

No

O. Shere total

Date: <u>Z/15/19</u>

Time: \_\_\_\_\_

Inspector Initials: KG H

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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l. J. Hans

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	=
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: $\frac{2/16/19}{16}$ Time: 0420	Inspector Initials	KgH_
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containm	ent and FBR secon	dary containment.
	Any leaks, punctures, damage, bulges visible?	III Y	'es* No
2.	Observe piping in Process Tank secondary containment are Any leaks, punctures, damage, bulges visible?		es* No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: <u>3,866,630</u> (gallons)	wmeter east of Pro	cess Tanks.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for por	ential wear and te	ar.
	Any leaks, punctures, or other damage visible?	Y	es (No

- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	(Yee)	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	res	No*	ves	No*	NA	NA

## 8. Visual inspection from top of each Process Tank:

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	res	No	res	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	les	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature $45$ Oil temperature	4	4 °F	- 4	ን °F	4	ך ≷



No pumping

Yes

**K05 PHASE III O&M ROUTINE INSPECTION FORM** 

Date: 2/10/19

Time: \_\_\_\_'

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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6. J. Hansn

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: 2/17/19 Time: 1345 Inspector Initials:		_
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR secondary contain Any leaks, punctures, damage, bulges visible? Yes*	No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes*	No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>3, タフフ, イタク</u> (gallons)		
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes	No	
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	No	pumping
6.	Is there storm water accumulation in equipment pad sumps?: Yes	No	punping

- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	6
All decant valves and transfer valves locked out?**	fes	No*	Yes	No*	es	No*	NA	NA
Are transfer pumps ready for service?	res	No*	Yes	No*	Yes	No*	NA	NA

	T-201		T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No		No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	Not	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>5</u> Oil temperature	5	( °F	5(	ン °F	50	°F

Date: 2/17/19

Time: \_\_\_\_\_

gle S. Hann

Inspector Initials: KSA

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixery run intermittently to reduce bearing wear Zudan confarman unoma rainunta From

**Operator Signature:** 

EMERGENCY CONTACTS:

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

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Dat	: <u>2/18/19</u> Time: <u>0700</u> Inspector Initials: <u>KGH</u>
PRO	CESS PIPING INSPECTION
1.	Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes* No
2.	Observe piping in Process Tank secondary containment area.         Any leaks, punctures, damage, bulges visible?         Yes*
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>3885950</u> (gallons)
SEC	INDARY CONTAINMENT INSPECTION
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes
5.	s there storm water accumulation greater than 1 foot? No If Yes, pump storm water into one of the Process Tanks. O.12 "Fell yearday
6.	If Yes, pump storm water into one of the Process Tanks. s there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks. No pumping
PRC	ESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	res	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	feg	No*	Yes	No*	NA	NA

	T-201		T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	Ng	Yes*	NØ
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	es	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	res	No	<b>Ve</b>	No
Mixer running and turbulence/vortex observed?**		No*	Yes	No.*	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste NA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>31</u> Oil temperature	3	le °F		37 °F	3	(₀°F

Date:

Time: \_\_\_\_\_

Inspector Initials: 144K

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	10 E = 1
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

# **K05 PHASE III O&M ROUTINE INSPECTION FORM** Time: 0950 Inspector Initials: 14511 Date: 7 **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* Ňο 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes\* 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 3895080 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks. 6. Is there storm water accumulation in equipment pad sumps?: Yes If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-a	203	Т-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	TNO
All decant valves and transfer valves locked out?**	Yes	No*	Free	No*	Ves	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Res	No*	fee	No*	NA	NA

	T-201		T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	643
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Ves	No	Yes	No	Nes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**		No*	Yes	No*	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	3	7 °F	39	°F	38	′°F

Date:

Time:

Inspector Initials:

KGF

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager -	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date: 2/20/19 Time: 1315 Inspecto	or Initials:	KGH	
PROCESS PIPING INSPECTION			
1. Observe piping between Process Tank secondary containment and F	BR secondary c	ontainment.	
Any leaks, punctures, damage, bulges visible?	Yes*	No	
<ol> <li>Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?</li> </ol>	Yes*	No	
<ol> <li>Record reading on Stabilized Lake Mead Water (SLMW) flowmeter ex Flowmeter: 3, 910, 470 (gallons)</li> </ol>	ast of Process T	anks.	
SECONDARY CONTAINMENT INSPECTION	1021		

4.	4. Perform 360 perimeter walk to observe liner system for potential wear and tear.						
	Any leaks, punctures, or other damage visible?	Yes					
5.	Is there storm water accumulation greater than 1 foot?	Yes					
	If Yes, pump storm water into one of the Process Tanks.						
6.	Is there storm water accumulation in equipment pad sumps?:	Yes					

Is there storm water accumulation in equipment pad sumps?:
 If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Ves	No*	es	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Tes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	res	No	Yes	No	ves	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste $\mathcal{NA}$ Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	2 °F	5	۴	5.	۶°F

No

No

Date: 20/19

Time:

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

## COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

- Mixleys run intermittenthe to reduce hearing wear

**Operator Signature:** 

lest. Hansen

Title	Name	Phone #	Comments 111 0P 11
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

# **K05 PHASE III O&M ROUTINE INSPECTION FORM** Time: 110 Inspector Initials: KGH Date: **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Yes\* Any leaks, punctures, damage, bulges visible? 2. Observe piping in Process Tank secondary containment area. Yes\* Any leaks, punctures, damage, bulges visible? No 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 39 18,010 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes No pomping No 0.42 inches Ratufall 5. Is there storm water accumulation greater than 1 foot? Yes

Yes

- If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	es	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No )	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	es	No*	es	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste NA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	3	<b>7</b> °₽	3'	] °F	38	°F

21/19 Date: \_2

Time: \_\_\_\_\_ Inspector Initials: <u>K4H</u>

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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**Operator Signature:** 

led. Janen

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	ate: <u>2/722/19</u> Time: <u>0800</u> Inspecto	or Initials:	KGH	
PR				
1.	Observe piping between Process Tank secondary containment and FE	3R secondary co	ntainment.	
	Any leaks, punctures, damage, bulges visible?	Yes*	No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter ea Flowmeter: <u>39 ステ ビール</u> (gallons)	ist of Process Ta	nks.	
SEC	CONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner system for potential wea	ar and tear.	$\sim$	
	Any leaks, punctures, or other damage visible?	Yes	(No)	
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Ves	No	pimping
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No	
PRO	COCESS TANKS AND DAY TANK INSPECTION			

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Ko I
All decant valves and transfer valves locked out?**	Ves	No*	es	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	T-202		T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	(No)	Yes*	/No)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	res	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	(Yes/	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	3	∠ °F	3	°F	3	2 °F

Date: Z

Time: \_\_\_\_

Inspector Initials: KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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Ella.

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

	K05 PHASE III O&M ROUTINE INSPE	ECTION FORM	
Da	te: <u>2/23/19</u> Time: <u>1450</u> Inspec	ctor Initials:	KSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and Any leaks, punctures, damage, bulges visible?	FBR secondary con Yes*	tainment.
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: <u>3,940,020</u> (gallons)	east of Process Tan	ks.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential v Any leaks, punctures, or other damage visible?	wear and tear. Yes	No
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	(No)
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No

6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	6
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	Yes	No*	Yes	No*	NA	NA

# 8. Visual inspection from top of each Process Tank:

1	T-2	201	III T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	NO
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	ves	No	res	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	es	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	/N6*)	Yes	No*	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste ///A Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>54</u> Oil temperature	5	ZPF	5	2_ °F	5.	≥ °f

(Nor

Date:

Time:

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

- Mixeye run intermittently to recluce bearing wear.

**Operator Signature:** 

# ture: Tyles Hansn

Title	Name	Phone #	Comments -
Site Implementation Manager	Brad Maynard	(907) 723-2646	10 10 10 10 10 10 10
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	lige IIII M
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	ate: <u>2/24/19</u> Time: <u>1317</u> In:	spector Initials:	KGH	
PR	ROCESS PIPING INSPECTION		17	
1.	Observe piping between Process Tank secondary containment	and FBR secondary co	ontainment	
	Any leaks, punctures, damage, bulges visible?	Yes*	NO	
2.	Observe piping in Process Tank secondary containment area.			
	Any leaks, punctures, damage, bulges visible?	Yes*	No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowme Flowmeter: <u>3, 947, 510</u> (gallons)	eter east of Process Ta	anks.	
SE	CONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner system for potent	ial wear and tear.	<i>7</i> 0	
	Any leaks, punctures, or other damage visible?	Yes	No	

Yes

If Yes, pump storm water into one of the Process Tanks.
6. Is there storm water accumulation in equipment pad sumps?: Yes If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

5. Is there storm water accumulation greater than 1 foot?

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	€ €
All decant valves and transfer valves locked out?**	ves	No*	Ves	No*	Ye	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yee	No*	Ves	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	(1)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	res	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>59</u> Oil temperature	5	°F	5	8°F	58	°۴

19 Date:

Time: 🔍

Inspector Initials:

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittently to reduce Mixera bear un run Wear

6 & Janen

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	a -an g u
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	00 77 001 11
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>2/25/19</u> Time: <u>1225</u> Inspector	Initials:	KSH
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBF	R secondary o	containment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter eas Flowmeter: <u>3,955,570</u> (gallons)	t of Process 1	Γanks.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear	r and tear.	~
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	<b>N</b>
All decant valves and transfer valves locked out?**	Nes	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Nes	No*	Yes	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Tes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*)	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature 57 Oil temperature	5	Z ⁰F	5	۴.	5	ح °F

25/19 Date:

Time: \_\_\_\_\_

Inspector Initials: 124 H

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

- Mixing run intermittenthe to reduce beaving wear.

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: <u>2/26/19</u> Time: <u>0840</u> Ir	spector Initials:	Kall	
PRO	DCESS PIPING INSPECTION			
1.	Observe piping between Process Tank secondary containment	and FBR secondary	containment.	
	Any leaks, punctures, damage, bulges visible?	o Yes*	No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowm Flowmeter: 3.962,660 (gallons)	eter east of Process	Tanks.	
SEC	ONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner system for poten	tial wear and tear.	~	
	Any leaks, punctures, or other damage visible?	Yes	No	
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No	
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No	

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	es	No*	les	No*	NA	NA

	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	ves	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**		No*	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>53</u> Oil temperature	5	() °F	4	٩°F	5	∂ °F

Date:

Time:

Inspector Initials: \_\_\_\_\_KGH

NOTES:

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\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce bearing wear meter mitheutle MHUNG NUN

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	о II
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173 💷	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	ite: 2/27/19 Time: 0900 Inspecto	r Initials:	KAI
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FB Any leaks, punctures, damage, bulges visible?	iR secondary Yes*	containment.
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter ea Flowmeter: <u>3,967,770</u> (gallons)	st of Process	Tanks.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wea Any leaks, punctures, or other damage visible?	ar and tear. Yes	No
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No

If Yes, pump storm water into one of the process tanks.

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-2	02	T-2	03	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes I	No*	Yes	No*	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Ves	No*	Yes	No*	NA	NA

11	T-2	201	T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No)	Yes*	
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Ves	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	es	No	Ves	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	(N9*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature 51 Oil temperature	5	le °F	5	7 °F	50	∕ °F

27/ (9 Date: \_ 2

Time: \_\_\_\_\_

Inspector Initials: KGK

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

ruter mittently to reduce Moyers run bearing war.

**Operator Signature:** 

les Hansu

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: <u>2/28/19</u> Time: <u>1108</u> Ins	pector Initials:	<u>f/</u>
PR	DCESS PIPING INSPECTION	÷	
1.	Observe piping between Process Tank secondary containment a	ind FBR secondary containr	nent.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmet Flowmeter: <u>3,9,74,710</u> (gallons)	ter east of Process Tanks.	
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potentia	al wear and tear.	0
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	1 <del>1</del> 1	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

U	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	CN6
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	fes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	NO*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	6	<b>3</b> °₽	60	∕ °F	6	₹°F

Date: 2/28/19

Time: \_\_\_\_\_\_ Inspector Initials: \_\_\_\_KSH

NOTES:

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\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Water toansfer from T-201

**Operator Signature:** 

Kyled. Hanne

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	-
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

	te: $3/1/19$ Time: 0930 DCESS PIPING INSPECTION	Inspector Initials:	KGH
1.			containment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area	a	-
	Any leaks, punctures, damage, bulges visible?	Yes*	Ng
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: <u>3,978 270</u> (gallons)	meter east of Process	Tanks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pote	ential wear and tear.	6
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		0
6.	Is there storm water accumulation in equipment pad sumps	?: Yes	NO
	If Yes, pump storm water into one of the process tanks.		0

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-2	203	Т-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	res	No*	Yes	No*	(es)	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	Yes	No*	NA	NA

11 A	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	(es	Ňo
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No	Yes	No*)	Yes	Ngt
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureOC Oil temperature	6	3 °F	G	? Z °F	6	2 °F

Date:

Time: \_\_\_\_\_

Inspector Initials: K4H

NOTES:

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Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

infermittenthe to reduce pearing wear Run mixers

sled. Hanson

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	ate: 3/2/19 Time: 1045 Inspector Initials: <u>K411</u>	
PR	ROCESS PIPING INSPECTION	
1.	Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes* No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes* No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>3,991,7320</u> (gallons)	
SEC	CONDARY CONTAINMENT INSPECTION	
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear.	
	Any leaks, punctures, or other damage visible? Yes No	
5.	Is there storm water accumulation greater than 1 foot? Yes	
	If Yes, pump storm water into one of the Process Tanks.	
6.	Is there storm water accumulation in equipment pad sumps?: Yes No por If Yes, pump storm water into one of the process tanks.	price
	Olt in	ucher
PR	OCESS TANKS AND DAY TANK INSPECTION	utay
7.	Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:	

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	res	No*	NA	NA

10 - A	T-2	201 🦰	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	<b>E</b>	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	Not	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO >Oil temperature	6	Z °F	67	Z °F	6-	ζ°F

Date:

**Corporate Health & Safety** 

**Process Engineer** 

(United Rentals)

**Emergency Generator** 

Time: \_\_\_\_\_

Inspector Initials: K4H

NOTES:

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Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

mixing intermittently to reduce bearing wear RUN ryle S. Haner **Operator Signature: EMERGENCY CONTACTS:** Title Name Phone # Comments Site Implementation Manager **Brad Maynard** (907) 723-2646 **Field Operations Manager Kyle Hansen** (801) 949-6663 **Project Manager** David Bohmann (303) 704-9527 Program Manager Dan Pastor (303) 588-0901 Site Health & Safety Karen Luna (702) 217-8173

(610) 348-7197

(770) 845-6281

(702) 538 2292

Michelle Gillie

**Courtney Flores** 

Heath Barnard

Reference Quote # 142770051

Reference Customer # 1439334

Dat	ate: <u>3/3/19</u> Time: <u>1245</u> Inspecto	or Initials:	KGH
PRC	ROCESS PIPING INSPECTION		
1.	<ul> <li>Observe piping between Process Tank secondary containment and FE Any leaks, punctures, damage, bulges visible?</li> </ul>	3R secondary co Yes*	ontainment.
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter ear Flowmeter: $3,998,860$ (gallons)	ist of Process T	anks.
SEC	CONDARY CONTAINMENT INSPECTION		

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible?
- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	NO
All decant valves and transfer valves locked out?**	Yes	No*	es	No*	es	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	Yes	No*	res	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

1	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	NO	Yes*	No	Yes*	NO
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	res	No	res	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No.
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	7	0 °F		9 °F	6	9°F



-1-10

Date:

Time:

Inspector Initials: KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

**Corporate Health & Safety** 

**Process Engineer** 

(United Rentals)

**Emergency Generator** 

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

mixing intermittently to reduce beaching Run wear Kyle J. Haner **Operator Signature:** EMERGENCY CONTACTS: Title Name Phone # Comments Site Implementation Manager **Brad Maynard** (907) 723-2646 Field Operations Manager **Kyle Hansen** (801) 949-6663 Project Manager **David Bohmann** (303) 704-9527 Program Manager Dan Pastor (303) 588-0901 Site Health & Safety Karen Luna (702) 217-8173

(610) 348-7197

(770) 845-6281

(702) 538 2292

**Michelle Gillie** 

**Courtney Flores** 

Heath Barnard

Reference Quote # 142770051

Reference Customer # 1439334

Date	3/4/19	Time:	1150
PRO	CESS PIPING INSPECTION		
1 0	Diserve nining between Pro	ress Tan	k secondary contains

- 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* No
- 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4,004,710 (gallons)

## SECONDARY CONTAINMENT INSPECTION

- Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes
   Is there storm water accumulation greater than 1 foot? Yes
- 5. Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.
- Is there storm water accumulation in equipment pad sumps?:
   If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	Ko)	Yes*	(No)
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

### 8. Visual inspection from top of each Process Tank:

	T-2	201	T-2	202	T-2	203 2
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	les	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	res	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	Not	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	68	۶°F	69	∕ °F	70	°F

Tetra Tech, Inc.



Inspector Initials: \_\_\_\_\_KGH

Yes\*

Yes

Date:

Time:

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Feduce Kum mixus intermitteri 4 blaring wear

**Operator Signature:** 

ste et Hans

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	Page 11 12 19
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	T : "Dated
Program Manager	Dan Pastor	(303) 588-0901	-
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

	3/5/19 KUS PHASE III O&M ROUTINE INSPEC	TION FORM	
Da	ite: <u>House</u> Time: <u>1645</u> Inspecto	or Initials:	KSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and Fl	BR secondary co	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		0
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter each Flowmeter: 4018770 (gallons)	ast of Process Ta	anks.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential we	ar and tear.	~
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	Ng

- If Yes, pump storm water into one of the Process Tanks. 6. Is there storm water accumulation in equipment pad sumps?:
  - If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

Yes

Nb

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Nø
All decant valves and transfer valves locked out?**	res	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	res	No*	res	No*	Yes	No*	NA	NA

	T-2	201	T-202		Т-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	res	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	les	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No <sup>1</sup> *	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature 72 Oil temperature	72 °F		72 °F 72 °F		73 °F	

3/5/19 Date:

Time:

Inspector Initials: K4H

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

wed 4(e, 500 gollous from T-201 to T-203. to reduce hearing wear

gle S. Hann

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	-
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/6/19</u> Time: <u>1525</u> In:	spector Initials:	stl	
PR	OCESS PIPING INSPECTION			
1.	Observe piping between Process Tank secondary containment	and FBR secondary contai	nment.	
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)	
2.	Observe piping in Process Tank secondary containment area.		~	
	Any leaks, punctures, damage, bulges visible?	Yes*	NO	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowme Flowmeter: 4,0.26, 320 (gallons)	ter east of Process Tanks:	Ŭ	
SEC	CONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner system for potent	ial wear and tear.	-	
	Any leaks, punctures, or other damage visible?	Yes	No	
5.	Is there storm water accumulation greater than 1 foot?	Yes	No	
	If Yes, pump storm water into one of the Process Tanks.		$\smile$	
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No	Pumping
	If Yes, pump storm water into one of the process tanks.			

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Ng
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Ves	No*	NA	NA

·	T-2	201	T-2	202	T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	es	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	N9*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	6	2 °F	te	S °₽	6	<b>3</b> °F

19 Date:

Time: \_\_\_\_\_ Inspector Initials: KS+J

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixers run intermittently to reduce bearing wear Transferred 41,000 gallow from T-201 to T-203.

**Operator Signature:** 

st. J. Hansun

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date: 3/7/19 Time: 1615 Inspector Initials: K	51/
PROCESS PIPING INSPECTION	
1. Observe piping between Process Tank secondary containment and FBR secondary containm Any leaks, punctures, damage, bulges visible? Yes*	ent. No
2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes*	No
<ol> <li>Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks.</li> <li>Flowmeter: 4035, 210 (gallons)</li> </ol>	
SECONDARY CONTAINMENT INSPECTION	

*les* 

Yes

T-20

0,24

ko -

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes
- Is there storm water accumulation greater than 1 foot?
   If Yes, pump storm water into one of the Process Tanks.
- 6. Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	N
All decant valves and transfer valves locked out?**	Yes	No*	res	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Ves	No*	es	No*	NA	NA

	T-2	201	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	NO	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Nes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	res	No		No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	10*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	70	°F	7	°F	7	۴

Date:

Time: \_\_\_\_\_\_ Inspector Initials: \_\_\_\_\_\_

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

reduce VixIns ) where mithew Dearina wear TUL gled Hansn

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	te: <u>3/8/19</u> Time: <u>1050</u> Insp	ector Initials: <u>KGK</u>	-
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment an Any leaks, punctures, damage, bulges visible?	d FBR secondary containment. Yes* No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes* No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: <u>4,040,540</u> (gallons)	er east of Process Tanks.	
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential Any leaks, punctures, or other damage visible?	wear and tear. Yes	
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes No	
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes No	

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Ro
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Ves	No*	NA	NA
Are transfer pumps ready for service?	fes	No*	Yes	No*	Yes	No*	NA	NA

1 M	T-2	201	Т-2	202	T-3	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Ves	No
Mixer off as part of sediment washing process? f Yes, draw an "X" through answers to next question.		No	ves	No		No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	Not	Yes	446*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature $59$ Oil temperature	5	¶ °F	5	G °F	5	-8 °F

Date:

Time: 1050 Inspector Initials: RSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

EUN intermittently to reduce bearing Viters Wear

gled Hanson

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	U All
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	1 2 2 4 10
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: 3/9/19 Time: 0910	Inspector Initials:	K411
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containme Any leaks, punctures, damage, bulges visible?	ent and FBR secondary Yes*	containment. No
2.	Observe piping in Process Tank secondary containment are Any leaks, punctures, damage, bulges visible?	a. Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: <u>4,051,010</u> (gallons)	vmeter east of Process	Tanks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pot	ential wear and tear.	0
	Any leaks, punctures, or other damage visible?	Yes	NO
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No
6.	Is there storm water accumulation in equipment pad sumps If Yes, pump storm water into one of the process tanks.	?: Yes	No

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	A.
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	(es	No*	NA	NA

24.4 M 34	T-2	201	Т-2	202	T-2	03
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	res	No	ø	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	les	No	Ø	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature $54$ Oil temperature	50	°F	5(	°F	55	°F

Date:

Time:

\_\_\_\_ Inspector Initials: \_\_\_\_

KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittenthe to reduce bearing wear Mixers UU

6.J. Hansu

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	50 KV
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	(III)
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/10/19</u> Time: <u>0647</u> Inspector Init	ials:	KSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec Any leaks, punctures, damage, bulges visible?	condary coi Yes*	ntainment. No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: <u>4,062,040</u> (gallons)	Process Tai	nks.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	i tear.	0
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	64D
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Tes	No*	Yes	No*	res	No*	NA	NA

E II A A	T-2	201	T-2	202	T-2	203 ~
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Nes	No	es	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	NLO*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	<b>~</b> 4 °₽	5	5°F	53	5 °₽

3/10/19 Date: >>

Time: \_\_\_\_\_

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce bearing MILWS intermitterdly ~UU wear

**Operator Signature:** 

gle & Hansen

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	- T
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: <u>3/11/19</u> Time: 0925 Inspec	ctor Initials:	KSH
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and Any leaks, punctures, damage, bulges visible?	FBR secondary co Yes*	ontainment. No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: <u>4,069,230</u> (gallons)	east of Process T	anks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential v	vear and tear.	m
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	Ng

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Ng
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Nor
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	₽°F	5	2_ °F	52	°₽

Date:

Time: \_\_\_\_\_

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Inspector Initials:

KSI

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce UN inter \$0,000 apliants from T. 202 10 concer

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	te: <u>3/12/19</u> Time: <u>0756</u> Insp	ector Initials:K	511
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment ar	nd FBR secondary contai	nment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		0
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: 4,080,560 (gallons)	er east of Process Tanks.	0
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potentia	I wear and tear.	2
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	NO
	If Yes, pump storm water into one of the Process Tanks.		~
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No
	If Yes, pump storm water into one of the process tanks.	West	East

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	NO	Yes*	No	Yes*	No	Yes*	NO
All decant valves and transfer valves locked out?**	(es	No*	res	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	fes	No*	Yes	No*	Yes	No*	NA	NA

		201	T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Ves	No	(e)	No
Mixer running and turbulence/vortex observed?**	Yes	Not	Yes	No	Yes	<b>K</b> 0*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	Ø °F	5	/ °F	50	°F

Date:

Time: \_\_\_\_\_ =

Inspector Initials: KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixens run intermittenthes to reduce bearing wear. in prozess Batch From T-203

**Operator Signature:** 

**EMERGENCY CONTACTS:** 

Title Name Phone # Comments Site Implementation Manager **Brad Maynard** (907) 723-2646 **Field Operations Manager Kyle Hansen** (801) 949-6663 **Project Manager David Bohmann** (303) 704-9527 **Program Manager** Dan Pastor (303) 588-0901 Site Health & Safety Karen Luna (702) 217-8173 **Corporate Health & Safety** Michelle Gillie (610) 348-7197 Process Engineer **Courtney Flores** (770) 845-6281 Emergency Generator Reference Quote # 142770051 Heath Barnard (702) 538 2292 (United Rentals) Reference Customer # 1439334

Da	te: 3/13/19	or Initials:/	411	-
PR	OCESS PIPING INSPECTION			
1.	Observe piping between Process Tank secondary containment and F	BR secondary conta	inment.	
	Any leaks, punctures, damage, bulges visible?	Yes*	No	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	No	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter e Flowmeter: <u>4091,000</u> (gallons)	ast of Process Tank	5.	
SE	CONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner system for potential we	ear and tear.	10	
	Any leaks, punctures, or other damage visible?	Yes	No	
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks.	Yes	No	
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	NO	

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	646
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	es	No*	Yes	No*	Yes	No*	NA	NA

		201	T-2	202	T-203	
Visible oil leaks from gear box?		No	Yes*	No	Yes*	Ng
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Ves	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	és	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>7</u> Oil temperature	5	¶° F	l	5 ( °F	51	°F

Date: \_\_\_\_\_

Inspector Initials: \_\_\_\_\_

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

Time: \_\_\_\_\_

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

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<b>Operator Signature:</b>	

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	L
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

### **K05 PHASE III O&M ROUTINE INSPECTION FORM** Time: 0850 Inspector Initials: \_\_\_\_ KG (( Date: PROCESS PIPING INSPECTION 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* No 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes\* 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4098, 230 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks. 6. Is there storm water accumulation in equipment pad sumps?: Yes

If Yes, pump storm water into one of the process tanks.

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Ves	No	Yes	No	Tes	No
Mixer running and turbulence/vortex observed?**	Yes	No*)	Yes	No*)	Yes	NO*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature 49° Oil temperature	49	°F	U C	°₽	40	°F

Date:	3/1	41	19	-
	1	1		

Time:\_\_\_\_\_

Inspector Initials: KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

- Mixers run intermittently to reduce bearing wear.

**Operator Signature:** 

Kifed Hanson

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date: 3/15/19 Time: 0925 Inspector	Initials: <u>/&lt;</u>	s.H
PROCESS PIPING INSPECTION		
1. Observe piping between Process Tank secondary containment and FBF	l secondary cont	tainment.
Any leaks, punctures, damage, bulges visible?	Yes*	(NO)
2. Observe piping in Process Tank secondary containment area.		0
Any leaks, punctures, damage, bulges visible?	Yes*	No
3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter eas	t of Process Tanl	ks.
Flowmeter: 4, 112, 420 (gallons)		
SECONDARY CONTAINMENT INSPECTION		
4. Perform 360 perimeter walk to observe liner system for potential wear	and tear.	0
Any leaks, punctures, or other damage visible?	Yes	No
5. Is there storm water accumulation greater than 1 foot?	Yes	(No)
If Yes, pump storm water into one of the Process Tanks.		X
6. Is there storm water accumulation in equipment pad sumps?:	Yes	(ve
If Yes, pump storm water into one of the process tanks.		

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	res	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**		(No*)	Yes	No	Yes	(No*)
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	51	3 °F	- 5	ζ °F	52	°F

Date:

Time: 0925

Inspector Initials: KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixeus run intermittenthe to reduce bearing wear

**Operator Signature:** 

fled. Haner

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/10/19</u> Time: <u>1150</u>	Inspector Initials:K	14 fl
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment	nt and FBR secondary contai	nment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		2
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flown Flowmeter: <u>4, 119, 690</u> (gallons)	meter east of Process Tanks	
4.	Perform 360 perimeter walk to observe liner system for pote		$\bigcirc$
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		2
6.	Is there storm water accumulation in equipment pad sumps?	: Yes	No
	If Yes, pump storm water into one of the process tanks.		

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	res	No*	NA	NA

	T-2	201	T-3	202	T-2	203 >
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Res	No	(es	No
Mixer running and turbulence/vortex observed?**		No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	U	≶ °F		64 °F	6	5 °F

Date:

Time: \_\_\_\_\_

Inspector Initials: KSIA

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

reduce bearing moter mittent as Mixery run 10 Wear

**Operator Signature:** 

Kaled. Have

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	1999
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	in the second se
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	and a second or an
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	te: $3/(7/19)$ Time: 0930	Inspector Initials:	KGH
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment	nt and FBR secondary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flows Flowmeter: <u>4</u> , 126, 915 (gallons)	meter east of Process T	anks.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pote	ntial wear and tear.	3
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		
6.	Is there storm water accumulation in equipment pad sumps? If Yes, pump storm water into one of the process tanks.	: Yes	No

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No	
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA	
Are transfer pumps ready for service?	Ves	No*	Yes	No*	Yes	No*	NA	NA	

10 M	Т-2	201	T-2	202	T-2	.03
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>5</u> <u>3</u> Oil temperature	5	4 °F	55	۴	52	°F

Date:	3/	17/1	9
	1	1	

Time:

Inspector Initials: KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

reduce bearing wear Mixurs run wtermittenth to

Operator Signature:

Kyle & Harren

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:       3/18/19       Time:       0.82-5       Inspector Initials:       K-411         PROCESS PIPING INSPECTION         1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible?       Yes*       No         2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?       Yes*       No					
Da	te: 3/18/19 Time: 0825 Inspector Init	tials:	KGIL		
PR	OCESS PIPING INSPECTION				
1.		÷			
	Any leaks, punctures, damage, bulges visible?	Yes⁺	No		
2.	Observe piping in Process Tank secondary containment area.		3		
	Any leaks, punctures, damage, bulges visible?	Yes*	(Ng)		
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: 4,134,140 (gallons)	Process Tank:	5.		
SEG	CONDARY CONTAINMENT INSPECTION				
4.	Perform 360 perimeter walk to observe liner system for potential wear an	d tear.	~		
	Any leaks, punctures, or other damage visible?	Yes	No		
5.	Is there storm water accumulation greater than 1 foot?	Yes	NO		
	If Yes, pump storm water into one of the Process Tanks.				
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No		
	If Yes, pump storm water into one of the process tanks.		~		

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Ø	No*	Ð	No	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Ves	No*	es	No*	NA	NA

	T-2	201	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	res	No	(es)	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	3 °F	5	4°F	54	°F

Date:

Time: \_\_\_\_\_

Inspector Initials: KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

VUN 1dure penna T-7-01 CT-202 T-ZOZ 410 inta 00,000 ag llore

**Operator Signature:** 

sre: Nigled Hamen

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: 3/19/19 Time: 1295 Inspector Initials: KS14	
PRO	DCESS PIPING INSPECTION	
1.	Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible?	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes*	
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: $4,149,080$ (gallons)	
SEC	ONDARY CONTAINMENT INSPECTION	
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes	
5.	Is there storm water accumulation greater than 1 foot? Yes No If Yes, pump storm water into one of the Process Tanks.	

6. Is there storm water accumulation in equipment pad sumps?: Yes If Yes, pump storm water into one of the process tanks.

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	Na	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Tes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Nes	No*	NA	NA

#### 8. Visual inspection from top of each Process Tank:

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	7	8°F	7	7 °F	78	°F

No

Date:

Kyle S. Haven

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_\_12 4 H

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittently to reduce bearing wear run

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	n 11
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	· · · · ·
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

## **K05 PHASE III O&M ROUTINE INSPECTION FORM** Time: 0430 Inspector Initials: \_\_\_\_ KGH Date: PROCESS PIPING INSPECTION Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* No 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes\* No 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4,149,090 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Yes

- Any leaks, punctures, or other damage visible?Yes5. Is there storm water accumulation greater than 1 foot?YesIf Yes, pump storm water into one of the Process Tanks.
- Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

Yes

	T-201		T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Ye	No*	NA	NA

## 8. Visual inspection from top of each Process Tank:

		T-201		T-202		203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureO 2 Oil temperature	6	∠ °F	le	2 °F	67	°F

## K05 Phase III Inspection Form\_17011\_05

20/19 Date:

Time: \_\_\_\_\_

yes. Ha

Inspector Initials:

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

ermittenthe to reduce bearing wear. Mixed rua 2 GPM ETI DUllrun a

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	11 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	-
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals) Heath Barnard		(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: <u>3/21/19</u>	Time: 1020	Inspector Initials:	KGH
PR	DCESS PIPING INSPECTION			
1.	Observe piping between Pa	rocess Tank secondary conta	ainment and FBR secondary o	ontainment.
	Any leaks, punctures, o	lamage, bulges visible?	Yes*	No
2.		Fank secondary containment lamage, bulges visible?	t area. Yes*	No
3.		ed Lake Mead Water (SLMW 19,180 (gallons)	) flowmeter east of Process 1	'anks.
SEC	ONDARY CONTAINMENT I	SPECTION		
4.	Perform 360 perimeter wa	lk to observe liner system fo	r potential wear and tear.	5
	Any leaks, punctures, c	r other damage visible?	Yes	(No)
5.	Is there storm water accun	aulation greater than 1 foot?	? Yes	NO
	If Yes, pump storm wat	er into one of the Process Ta	anks.	
6.	Is there storm water accum	nulation in equipment pad su	umps?: (Yes)	No pump

If Yes, pump storm water into one of the process tanks.

### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-2	202	Т-2	203	T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Nø
All decant valves and transfer valves locked out?**	res	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

- 41 M		T-201		T-202		203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	res	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	fes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	Ng*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	5	₽ °F	5-	7 °F	5	6 °F

Date:	3/21	19
	1-1	

Time: \_\_\_\_\_

Inspector Initials: <u>KSII</u>

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce bearing wear Milling intermit ten *run* 

led Hanson

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	10
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/22/19</u> Time: <u>1(30</u> Inspecto	or Initials:	Katl
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and Fl	BR secondary con	itainment,
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		~
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter ea	ast of Process Tar	ıks.
	Flowmeter: 4,156,075 (gallons)		
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential we	ar and tear.	2
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		-
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No
	If Yes, pump storm water into one of the process tanks.		Ŭ

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		Т-2	202	T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

		T-201		T-202		203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	6	2 <i>0</i> °F	5	9 °F	(a)	/ °F

Date:	3	22	119
	1		

Time: \_\_\_\_\_

Inspector Initials: K4U

NOTES:

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\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

mer mittent reduce bearing Nikevs run wear

**Operator Signature:** 

glid Hanse

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	Time: $\frac{3/23/19}{2}$ Time: 0800	Inspector I	nitials:/	CSH	
PRO	DCESS PIPING INSPECTION				
1.	Observe piping between Process Tank secondary containm Any leaks, punctures, damage, bulges visible?	ent and FBR s	secondary cont Yes*	tainment.	
2.	Observe piping in Process Tank secondary containment are Any leaks, punctures, damage, bulges visible?	:a.	Yes*	No	
	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: <u>4,156,075</u> (gallons)	wmeter east (	of Process Tan	ks.	
Į.	ONDARY CONTAINMENT INSPECTION	_			
4.	Perform 360 perimeter walk to observe liner system for po Any leaks, punctures, or other damage visible?	tential wear a	and tear. Yes	No	
5.	Is there storm water accumulation greater than 1 foot? If Yes, pump storm water into one of the Process Tanks	i.	Yes	NO	
6.	Is there storm water accumulation in equipment pad sump	s?:	Yes	No	

If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	es	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Nes	No*	res	No*	Ves	No*	NA	NA

	T-201		T-202		T-203	
Visible oil leaks from gear box?	Yes*	Nò	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Nes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	(es	No
Mixer running and turbulence/vortex observed?**		No	Yes	No*)	Yes	Net
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste M Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	4	7 .°₽	4	<b>₿</b> °F	48	°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_KSH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

ently to reduce beging wear. Nikers run intermitt

**Operator Signature:** 

yl J. Hansu

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	- 11
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	-
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u> </u>	itials:	KGH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR s	econdary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		2
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: $4,156,075$ (gallons)	of Process T	anks.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear a	nd tear.	6
	Any leaks, punctures, or other damage visible?	Yes	(No)
5.	Is there storm water accumulation greater than 1 foot?	Yes	(No)
	If Yes, pump storm water into one of the Process Tanks.		~
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	(vo)

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	<b>A</b> to
All decant valves and transfer valves locked out?**	Yes	No*	ves	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Ves	No*	NA	NA

	T-2	201	T-2	202	Т-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	es	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	(es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	(No*	Yes	(N0*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureO (O il temperature	C	? ( °F	_ 5'	¶ °F	lo C	) °F

Date:	3/24	/19

Time:

Inspector Initials: \_\_\_\_\_KH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

run intermittently to reduce bearing wear - Mixery

**Operator Signature:** 

Kyl J. Hanen

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	10 11 01
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

## **K05 PHASE III O&M ROUTINE INSPECTION FORM** Time: 0930 Inspector Initials: KGH Date: **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* ŃΟ 2. Observe piping in Process Tank secondary containment area. Yes\* Any leaks, punctures, damage, bulges visible? 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4,157,250 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks. 6. Is there storm water accumulation in equipment pad sumps?: Yes If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	res	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	T-201		T-202		203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	6	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Ves	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	(No*)	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	6	2 °F	Le 1	°F	Ce l	°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_KG[·]

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittently to reduce bearing wear Nixers run

**Operator Signature:** 

yl & Hansen

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/26/19</u> Time: 1605 Inspector Init	als:K	4 A					
PR	PROCESS PIPING INSPECTION							
1.	I. Observe piping between Process Tank secondary containment and FBR secondary containment.							
	Any leaks, punctures, damage, bulges visible?	Yes*	No					
2.	Observe piping in Process Tank secondary containment area.		-					
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)					
3.	3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: $4, 163, 480$ (gallons)							
SEC	ONDARY CONTAINMENT INSPECTION							
4.	Perform 360 perimeter walk to observe liner system for potential wear and	tear.	-					
	Any leaks, punctures, or other damage visible?	Yes	No					
5.	Is there storm water accumulation greater than 1 foot?	Yes	No					
	If Yes, pump storm water into one of the Process Tanks.		à					
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No					

#### PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	Т-2	202	Т-2	203	Т-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	es	No*	Yes	No*	NA	NA

	T-2	201	T-2	202	T-2	.03
Visible oil leaks from gear box?	Yes*	Na	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	res	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	es	No	les	No	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*)	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	88	) °F	8	/ °F	80	°F

26/19 Date: \_

Time:

Inspector Initials: \_\_\_\_ KGA

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

is to reduce bearing what TUN ristermitten 4,200 adlences moto esed 7-203

**Operator Signature:** 

glis. Haven

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

	te: <u>3/27/19</u> Time: <u>1445</u> Inspection	ector Initials:	KS11				
r ix							
1.	Observe piping between Process Tank secondary containment an	id FBR secondary co	ntainment				
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)				
2.	Observe piping in Process Tank secondary containment area.		6				
	Any leaks, punctures, damage, bulges visible?	Yes*	No				
3.	<ol> <li>Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks.</li> <li>Flowmeter: 4, 103, 485 (gallons)</li> </ol>						
351	CONDARY CONTAINMENT INSPECTION						
4.	Perform 360 perimeter walk to observe liner system for potential	l wear and tear.	~				
	Any leaks, punctures, or other damage visible?	Yes	No				
5.	Is there storm water accumulation greater than 1 foot?	Yes	No				
	If Yes, pump storm water into one of the Process Tanks.		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)				
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No				

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	T-2	.02	T-2	203	T-2	.04
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	<b>No</b>	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Tes	No*	NA	NA

	T-2	201	T-2	202	T-2	:03
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Tes	No	res	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>78</u> Oil temperature	7	8 °F	7	9°F	77	7 °F

Date:	3/27	19
	1	1 '

Time:

Inspector Initials: KG4

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

run intermittently to reduce bearing wear and 29,000 from T-201 to T-203 Mikera Trensferred

**Operator Signature:** 

Kyle J. Haven

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/29/19</u> Time: <u>705</u> Inspector In	itials:	124 H					
PR	PROCESS PIPING INSPECTION							
1.	1. Observe piping between Process Tank secondary containment and FBR secondary containments							
	Any leaks, punctures, damage, bulges visible?	Yes*	No					
2.	Observe piping in Process Tank secondary containment area.		2					
	Any leaks, punctures, damage, bulges visible?	Yes*	No					
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east o	f Process 1	Fanks.					
	Flowmeter: 4, 163, 610 (gallons)							
SEG	CONDARY CONTAINMENT INSPECTION							
4.	Perform 360 perimeter walk to observe liner system for potential wear an	nd tear.	2					
	Any leaks, punctures, or other damage visible?	Yes	Ne					
5.	Is there storm water accumulation greater than 1 foot?	Yes	No					
	If Yes, pump storm water into one of the Process Tanks.							
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	(Ng					
	If Yes, pump storm water into one of the process tanks.							

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	T-2	03	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	Ne
All decant valves and transfer valves locked out?**	Yes	No*	res	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	es	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	(B)	No	res	No	fes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	res	No	es	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature 64 Oil temperature	6	4 °F	60	-{ °F	6	5°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_\_

KGH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce mermitlenth Bearing wear. Mixwy CUL

**Operator Signature:** 

led Ha

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	e: <u>3/29/19</u> Time: <u>0925</u> Inspe	ctor Initials:	K411
PRC	CESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and	FBR secondary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	NO
2.	Observe piping in Process Tank secondary containment area.		0
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter	east of Process T	anks.
	Flowmeter: 4,170,700 (gallons)		
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential v	wear and tear.	0
	Any leaks, punctures, or other damage visible?	Yes	NO
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		
6.	s there storm water accumulation in equipment pad sumps?:	Yes	Ng
	If Yes, pump storm water into one of the process tanks.		

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	T-2	201	T-2	202	Т-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	10	Yes*	No	Yes*	No	Yes*	N
All decant valves and transfer valves locked out?**	res	No*	es	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	res	No*	res	No*	Yes	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	Nö	ves	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	es	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	lo	7 °F	62	°F	6	3 ℉

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_\_KS//

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Mixos run intermittently to reduce bearing wear

Operator Signature:

Kyled. Hannen

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

# Time: 0910 Inspector Initials: KSA Date: **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* No 2. Observe piping in Process Tank secondary containment area: Yes\* Any leaks, punctures, damage, bulges visible? 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4, 170, 8(0 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks. 6. Is there storm water accumulation in equipment pad sumps?: Yes

If Yes, pump storm water into one of the process tanks.

# PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

	Т-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	Nø	Yes*	M	Yes*	NO	Yes*	<b>D</b>
All decant valves and transfer valves locked out?**	Yes	No*	res	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	les	No*	Yes	No*	es	No*	NA	NA

## 8. Visual inspection from top of each Process Tank:

	T-201		T-2	202	T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	Ne
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Ne	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Ves	No	Yes	No	(Jos	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	61	୬ °F	59	°F	58	°F

# **K05 PHASE III O&M ROUTINE INSPECTION FORM**

Date:

Time:

les. Hans

\_\_\_\_\_ Inspector Initials: \_\_\_\_ K-GH

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### COMMENTS:

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

to reduce bearing - Mikerg run intermittently ysear

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	×
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

# **K05 PHASE III O&M ROUTINE INSPECTION FORM** Time: <u>1350</u> Inspector Initials: <u>#5H</u> Date: **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment Any leaks, punctures, damage, bulges visible? Yes\* 2. Observe piping in Process Tank secondary containment area. Yes\* Any leaks, punctures, damage, bulges visible? 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4, 170, 8/0 (gallons) SECONDARY CONTAINMENT INSPECTION 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 5. Is there storm water accumulation greater than 1 foot? Yes If Yes, pump storm water into one of the Process Tanks.

Is there storm water accumulation in equipment pad sumps?:
 If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

7. Perform 360 degree walk around of each tank to inspect for damage or leaks and lock out of valves:

Yes

	T-2	201	T-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Tes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	(No)	Yes*	(No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Tes	No
Mixer running and turbulence/vortex observed?**	Yes	No	Yes	No*	Yes	(No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	7	∕S °F	74	∲ °F	74	°F

19 Date:

Time: \_\_\_\_\_\_ Inspector Initials: \_\_\_\_\_K4K

NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Active sediment washing requires occasional shutdown of mixers and opening of decant valves. Notify Site Implementation Manager immediately if this condition is observed and active washing is not occurring.

Initiate procedures to mobilize and connect portable generators to power the mixers in the event of a power loss greater than six hours to prevent solids from consolidating in the bottom of the Process Tanks.

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

intermittenthe to reduce bearing wear Milers run

Kyled. Hansen

**Operator Signature:** 

Title 👘	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

# Attachment B Phase III O&M Monthly Inspection Forms

Da	te: _	2/27/19	Time: _	1045	Inspector Initia	ls:R	
IN	SPEC	T MATERIALS AND P	ARTS				
1.	Are	e all spare parts prese	nt?:			Yes	No
		If no, list which parts	s need to be	e ordered and inf	orm Site Implementatio	n Manager:	
2.	Are	e all safety materials, If no, list what needs			erform work present? ite Implementation Mai	Yes	No
					·		

# PUMP OPERATION INSPECTION

3. Check if all AODD transfer pumps are in good condition and working order. Provide notes and contact the Site Implementation Manager if any repairs are required:

P-201	$\overline{\mathbf{V}}$	
P-202	$\overline{\mathbf{V}}$	
P-203	$\overline{}$	
P-204	$\overline{\mathbf{A}}$	
P-205	$\overline{\mathbf{V}}$	
P-206		

## **HIGH-HIGH LEVEL ALARMS INSPECTIONS**

4. Check if the high-high level warning alarm system is in good condition for each tank. Provide notes and contact the Site Implementation Manager if any repairs are required:

	T-2	201	T-2	202	T-2	203	T-2	.04
Check what level the High-High alarm signals – is it consistent with the set points?	Yes	No*	Yes	No*	Yes	No*	(Yes)	No*
Test reset procedure – were there any issues?	Yes*	No	Yes*	No	Yes*	No	Yes*	(No)
Are all alarm status lights in good working order?	Yes	No*	Yes	No*	Yes	No*	Yes	No*
Are the shut-off devices in good working order?	Yes	No*	Yes	No*	Yes	No*	(Yes)	No*
Visible damages to the alarm cords and cables?	Yes*	No	Yes*	No	Yes*	No	Yes*	No

Notes:\_\_\_\_\_

Date: 2/27/19

Time: <u>1045</u> Inspector Initials: <u>JR</u>

**INSPECT PROCESS TANK MIXERS** 

5. Visual inspection from top of each Process Tank:

	T-201		T-2	202	T-203	
Is there adequate oil in Process Tank mixer motors?	Yes	No*	(Yes)	No*	(Yes) N	lo*
Control panel mixer run time**	9375,7	7 hrs	9581	8 hrs	9645.4	hrs

#### INSPECT MAINTENANCE ITEMS

6. Check if equipment requiring maintenance is in good condition and working order. Provide the date of next required maintenance and contact the Site Implementation if anything is in need of maintenance:

Comments
·

## **NOTES:**

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Date of next oil change is approximate. The timing for process tank mixer gear box oil change is based on actual run time (10,000 hours). Each mixer ran for the following hours after the last oil change and prior to control panel set up, and these hours need to be added to the control panel readings to arrive at the total run time for the mixers:

M-201 = 1,276.2 hours, M-202 = 1,253.2 hours, M-203 = 1,277.5 hours

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

Operator Signature: MM R R

Date: 2/27/19 Time: 1045 Inspector Initials: JR

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

		K05 PHASE III O&M MONTHLY INSPECTION FO	RM	
Da	te:_	3/29/19 Time: 1015 Inspector Initials:	JR	
INS	PEC	T MATERIALS AND PARTS		
1.	Are	all spare parts present?: If no, list which parts need to be ordered and inform Site Implementation M	Yes anager:	No
2.	Are	all safety materials, resources, and supplies to perform work present? If no, list what needs to be ordered and inform Site Implementation Manage	Yes er:	No
		······		

#### PUMP OPERATION INSPECTION

3. Check if all AODD transfer pumps are in good condition and working order. Provide notes and contact the Site Implementation Manager if any repairs are required:

P-201		
P-202		
P-203		
P-204	$\checkmark$	
P-205	$\overline{\mathcal{V}}$	
P-206	$\Box$	

## **HIGH-HIGH LEVEL ALARMS INSPECTIONS**

4. Check if the high-high level warning alarm system is in good condition for each tank. Provide notes and contact the Site Implementation Manager if any repairs are required:

	T-2	201	T-2	202	Т-2	203	T-2	204
Check what level the High-High alarm signals – is it consistent with the set points?	Yes	No*	Yes	No*	Yes	No*	Yes	No*
Test reset procedure - were there any issues?	Yes*	No	Yes*	(No)	Yes*	No	Yes*	No
Are all alarm status lights in good working order?	Nes	No*	Yes	No*	Yes	No*	Yes	No*
Are the shut-off devices in good working order?	(Yes)	No*	Yes	No*	Yes	No*	Yes	No*
Visible damages to the alarm cords and cables?	Yes*	No	Yes*	No	Yes*	No	Yes*	(NO)

Notes:\_\_\_\_\_

# Date: 3/29/19

Time: 1015

Inspector Initials: JR

## **INSPECT PROCESS TANK MIXERS**

5. Visual inspection from top of each Process Tank:

	T-201	T-202	T-203
Is there adequate oil in Process Tank mixer motors?	Yes No*	Yes No*	Yes No*
Control panel mixer run time**	9375.8 hrs	9581.9 hrs	9645,4 hrs

#### **INSPECT MAINTENANCE ITEMS**

6. Check if equipment requiring maintenance is in good condition and working order. Provide the date of next required maintenance and contact the Site Implementation if anything is in need of maintenance:

Activity Replace 3" decant transfer hoses	Maintenance	Commonte
Peologo 2" docent transfer bosos		Comments
	8/1/2019	
Replace 3" solid transfer hoses	8/1/2019	
Replace 1.5" SLMW flush hose	6/15/2019	
Replace 3" stainless steel doublesphere expansion joints	8/1/2019	
Replace air compressor filter element	10/16/2022	
Service air compressor	1/26/2021	
Change process tank mixer gear box oil**	1/4/2020	
Grease gear seals on process tank mixer	6/21/2019	

#### NOTES:

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly document on this form and through photographs.

\*\* - Date of next oil change is approximate. The timing for process tank mixer gear box oil change is based on actual run time (10,000 hours). Each mixer ran for the following hours after the last oil change and prior to control panel set up, and these hours need to be added to the control panel readings to arrive at the total run time for the mixers:

M-201 = 1,276.2 hours, M-202 = 1,253.2 hours, M-203 = 1,277.5 hours

#### **COMMENTS:**

(Describe all "yes" answers, any observed damage, any areas that could not be inspected and the reason, etc.)

		~ ~ ~
Operator Signature: _	MKR	

Tetra Tech, Inc.

Date: 3/29/19 Time: 1015 Inspector Initials:  $\overline{JR}$ 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334