

# TECHNICAL MEMORANDUM

То:	Nevada Environmental Response Trust
Cc:	Nevada Division of Environmental Protection
From:	David Bohmann and Bounkheana Chhun
Date:	October 24, 2019
Subject:	AP-5 Operation and Maintenance Bi-Monthly Progress Report Summary – August and September 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 August and September 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 August and September 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 August and September 2019.

## SOLIDS WASHING AND DECANT WATER TRANSFER

Throughout August and September 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 64,662 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in August 2019 and approximately 44,774 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in August 2019 and approximately 44,774 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in September 2019. A summary of daily AP-5 wash water volumes that were decanted from the Process Tanks and transferred to the Day Tank in August and September 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. During the months of August and September 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 0.98% in August and September 2019.

In an effort to provide decant water for feed to the FBRs at consistent concentrations and perchlorate to ammonia ratios, Tank T-203 was used as the source of all decant water transferred to the FBRs in August and September 2019. To facilitate transfer of decant water to the FBRs through Tank T-203, AP-5 wash water was transferred between tanks as part of the solids washing process. In September 2019, AP-5 wash water decanted from tanks T-201 and T-202 were transferred into Tank T-203. The perchlorate and ammonia concentrations in Tanks T-201 and T-202 are lower than that of T-203. The transfer of decant water between Process Tanks resulted in a transfer of mass (i.e. increase in perchlorate and ammonia mass in the Process Tank receiving decant water), which is reflected on Figures 1 and 3.

## **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 August 2019, one grab sample was collected from each tank for analysis of perchlorate. In September 2019, four grab samples were collected from each tank for analysis of perchlorate. September 2019 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 September 2019 to improve concentration estimates over those obtained from a single-point sample. The perchlorate mass estimate for each tank in August and September 2019 as determined by the sampling method is provided on Table 3b. As noted above, AP-5 wash water from solids washing was transferred from tanks T-201 and T-202 to T-203 in September 2019.

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 August and September 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 was transferred from tanks T-201 and T-202 into T-203 in September 2019.

## **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 2.0 gpm at 1.8% 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 for all three tanks is expected to be completed in 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. Based on a composite sample collected from T-201 in July 2019, the solids concentration in T-201 is less than 1% and solids washing activities are considered complete for that tank. The solids in tank T-201 will be characterized for disposal followed by removal of solids from the tank for dewatering and off-site disposal following build out of the solids dewatering area. Tetra Tech initiated planning for solids dewatering in September 2019, including collecting samples from T-201 for field and laboratory testing to evaluate and optimize dewatering procedures and collecting samples for landfill waste disposal profiling. Solids dewatering activities are anticipated to begin in 2020 with T-201 and will continue to T-202 and T-203 as appropriate.

## **ROUTINE INSPECTIONS**

Routine inspections were conducted throughout August and September 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 August and September 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.
- No stormwater accumulation on the secondary containment liner or in equipment pad sumps were observed.

## **Tanks and Equipment**

Process Tanks T-201, T-202 and T-203, and Day Tank T-204 were inspected on a routine basis in August and September 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 August and September 2019 monthly inspections were conducted on August 30, 2019 and September 30, 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 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 Bi-Monthly Progress Report Summary – August and September 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

10/24/19 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 Bi-Monthly Progress Report Summary for August and September 2019.

Hansen

October 24, 2019

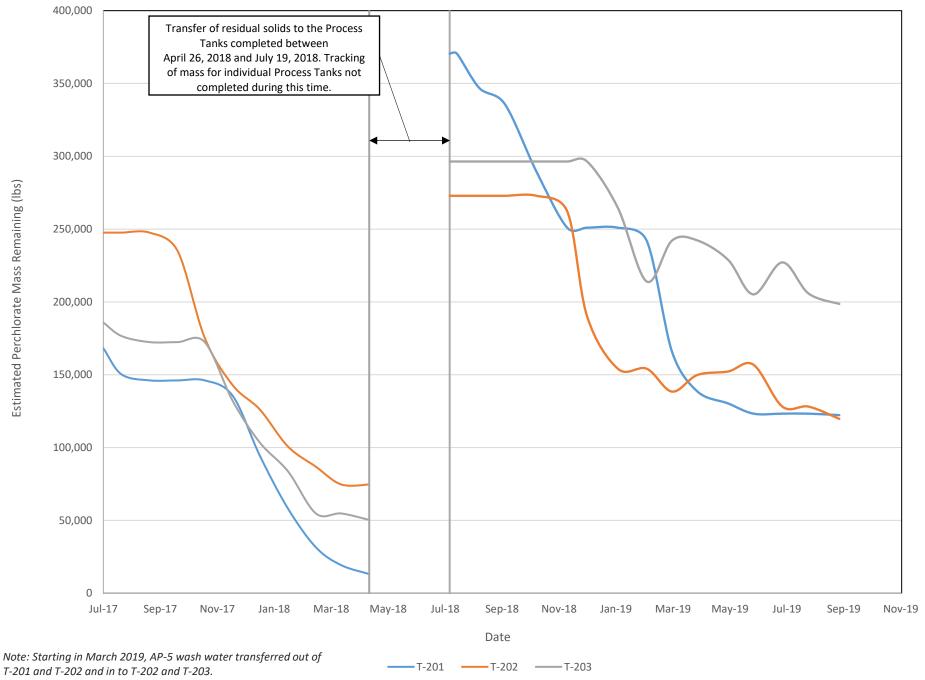
Date

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

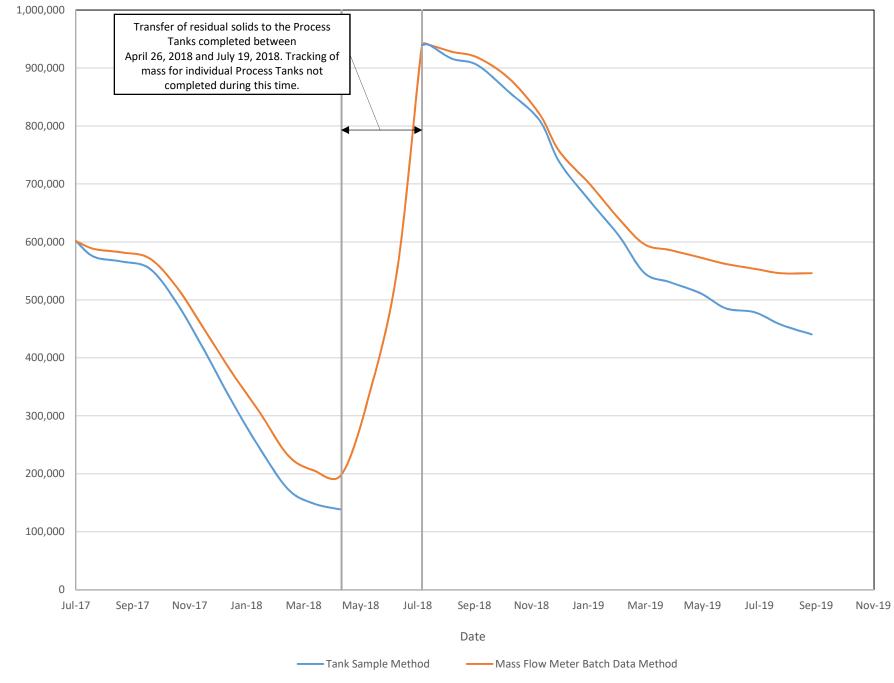
Nevada CEM Certificate Number: 2167 Nevada CEM Expiration Date: September 18, 2020

# **Figures**

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

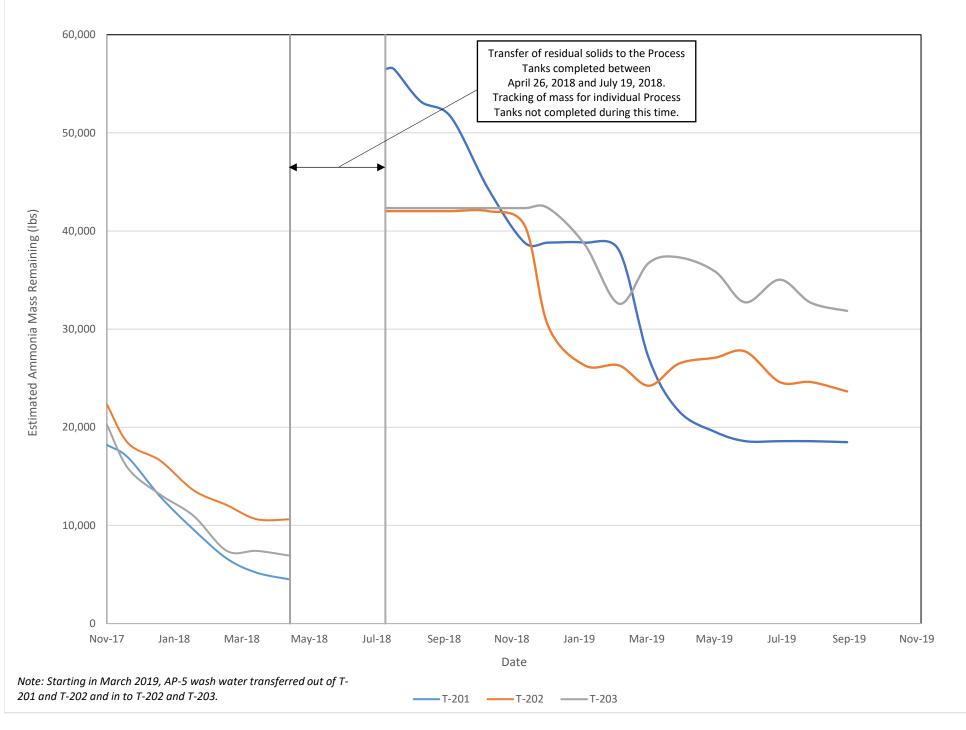


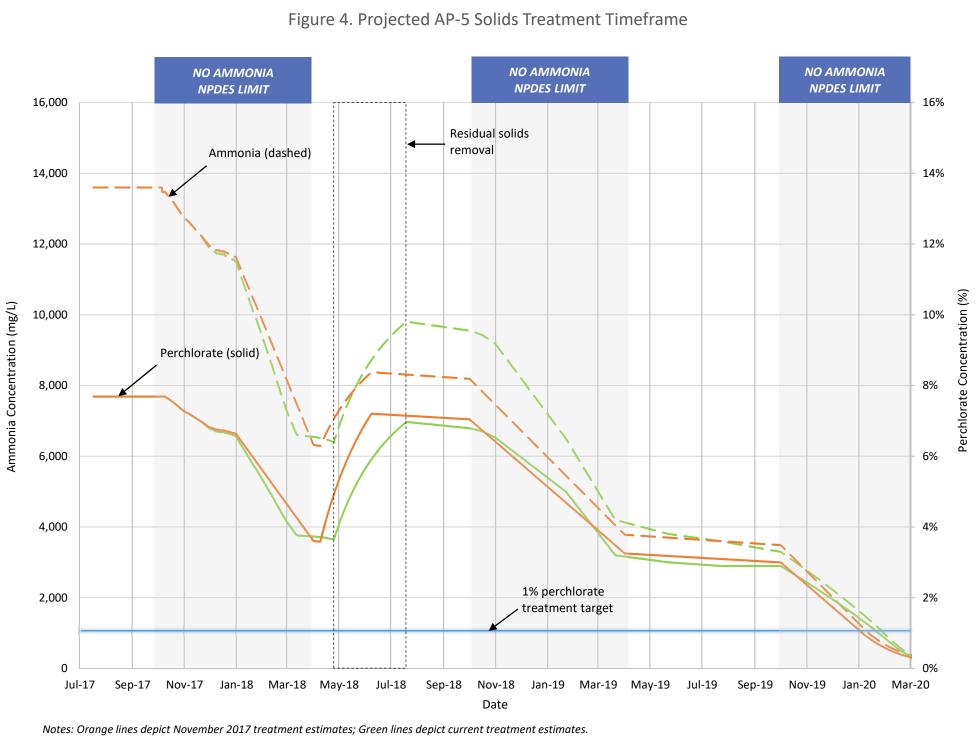
## Figure 2. Estimate of Total Perchlorate Mass Remaining in Process Tanks



Estimated Perchlorate Mass Remaining (lbs)







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

## **Tables**

Det	T-201	T-202	T-203	Daily Total
Date	(Gallons)	(Gallons)	(Gallons)	(Gallons)
8/1/2019	-	-	20,104	20,104
8/2/2019	-	-	-	-
8/3/2019	-	-	-	-
8/4/2019	-	-	-	-
8/5/2019	-	-	-	-
8/6/2019	-	-	-	-
8/7/2019	-	-	-	-
8/8/2019	-	-	-	-
8/9/2019	-	-	-	-
8/10/2019	-	-	-	-
8/11/2019	-	-	-	-
8/12/2019	-	-	-	-
8/13/2019	-	-	19,118	19,118
8/14/2019	-	-	-	-
8/15/2019	-	-	-	-
8/16/2019	-	-	-	-
8/17/2019	-	-	-	-
8/18/2019	-	-	-	-
8/19/2019	-	-	-	-
8/20/2019	-	-	-	-
8/21/2019	-	-	-	-
8/22/2019	-	-	-	-
8/23/2019	-	-	-	-
8/24/2019	-	-	-	-
8/25/2019	-	-	-	-
8/26/2019	-	-	25,440	25,440
8/27/2019	-	-	-	-
8/28/2019	-	-	-	-
8/29/2019	-	-	-	-
8/30/2019	-	-	-	-
8/31/2019	-	-	-	-
Total	-	-	64,662	64,662

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

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.

Dete	T-201	T-202	T-203	Daily Total
Date	(Gallons)	(Gallons)	(Gallons)	(Gallons)
9/1/2019	-	-	-	-
9/2/2019	-	-	-	-
9/3/2019	-	-	-	-
9/4/2019	-	-	-	-
9/5/2019	-	-	-	-
9/6/2019 <sup>2</sup>	13,000	-	(13,000)	-
9/7/2019	-	-	-	-
9/8/2019	-	-	-	-
9/9/2019	-	-	21,711	21,711
9/10/2019	-	-	-	-
9/11/2019	-	-	-	-
9/12/2019	-	-	-	-
9/13/2019	-	-	-	-
9/14/2019	-	-	-	-
9/15/2019	-	-	-	-
9/16/2019	-	-	-	-
9/17/2019	-	-	-	-
9/18/2019	-	-	-	-
9/19/2019	-	-	-	-
9/20/2019	-	-	-	-
9/21/2019	-	-	-	-
9/22/2019	-	-	-	-
9/23/2019	-	-	-	-
9/24/2019	-	-	23,063	23,063
9/25/2019	-	-	-	-
9/26/2019 <sup>2</sup>	-	33,000	(33,000)	-
9/27/2019	-	-	-	-
9/28/2019	-	-	-	-
9/29/2019	-	-	-	-
9/30/2019	-	-	-	-
Total	13,000	33,000	(1,226)	44,774

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

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.
2 - Decant volume transferred from T-201 and T-202 to T-203. Transfer into Tank T-203 shown as a negative value.

#### Table 2a. Cumulative AP-5 Wash Water Decant and Transfer Records

Basuth	T-201	T-202	T-203	Monthly Total
Month	(Gallons)	(Gallons)	(Gallons)	(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
April 2019	-	-	20,837	20,837
May 2019	-	-	55,405	55,405
June 2019	-	-	83,194	83,194
July 2019	-	-	22,342	22,342
August 2019	-	-	64,662	64,662
September 2019	-	-	44,774	44,774
Cumulative Total	975,053	717,348	978,794	2,671,195

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.

	T-201	T-202	T-203	Monthly Total
Month	(Gallons)	(Gallons)	(Gallons)	(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
April 2019	86,500	4,500	210	91,210
May 2019	74,000	-	730	74,730
June 2019	85,000	-	1,930	86,930
July 2019	23,360	-	320	23,680
August 2019	10,330	-	850	11,180
September 2019	13,000	-	400	13,400
Cumulative Total	823,437	492,567	313,310	1,629,314

#### 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 Perchlorate 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	
p	October 2017	-	59,663	-	59,663	493,878	
Approx. Mass Removed	November 2017	10,605	32,571	40,418	83,594	410,284	
Ren	December 2017	41,090	16,693	28,582	86,365	323,919	
lass	January 2018	36,195	25,360	19,639	81,195	242,724	
×.	February 2018	26,727	13,925	29,020	69,672	173,051	
pro.	March 2018	12,248	12,168	-	24,415	148,636	
Ap	April 2018	6,083	-	4,441	10,524	138,112	
	May 2018 <sup>3</sup>						
June 2018		INDIVIDUAL PI	INDIVIDUAL PROCESS TANK MASS CALCULATIONS WERE SUSPENDED UNTIL POND SOLIDS TRANSFER COMPLETED.				
July 2018			50110				
Ending	Perchlorate Mass					138,112	

Table 3a. Estimate of Perchlorate Mass in Process Tanks Based on Tank Samples after Initial Slurry Transfer

#### 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.

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 Perchlorate Mass <sup>4</sup>		370,459	272,873	296,418		939,750
	August 2018⁵	23,717	-	-	23,717	916,033
	September 2018	10,889	-	-	10,889	905,144
	October 2018	46,380	-	-	46,380	858,764
p	November 2018	38,510	10,660	-	49,170	809,594
Approx. Mass Removed	December 2018	-	72,088	-	72,088	737,507
Ren	January 2019	-	36,002	31,779	67,781	669,726
ass	February 2019	9,026	-	50,646	59,671	610,055
×.	March 2019 <sup>6</sup>	76,234	15,700	(28,139)	<i>63,795</i>	546,260
pro:	April 2019	27,186	(11,423)	(93)	15,670	530,590
Ap	May 2019	8,238	(2,366)	13,346	19,218	511,372
	June 2019	7,006	(4,670)	23,693	26,028	485,344
	July 2019	-	28,762	(21,934)	6,829	478,515
	August 2019	-	-	21,383	21,383	457,132
	September 2019	1,021	8,434	7,093	16,548	440,584
Ending	Perchlorate Mass	122,252	119,686	198,647		440,584

Notes:

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 - Starting in March 2019, AP-5 wash water was transferred out of Process Tanks T-201 and T-202 and into Process

Tanks T-202 and T-203 to provide consistent concentrations and perchlorate to ammonia ratios for feed to the FBRs.

		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
pa	October 2017		49,990	521,163
Approx. Mass Removed	November 2017		74,231	446,933
Ren	December 2017		73,066	373,867
lass	January 2018		69,363	304,504
×. M	February 2018		73,247	231,257
pro	March 2018		25,321	205,935
Ap	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

Table 4a. Estimate of Perchlorate Mass in Process Tanks Based on Batch Transfers after Initial Slurry Transfer

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.

Table 4b. Estimate of Perchlorate Mass in Process Tanks Based on Batch Transfers after Residual Solids Transfer

		Estimated Monthly Mass Added (lbs) <sup>3</sup>	Total Monthly Mass Removed (lbs)	Total Perchlorate Mass In Process Tanks (lbs)
Perchlo	orate Mass After Pon	d Solids Removal <sup>5</sup>		939,750
	August 2018		11,710	928,040
	September 2018		9,777	918,264
	October 2018		35,943	882,320
ed	November 2018		61,959	820,361
Approx. Mass Removed	December 2018		64,395	755,966
Rer	January 2019		57,196	698,770
ass	February 2019		59,301	639,469
Š.	March 2019		43,614	595,855
(ora	April 2019		9,820	586,035
Ap	May 2019		13,081	572,954
	June 2019		11,009	561,945
	July 2019		8,394	553,551
	August 2019		7,613	545,938
	September 2019		8,604	537,334
Ending	Perchlorate Mass			537,334

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 (Ibs)	Total Monthly Mass Removed (lbs)	Total Ammonia Mass In Process Tanks (lbs)
Initial A	Ammonia Mass <sup>1</sup>	18,217	22,343	20,277		60,837
	November 2017	1,323	3,979	4,490	9,792	51,045
pa	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
Ren	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
pro.	May 2018 <sup>2</sup>					
Ap	June 2018	INDIVIDUAL PR			S WERE SUSPENL PLETED	DED UNTIL POND
	July 2018	SOLIDS TRANSFER COMPLETED.				
Ending	Ammonia Mass					22,034

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

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.

		Mass in T-201 (lbs)	Mass in T-202 (lbs)	Mass in T-203 (lbs)		Total Ammonia Mass In Process Tanks (Ibs)
Initial A	Ammonia Mass <sup>3</sup>	56,496	42,023	42,335		140,854
	August 2018⁴	3,294	-	-	3,294	137,560
	September 2018	1,561	-	-	1,561	135,999
	October 2018	7,340	-	-	7,340	128,659

1,455

10,263

3,998

-

2,074

(2,253)

(610)

(623)

3,105

\_

23,649

964

\_

3,699

6,045

(4,173)

(548)

1,460

3,124

(2,313)

2,347

31,858

836

6,939

10,263

7,697

6,818

8,942

2,561

2,974

3,436

2,347

1,902

792

121,720

111,457

103,760

96,942

88,000

85,438

82,465

79,029

78,237

75,889

73,987

73,987

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

5,483

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11,041

5,363

2,124

-

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18,480

103

934

773

#### Notes:

Approx. Mass Removed

November 2018

December 2018

January 2019

February 2019

March 2019 ⁵

April 2019

May 2019

June 2019

July 2019

**Ending Ammonia Mass** 

August 2019

September 2019

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

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

Da	te: <u>8/1/19</u> Time: <u>1430</u> Inspector Initi	als:	KSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec	ondary 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) flowmeter east of F Flowmeter: $\underline{4}, 6\pi1, 140$ (gallons)	rocess Tanks.	
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? If Yes, pump storm water into one of the Process Tanks.	Yes	To
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	Ng

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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*	fes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	res	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	Ves	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 M Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature $105$ Oil temperature	((	58°F	10	(∕∂ °F	10	<b>6</b> °₽

8/1/19 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.)

run intermitten Mixens bearing to Feduce Weler

**Operator Signature:** 

les. Hans

**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	re: <u>8/2/19</u> Time: <u>0840</u> Inspector	Initials:	KGH
PRO	DCESS PIPING INSPECTION		
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.		$\overline{\frown}$
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east Flowmeter: $\underline{\mathcal{H}}_{1}$ ( $\mathcal{D}_{1}$ , $140$ (gallons)	t of Process Ta	anks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear	and tear.	$\bigcirc$
	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.	Yes	Nd

#### 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*	(NS)
All decant valves and transfer valves locked out?**	Yes	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?		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 X
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	9	3 °F	97	₹°F	9	3 °F

8/2/19 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.)

Mixers run intermittently to reduce bearing wear,

**Operator Signature:** 

le S. Hausen

**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: $\frac{6/3}{19}$ Time: 07/D Inspector Initial	als:	KSH
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec Any leaks, punctures, damage, bulges visible?	ondary 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 east of Flowmeter: $4, 621, 140$ (gallons)	rocess T	anks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and Any leaks, punctures, or other damage visible?	l 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?: 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*	Ø
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Ves	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	T-202		T-2	203
Visible oil leaks from gear box?		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.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	(No <sup>*</sup> )	Yes	No*	Yes	No
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste ///A Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	g	└(°F	8	└┤ °F	8	Υ°F

19 9 Date:

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.)

RUN intermittently to mixers reduce harina wear.

**Operator Signature:** 

Keled. Hann

**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** Time: 0605 Inspector Initials: K4H 8/4 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. Any leaks, punctures, damage, bulges visible? Yes\* No 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4, 621, 140 (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*	(A)
All decant valves and transfer valves locked out?**	Ves	No*	es	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Ves	No*	Yes	No*	Ver	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?		No	es	No	(Pas	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	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>&amp;</u> Oil temperature	8	₿°F	8	Ĵ°F	89	°F

Date:	8/4/19	Time:
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Inspector Initials: \_\_\_\_\_KAA

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 intermittently to reduce bearing wear.

**Operator Signature:** 

gled. Hansin

**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	100
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

#### RM KO5 PH 1025 KSH Time: Inspector Initials: Date: PROCESS PIPING INSPECTION 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* ٧o 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, 676, 395 (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 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

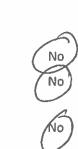
If Yes, pump storm water into one of the process tanks.

#### 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		<b>T-20</b> 4	
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*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	res	No*	NA	NA

	T-201		T-202		T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	(19)
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.	Yes	No	Ves	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 temperatureO2Oil temperature	10	) <i>0</i> °F	10	2 (°F	101	۴°



ASE III O&M ROUTINE INSPECTION	FO
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5/19 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.)

intermittently to reduce Miters **NW** bearing weat.

**Operator Signature:** 

l. J. Janson

**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: <u>8/6/19</u> Time: <u>1015</u> Inspector Initi	als:	KSH
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec	ondary con	tainment
	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 I Flowmeter: 4,676, 395 (gallons)	Process Tan	.ks.
SEC	ONDARY 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	<b>B</b> M
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?	Ves	No*	Yes	No*	Yes	No*	NA	NA

	T-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	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 MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>99</u> Oil temperature		) 2_ °F	10	/ °F	10	Z_°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_ KG f

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. -mi

lid. 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

#### Time: 0810 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\* Nó 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, 624, 4(05 (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.

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

#### 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*	< </td
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?	Yes	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	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 <u><u> </u></u>	92 °F		9/ °F		91	°۶

Date:	8/7/19	
_		

Time: \_\_\_\_\_ Inspector Initia

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.)

- Mikers run intermittently to reduce bearing weekar

**Operator Signature:** 

yl J. Hanse

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	-
Field Operations Manager	Kyle Hansen	(801) 949-6663	8
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>8/8/19</u> Time: <u>1030</u> Inspector Initials: <u>K5</u> H	_
PR	OCESS 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: $4, 629, 215$ (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 (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.	
PRO	DCESS 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*	Ves	No*	Yes	) No*	NA	NA
Are transfer pumps ready for service?	Yes	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?	es	No	Yes	No	res	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Ves	No	Yes	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 temperature7 Oil temperature	9	7°F	9	0°F	9 (	0°F

19 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 bearing wear inter mittently - Mixers CUL I.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

	e: $\frac{8/4}{19}$ Time: $\frac{0800}{0800}$ Inspector Init	ials:	KSH
4	Observe sinise between Process Tank assessment and FRP as		
1.	Observe piping between Process Tank secondary containment and FBR sec Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		$\sim$
	Any leaks, punctures, damage, bulges visible?	Yes*	No
	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: <u>4.631,435</u> (gallons) ONDARY CONTAINMENT INSPECTION	Process Ti	anks.
4	Perform 360 perimeter walk to observe liner system for potential wear an	d 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.		à
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*	6
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	res	No*	NA	NA

ೆಂ	T-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?	Yes	No	es	No	es	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 MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>81</u> Oil temperature	8	9 °F	- 83	Ŝ°F	8%	°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.)

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**Operator Signature:** 

les A

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>6/10/19</u> Time: <u>6/0/0</u> Inspector Initia	als: <u>/</u>	<u>-41</u>
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary 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) flowmeter east of F Flowmeter: $4, 631, 435$ (gallons)	rocess Tanks	
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and Any leaks, punctures, or other damage visible?	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?: 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*	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?		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	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> </u>	9	3 °F	92	°F	9	5 °F

 $(N_{9})$ 

Yes

19 Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_\_K4/4

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 Nikevs intermittenth 1UL Wear.

**Operator Signature:** 

L.S. 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	
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>8/11/19</u> Time: <u>13,45</u> Inspector Initials:	KGH
PR	OCESS PIPING INSPECTION	
1.	Observe piping between Process Tank secondary containment and FBR secondary           Any leaks, punctures, damage, bulges visible?         Yes	
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes	s* (No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Proce Flowmeter: <u>4</u> , <u>636</u> , <u>640</u> (gallons)	ess Tanks.
SEC	ONDARY CONTAINMENT INSPECTION	
4.	Perform 360 perimeter walk to observe liner system for potential wear and team 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	s 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*	res	No*	NA -	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	res	No*	NA	NA

Q.		T-201		T-202		.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	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	90	Î °F	100	·) °F	10	¢ °F

15 Date:

Time:

Inspector Initials:

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.)

- Mixews run intermittenthe to reduce pearing wear

**Operator Signature:** 

Rel. J. ans

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: 1200 Inspector Initials: 1294 Date: **PROCESS PIPING INSPECTION** 1. Observe piping between Process Tank secondary containment and FBR secondary containment Any leaks, punctures, damage, bulges visible? Yes\* Nó 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: 41, 036, 646 (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.

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

## 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	Т-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	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 78 Oil temperature	9	7 °F	90	°F ℃	9	7 °F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_\_ KGI-

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 hearing 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

Date: 8/13/19 Time: 1415 Inspector Init	ials: <u>K</u> q	H
PROCESS PIPING INSPECTION		
1. Observe piping between Process Tank secondary containment and FBR sec Any leaks, punctures, damage, bulges visible?	condary containm Yes*	ent.
<ol> <li>Observe piping in Process Tank secondary containment area.</li> </ol>	(	
Any leaks, punctures, damage, bulges visible?	Yes*	No
<ol> <li>Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: <u>4,637,060</u> (gallons)</li> <li>SECONDARY CONTAINMENT INSPECTION</li> </ol>	Process Tanks.	
4. Perform 360 perimeter walk to observe liner system for potential wear and	d tear.	
Any leaks, punctures, or other damage visible?	Yes (	No
<ol> <li>Is there storm water accumulation greater than 1 foot?</li> <li>If Yes, pump storm water into one of the Process Tanks.</li> </ol>	Yes (	No
<ol><li>Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.</li></ol>	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*	Ng	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Ves	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Ves	No*	Tes	No*	NA	NA

	Т-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	NO	Yes*	Nø	Yes*	No
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.		No	Yes	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 //4 Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>107</u> Oil temperature	(1)	°F		<i>(</i> ) °F	11	) °F

Date:

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 MIXING TUN intermittenth bearing wear.

U.S. 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

Da	te: <u>8/14/19</u> Time: <u>0737</u> Inspector Initi	als: <u> </u>	9H
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec	ondary contain	ment.
	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
	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of I Flowmeter: <u>4,637,060</u> (gallons)	Process Tanks.	
4.	Perform 360 perimeter walk to observe liner system for potential wear and Any leaks, punctures, or other damage visible?	i 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?: If Yes, pump storm water into one of the process tanks.	Yes	No
6.		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*	Mo
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

	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 Oil temperature	8	(ĵ °F	8	7 °F	- 84	⁊°₽

Date:	8/14/19	

Time:

Inspector Initials: 124H

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

# KO5 PHASE III O&M ROUTINE INSPECTION FORM Date: 6/15/19 Time: 1025 Inspector Initials: KGH 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

3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4, 641, 660 (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 If Yes, pump storm water into one of the Process Tanks.
   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-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.	Yes	No	(es)	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 $0^2$ Oil temperature	10	∽ °F	10	5°F	102	<sup>7</sup> °F

Date:

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

Inspector Initials:

125H

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.)

SUMW 00 to T-201 to make

**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>\$/10/19</u> Time: <u>0910</u> Inspector Initi	ials:	KSH
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec	ondary cont	ainment
	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*	(No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: 4,645,950 (gallons)	Process Tank	s.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	i 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.		

#### 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*	es	No*	res	) <sub>No*</sub>	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?	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>99</u> Oil temperature	9	7 °F	7	7°F	9	Ø °F

Date:

Time:

Inspector Initials: K4H

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.)

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**Operator Signature:** 

gle S. Handen

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>8/17/19</u> Time: <u>0610</u> In:	spector Initials:	KSA
PRC	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment	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) flowmer Flowmeter: <u>4</u> , <u>6</u> , <u>9</u> , <u>9</u> , <u>9</u> , <u>6</u> (gallons)	eter east of Process Ta	nks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potent	ial wear 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	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-2	T-202 T-2		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*	Yes	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*	16
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	res	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	Ng*	Yes	N0*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste M Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>8</u> 3 Oil temperature	8	Z_°F	8	₹°F	8	<b>3</b> °F

17/19 Date:

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

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.)

Mixers Jutermittenthe to reduce bearing run Wear

Lyb. S. 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

Da	te: <u>8/18/t9</u> Time: <u>0730</u> Inspector Ir	nitials:	155/1
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR s	secondary c	ontainment
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.	Yes*	ALL I
_	Any leaks, punctures, damage, bulges visible?		in-lin
<u>ح</u> .	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: <u>4,649,670</u> (gallons)	of Process 1	anks.
SEG	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear a	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 T
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*	<b>N</b>
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

0 2.2	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	es	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 Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u><u>8</u> 2 Oil temperature</u>	8	4( °F	8	Υ°F	8	≥_°F

Date:

Time:

Inspector Initials: KSH

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.)

- Mixerg run intermittently to reduce bearing 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>8/19/19</u> Time: <u>0755</u> Inspecto	or Initials:	KEH
PRC	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FE	BR secondary con	itainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	Ng
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: 4,649,670 (gallons)	ast of Process Tar	nks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential we	ar 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*	No
All decant valves and transfer valves locked out?**	Yes	No*	Ves	) No*	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Ves	No*	NA	NA

	T-2	.01	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	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	Nes	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	ß	Z°F	8	3 °F	8	/ °F

Date:

Time: \_\_\_\_

Inspector Initials: K4A

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 bearing wear Nixwa

**Operator Signature:** 

al J. Hance

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: 8/20/19 Time: 1832	Inspector Initials:	KGA
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: $4,652,930$ (gallons)	meter east of Process Ta	inks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pote	ntial 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.		5
6.	Is there storm water accumulation in equipment pad sumps? If Yes, pump storm water into one of the process tanks.	2: 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*	res	No*	es	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?	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 Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature $3^{c_1}$ Oil temperature	9(	)°F	9	(°F	92	°F

Date:

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

Inspector Initials: \_\_\_\_\_K4//

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.)

Arion to wouth Ver SUL an ki s -**Operator Signature:** tancis **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: 8/21/19	Time: 1030	Inspector Initials:	KGH
PR	OCESS PIPING INSPECTION	I		
1.	Observe piping between l	Process Tank secondary contain	ment and FBR secondary contai	inment
	Any leaks, punctures,	damage, bulges visible?	Yes*	No
2.	Observe piping in Process	Tank secondary containment a	rea.	5
	Any leaks, punctures,	damage, bulges visible?	Yes*	No
3.	_	red Lake Mead Water (SLMW) fl	lowmeter east of Process Tanks	
SEC	ONDARY 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 If Yes, pump storm water into one of the Process Tanks.
   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:

12	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*	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:

	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	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 NA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	90	°F	9	°₽	.90	7 °F

No

Date:

Time: \_\_\_\_

Inspector Initials: \_\_\_\_\_ ILS FI

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	0
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>8/22/19</u> Time: <u>0950</u> Inspector In	itials:	KGH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR s	econdary con	tainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		4
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter:	of Process Tan	ıks.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear a	nd 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*	(NO
All decant valves and transfer valves locked out?**	Ves	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	res	No*	NA	NA

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	AND
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	les	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 temperature <u>95</u> Oil temperature	9	4°F	9	4 °F	9	Z °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.)

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**Operator Signature:** 

O. 1 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

Dat	e: <u> 9/23/19</u> Time: <u>0930</u> Inspe	ctor Initials:	KGH
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment 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
	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: 4,661,510 (gallons)	east of Process Ta	inks.
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? 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-2	201	Т-2	202	T-2	:03	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*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201 _	Т-2	202	Т-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	Ng
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	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 temperatureOil temperature	9	(°F	0	₹ P°∑	9	∣ °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.)

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**Operator Signature:** 

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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>9/24/19</u> Time: <u>6610</u> Inspector Initi	als:	CSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec	ondary conta	ainment
	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 Flowmeter: $4,667,120$ (gallons)	Process Tank	S.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	l tear.	A
	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-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*	Yes	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	) <sub>Yes</sub> *	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	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 8 Oil temperature	E	Z°F	8	β°F	82	°F

Date:

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

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.)

· Mixers run intermittent to Ceduce heering Wear.

**Operator Signature:** 

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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>8/25/19</u> Time: <u>0738</u> Inspec	ctor Initials:	KSK
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and		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
	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter Flowmeter: <u>4,667,120</u> (gallons)	east of Process Tan	nks.
	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential v	vear and tear.	2
	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-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*	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?	Yes	No	res	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	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 M Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u><u>86</u> Oil temperature</u>	8	¶ °F	8	ଟ °F	80	°F

Date:

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

Inspector Initials:

K 5 H

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.)

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**Operator Signature:** 

Roled. 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

Date: <u>3/26/19</u> Time:	15	00	I	nspecto	r Initials:	K	414		
PROCESS PIPING INSPECTION									
1. Observe piping between Process Ta	ink secoi	ndary cor	itainmen	it and FB	R second	lary cont	tainment		
Any leaks, punctures, damage,	bulges vi	sible?			Y	es*		$\hat{\boldsymbol{b}}$	
2. Observe piping in Process Tank seco	ondary c	ontainme	ent area.				Ć		
Any leaks, punctures, damage,	bulges vi	sible?			Y	es*	N	2	
3. Record reading on Stabilized Lake N	/lead Wa	ter (SLM	W) flowr	neter ea:	st of Pro	cess Tanl	ks.		
Flowmeter: 4, 673, 00	<u> 00</u>	_ (gallon:	5)						
SECONDARY CONTAINMENT INSPECTIO	N								
4. Perform 360 perimeter walk to obse	erve line	r system	for pote	ntial wea	ir and te	ar.	<i>(</i>	~	
Any leaks, punctures, or other o	lamage v	/isible?			Y	es			
5. Is there storm water accumulation g	greater t	han 1 foc	ot?		Y	es	NO		
If Yes, pump storm water into o	ne of the	e Process	Tanks.						
6. Is there storm water accumulation i	in equipr	nent pad	sumps?	:	Y	25	(Ng	)	
If Yes, pump storm water into o	ne of the	e process	tanks.				$\sim$		
PROCESS TANKS AND DAY TANK INSPE	CTION								
7. Perform 360 degree walk around of	each tai	nk to insp	ect for d	lamage c	or leaks a	nd lock o	out of va	lves:	
T-201 T-202 T-203 T-204							204		
Visible damage or leaks/stains?	Yes*	No	Yes*	No	Yes*		Yes*	NO	
(inspect all welds and nozzles/valves)	res"		res		res		Tes.		
All deserve unlines and transfer unlines	n		2		6				

All decant valves and transfer valves No\* No\* No\* NA NA (Yes) Nés ) (Yes) locked out?\*\* Are transfer pumps ready for Yes No\* No\* No\* Yes NA NA Yes service?

	T-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	(Ng)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Tes	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	Not	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>D</u> Oil temperature	11	O °F	- 11	°F	110	) °F

Date:

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

Inspector Initials:

KGA

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.)

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**Operator Signature:** 

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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: $\frac{8/27/19}{1320}$ Time: <u>1320</u> Inspector Initia	als:	KSH
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR secondary	ondary contair	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) flowmeter east of P	rocess Tanks.	$\smile$
	Flowmeter: 4, 673,000 (gallons)		
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	tear.	(1)
	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*	Ng	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	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-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No)	Yes*	(No)	Yes*	6
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	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	110	) °F	Π	<b>0</b> °F	10	9 °F

8/27/19 Date:

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

**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.)

run intermittently to reduce bearing wear MIXERS

1. J. 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 **David Bohmann** Project Manager (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

## Time: 0900 Inspector Initials: <u>LSH</u> 8/28/19 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. Any leaks, punctures, damage, bulges visible? Yes\* 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4,673,000 (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

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

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*	Ø
All decant valves and transfer valves locked out?**	Yes	No*	ves	No*	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	Yes	No*	NA	NA

	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?		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	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 temperature7 Oil temperature	90	ℓ °F	94	5 °F	99	°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_\_K4H

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.)

Mixers run intermittently to reduce bearing Near

**Operator Signature:** 

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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:	20/19	Time: 1015	Inspector Initials:	K541
PROCESS PI	PING INSPECTION			
1. Observe	piping between P	Process Tank secondary contain	nment and FBR secondary	containment.
Any	leaks, punctures, (	damage, bulges visible?	Yes*	No
2. Observe	piping in Process	Tank secondary containment	area.	
Any	leaks, punctures, o	damage, bulges visible?	Yes*	No
	-	ed Lake Mead Water (SLMW) 75, 330 (gallons)	flowmeter east of Process	Tanks.
SECONDARY	CONTAINMENT I	NSPECTION		
4. Perform	360 perimeter wa	alk to observe liner system for	potential wear and tear.	5
Any	leaks, punctures, o	or other damage visible?	Yes	(No
5. Is there	storm water accun	nulation greater than 1 foot?	Yes	No
lf Ye	s, pump storm wa	ter into one of the Process Tar	nks.	<u>(</u>
		nulation in equipment pad sur	·	No
If Ye	s, pump storm wa	ter into one of the process tan	IKS.	

#### 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:

3	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	Nó*	Yes	No*	NA	NA

L. C.	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.	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 MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	Ċ	19 °F	G	9 °F	99	₿°F

19 Date:

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

KSH

NOTES:

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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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**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	
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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: 8/30/19 Time: 0715 Inspector Ini	tials:	KSH
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR se	condary cont	ainment
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		Ň
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: 4,681,900 (gallons)	Process Tank	<5.
SEC	ONDARY 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?: 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*	Yes	No*	Yes	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.	Yes	No	Yes	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 MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	95	°F	90	°F	94	f°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:

Emergency Generator

(United Rentals)

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

Mixers inter mittent he to reduce perina UN wear. I Hansu 1 **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

(702) 538 2292

Heath Barnard

Reference Quote # 142770051

Reference Customer # 1439334

	te: <u><u><u>3</u></u><u>3</u><u>1</u><u>1</u><u>9</u> Time: <u><u>2015</u> Inspector Initials</u></u>	»К	'4 f)
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR secon	dary contai	iment
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		$\bigcirc$
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Pro Flowmeter: $4, 681, 900$ (gallons)	ocess Tanks.	
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and te	ear.	2
	•	íes 👘	No
5.	Is there storm water accumulation greater than 1 foot?	/es	(Ng)
	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*	No	Yes*	6
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*	res	No*	NA	NA

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

	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?	Yes	No	es	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	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 $100$ Oil temperature	10	4 °F	10	≥ °F	10	4 °₽

No

Yes

119 31 Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_ K42 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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**Operator Signature:** 

5. Hann

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:	9	1	19	
			1	

Time: 0630

Inspector Initials: KSH

Yes

PR	OCESS PIPING INSPECTION	
1.	Observe piping between Process Tank secondary containment and FBR seconda	ry containment.
	Any leaks, punctures, damage, bulges visible? Yes	* No
2.	Observe piping in Process Tank secondary containment area.	1
	Any leaks, punctures, damage, bulges visible? Yes	* No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Proce	ss Tanks.
	Flowmeter: 4, 686, 145 (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?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:

	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-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.		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 Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>87</u> Oil temperature	80	°F	90	°F	89	°F

k05 Phase III Inspection Form\_17011\_05

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.)

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**Operator Signature:** 

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

	te: <u>9/2/19</u> Time: <u>1020</u> Inspector Init	ials:	K41
			. –
1.	Observe piping between Process Tank secondary containment and FBR sec	condary contai	nment.
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
2.	Observe piping in Process Tank secondary containment area.		$\smile$
	Any leaks, punctures, damage, bulges visible?	Yes*	No
	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Flowmeter: 4, 686, 145 (gallons)	Process Tanks.	
SEU	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	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.		V
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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	.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*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	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?	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 Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	9	Z°F	97	Z_°F	91	°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.)

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**Operator Signature:** 

4.S. 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

Date:	9/3	1

Time: 1230

Inspector	Initials:	 K
÷		

Yes\*

5H

No

PROCESS PIPING INSPECTION

- 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. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4,686,145 (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 If Yes, pump storm water into one of the Process Tanks.
- 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	Т-2	203	Т-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*	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	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?	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?**		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>102</u> Oil temperature	1 (	).3°F		OZ	/	0'3F

k05 Phase III Inspection Form\_17011\_05

Date:	9/2/19	
	117	
NOTES:		

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

Inspector Initials: \_\_\_\_\_K41

\* - 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.)

Fedra Mixers intermittent FUIA bearing Wlai

**Operator Signature:** 

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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:	9	4	1	9
	- 7		Γ	1

Time: <u>0935</u>

Inspector	Initials:	K	54

Yes\*

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?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>4.686,145</u> (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 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	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?**	Ves	No*	es	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?	Yes	No	Ves	No	(re)	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Ye	No	Yer	No
Mixer running and turbulence/vortex observed?**	Yes	Not	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste M Management Plan?	A Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>90</u> Oil temperature	8	9°F	91	°F	9	°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.)

1<u>e</u> reduce Nixerg TUN intermitter bearing near

**Operator Signature:** 

led Hans

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	<u></u>
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>9/5/19</u> Time: <u>100</u>	00 Inspector Initia	ls: <u>K</u>	511
PR	OCESS PIPING INSPECTION			
1.	Observe piping between Process Tank second Any leaks, punctures, damage, bulges visil		ndary contain Yes*	No
2.	Observe piping in Process Tank secondary con Any leaks, punctures, damage, bulges visil		Yes*	No
3.	Record reading on Stabilized Lake Mead Wate Flowmeter: <u>4,691,445</u>	• •	rocess Tanks.	2.1
SEC	CONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner s Any leaks, punctures, or other damage vis		tear. Yes	No
5.	Is there storm water accumulation greater that If Yes, pump storm water into one of the F		Yes	No
6.	Is there storm water accumulation in equipme	ent pad sumps?:	Yes	(No)

## PROCESS TANKS AND DAY TANK INSPECTION

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

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	.04
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?**	Yes	No*	Yes	No*	es	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?	Yes	No	res	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	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 <u>94</u> Oil temperature	9	ζ°F	9	15°F	9	S °₽

19 Date:

Time:

Inspector Initials: Kaff

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 - Miters rou

**Operator Signature:** 

Jo S. Hans

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

<b>K05 PHASE III O&amp;M ROUTINE INSPECTION FORM</b>	KO5 PH	HASE III	<b>0&amp;M</b>	ROUTINE	<b>INSPECTION</b>	FORM
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Date:	9/6/19
-	

Time: 0845

Inspector	Initials:	
mapeccor		-

Yes\*

Yes

KGH

**PROCESS PIPING INSPECTION** 

- I. 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. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>4</u>, <u>691</u>, <u>945</u> (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
- 6. Is there storm water accumulation in equipment pad sumps?: 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		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

## 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.	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	90	γ°F	91	°F	90	°F

K05 Phase III Inspection Form\_17011\_05

19 916 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.)

N Yest searco 7.0 03

**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:

Time: 0635 Inspector Initials: KGH

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: 4, 704, 610 (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?: 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		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?**	les	No*	(es)	No*	es	No*	NA	NA
Are transfer pumps ready for service?	es	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?	es	No	Yes	No	(Yes)	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	es	No	Yes	No	New	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 $\lambda$ [/] Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u>28</u> Oil temperature	8	7 °F	91	′2 °F	8	9°F

k05 Phase III Inspection Form\_17011\_05

Date:

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

Inspector Initials:

K511

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:** 

le l'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

Date:	9/8/19	
-	-7-7	

Time:	07	22	
	/		

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

Yes\*

## 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?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4,710,355 (gallons)

## SECONDARY CONTAINMENT INSPECTION

4.	Perform 360 perimeter walk to observe liner system for potential wear a	nd 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*	Ng	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*	fes	No*	NA	NA

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

	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	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 Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	8	°F	8	/ °F	8	′∂°F

k05 Phase III Inspection Form\_17011\_05

KGA

Inspector Initials:

Date: 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:** 

les. Hansen

Time:

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:	9/9/19	

Time: 1350

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

Yes\*

Yes

KSH

PROCESS	PIPING	<b>INSPECTION</b>
		••••••

- 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: <u>4,711,960</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? 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:

	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*	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	T-2	.02	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	I 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*)	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	- 78	3°F	9	7 °F	9	7 °F

Inspector Initials: \_\_\_\_/CS //

Date: 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.)

interm: NUN reduce art

led Hansen **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

Tetra Tech, Inc.

	te: $\frac{9/10/19}{10}$ Time: $0955$ Inspector Initia	als: <u> </u>	<u>-511</u>
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary contain	iment.
	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 P	rocess Tanks.	
	Flowmeter: 4, 711, 960 (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	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)

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*	S
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	<sup>™</sup> NA
Are transfer pumps ready for service?	Yes	) No*	Yes	No*	res	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?	es	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	Te	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?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature <u><u><u>4</u>5</u> Oil temperature</u>	8-	) °F	8	Ø °F	8 5	∫ °F

k05 Phase III Inspection Form\_17011\_05

10/19 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.

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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.)

rin intermittenth reduce hearing - Milling 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

Da	te: <u>9/11/19</u> Time: <u>0830</u> Inspector	Initials:	125H							
PR	PROCESS PIPING INSPECTION									
1.	Observe piping between Process Tank secondary containment and FBF Any leaks, punctures, damage, bulges visible?	R secondary o 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 eas Flowmeter: <u>4, フロ、タムの</u> (gallons)	t of Process '	Tanks.							
SEC	CONDARY CONTAINMENT INSPECTION									
4.	Perform 360 perimeter walk to observe liner system for potential wear Any leaks, punctures, or other damage visible?	r 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)							

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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-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	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	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 Oil temperature	7	୪ °F	7	7 °F	7	9°F

K05 Phase III Inspection Form\_17011\_05 Page 1 of 2

Date:

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 TUN

**Operator Signature:** 

aled Hausen

Time:

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								
Dat	te: <u>9/12/19</u> Time: <u>1145</u> Inspector Initi	als: <u>4</u> 9	A						
PR	DCESS PIPING INSPECTION								
1.	Observe piping between Process Tank secondary containment and FBR secondary leaks, punctures, damage, bulges visible?	ondary contain 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: <u>4,717,960</u> (gallons)	Process Tanks.							
SEC	CONDARY CONTAINMENT INSPECTION								
4.	Perform 360 perimeter walk to observe liner system for potential wear and Any leaks, punctures, or other damage visible?	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?: 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?**	Ves	No*	Tes	No*	(PB)	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-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	es	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 M Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>90</u> Oil temperature	9	⊂Z °F	9	/ °F	97	7_°F

Date:

Time:

Inspector Initials: 14/

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.)

ru ruter mittently to reduce hearing Mixer weer.

**Operator Signature:** 

e.S. Hanser

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						
Da	te: <u>9/13/19</u> Time: <u>-1(00</u> Inspector	Initials:K	41			
PR	OCESS PIPING INSPECTION					
1.	Observe piping between Process Tank secondary containment and FB					
	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: $4,717,960$ (gallons)	t of Process Tan	iks.			
SE	CONDARY CONTAINMENT INSPECTION					
4.	Perform 360 perimeter walk to observe liner system for potential wea					
	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*	Nø
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	es	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*	No	Yes*	No	Yes*	Ro
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Nes	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	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 MAN Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	91	°F	9	() °F	90	°F

13/19 9 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.)

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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

Da	te: <u>9/14/19</u> Time: <u>0555</u> Inspect	tor Initials:	1641
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and f	FBR secondary con	tainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
2.	Observe piping in Process Tank secondary containment area.		S
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter e	east of Process Tan	ks.
	Flowmeter: 4,723,030 (gallons)		
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential w	ear and tear.	2
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No

Is there storm water accumulation in equipment pad sumps?: 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:

Yes

	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	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	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 <u><u><u>7</u>K</u> Oil temperature</u>	19	°F	10	Û °F	98	°F

K05 Phase III Inspection Form\_17011\_05

Date:	9/14/19
	//

Time:

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.)

Mixers run intermitte educe wear rearing

**Operator Signature:** 

6.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	
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>9/15/19</u> Time: <u>1000</u> Inspector Initia	als:/	41
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary contain	ment
	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*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of P	rocess Tanks.	
	Flowmeter: 4,723,030 (gallons)		
SEC	ONDARY 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.		A
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No

PROCESS TANKS AND DAY TANK INSPECTION

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

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	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	No*	Yes	No*	res	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-2	201	T-2	.02	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	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 NA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	9	7Z₽F	9	/ °F	93	°F

Date:	9/15/19	
	/ / /	

Time:

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.)

- Mixu's Nu intermittenthe to reduce bearing Wear

**Operator Signature:** 

yled 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	6 Thurless.
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

	<b>K05 PHASE III O&amp;M ROUTINE INSPECTION</b>	FORM	
Da	te: <u>9/16/19</u> Time: <u>1025</u> Inspector Initia	ls:	<u>-9H</u>
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR secondary leaks, punctures, damage, bulges visible?	ndary contain Yes*	No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	Yes*	M
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of P Flowmeter: <u>4, 723, 030</u> (gallons)	rocess Tanks.	Ū.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and Any leaks, punctures, or other damage visible?	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?: 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	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*	
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Nes	No*	Yes	No*	NA	NA

<	T-2	.01	T-2	202	T-2	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?		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	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	9	3 °F	9	₹°F	97	5°F

16/19 Date:

Time:

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

**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 infer mittent h Mixeus run

**Operator Signature:** 

1. Hans

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: _	9/17/19
_	

Time: 0840

KGH Inspector Initials: \_

Yes\*

Yes

Yes

**PROCESS PIPING'INSPECTION** 

- Any leaks, punctures, damage, bulges visible?
   Yes\*
- 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: <u>4, 729, 130</u> (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?
   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-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?	Yes	No*	Yes	No*	Yes	No*	NA	NA

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

	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?	Yes	No	les	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 MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	77	°F	7	7 °F	$\overline{2}$	✓ °F

k05 Phase III Inspection Form\_17011\_05



Date:

Time:

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

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:** 

6 S. Hour

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:	9/1	8/19	
		_//	

Time: 0930

Inspector Initials: \_\_\_\_

Yes\*

Yes

Yes

K	4	4	

No

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. Any leaks, punctures, damage, bulges visible?
- Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks.
   Flowmeter: <u>4, 729, 130</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
- 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:

N. (1	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?**	Ves	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Ves	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	es	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)	Yes	No
Mixer running and turbulence/vortex observed?**	Hes	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	ר	& °F	7	9°F	78	°F

18/19 Date:

Inspector Initials: K-SA

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.)

prior to manif Samp Miters opera

**Operator Signature:** 

yle S. Hans

Time:

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

	<b>K05 PHASE III O&amp;M ROUTINE INSPECTION F</b>	ORM	
Dat	te: <u>9/19/19</u> Time: <u>0850</u> Inspector Initials	:: <u>K</u>	511
PR	DCESS PIPING INSPECTION		
1.		dary containı (es*	No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	(es*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Pro Flowmeter: 4,729,368 (gallons)	cess Tanks.	
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and te Any leaks, punctures, or other damage visible?	es.	No
5.	Is there storm water accumulation greater than 1 foot? Y If Yes, pump storm water into one of the Process Tanks.	/es	No
6.	Is there storm water accumulation in equipment pad sumps?: Y If Yes, pump storm water into one of the process tanks.	′es	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?	Ves	No*	Yes	No*	Yes	No*	NA	NA

1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	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	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	es	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 $\underline{\$0}$ Oil temperature	87	°F	81	°F	Z	, °F

9/19 Date:

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

Inspector Initials:

KSH

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.)

HUG 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

Da	te: $\frac{9/20/19}{1300}$ Time: <u>1300</u> Inspector Initia	als: <u></u> <u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>	; H
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR secondary leaks, punctures, damage, bulges visible?	ondary containm 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 P Flowmeter: 4,736, 870 (gallons)	rocess Tanks.	
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and Any leaks, punctures, or other damage visible?	tear. Yes	NR
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

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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*	Go
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*	res	No*	NA	NA

<u></u>	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	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	Not
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste My Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature $\underline{\& 2}$ Oil temperature	8	°F	8	Z °F	8	∫ °F

Date:	9/20/19
	/ /

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.

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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.)

NU intermitt Minury to reduce pearing wear.

**Operator Signature:** 

I. J. 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

Date:

Time: <u>6610</u> Inspector Initials: <u>K4A</u>

Yes\*

Yes

**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. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 4, 736, 875 (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		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?**	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-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	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	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?	( <sub>Yes</sub>	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	7°	¶°F	80	ン。 ト	79	٩°

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.)

NOIR 1cn weer

**Operator Signature:** 

I. Har

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 INSPEC	TION FORM	
Da	te: <u>9/22/19</u> Time: <u>1415</u> Inspect	or Initials:	K4H
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and F	BR 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 e	ast of Process Ta	nks.
	Flowmeter: 4, 73.6, 875 (gallons)		
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	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.		<u> </u>

#### 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		Т-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*	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	les	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	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 <u>90</u> Oil temperature	90	°F	91	Ĵ °F	9	/ °F

22/19 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.)

Nixers intermittentl run r-Educe bear va Weav.

**Operator Signature:** 

led. Hane

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>9/23/19</u> Time: <u>1230</u> Inspe	ctor Initials:/	KGH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and	I FBR secondary conta	ainment
	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) flowmeter Flowmeter: $4,742,510$ (gallons)	east of Process Tank	s.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential w	wear and tear.	$\bigcirc$
	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.		12
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*	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	91	) °F	9	/ °F	91	°F

23/19 Date:

Time:

run intermittently

Inspector Initials:

to reduce bearing ween.

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:

Mixers

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

het. Hanse

**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:	9/24/19
_	

Time: <u>1500</u> Inspector Initials:

Yes\*

Yes

K44

**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. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 41743,070 (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		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	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	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?**		No*)	Yes	No*	Yes	Nor	
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 Oil temperature	94	°F	94	/ °F	95	°F	

k05 Phase III Inspection Form\_17011\_05

Date: 9/24/19

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.)

intermittenth to reduce bearing 1 Kera ron wear

**Operator Signature:** 

1. 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	
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>9/25/19</u> Time: <u>0930</u> Inspector Init	ials:	2411					
PR	OCESS PIPING INSPECTION							
1.	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 Flowmeter: 4,743,070 (gallons)	Process Tanks						
SEC	CONDARY CONTAINMENT INSPECTION							
4.	Perform 360 perimeter walk to observe liner system for potential wear and	l tear.	$\bigcirc$					
	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-2	.02 1		03	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*	fes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-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	ves	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	es	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	7'	°₽	70	7 °F	7	8°F

Date:	9/25/19	
	/ //	

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.)

intermittently to reduce - MAUNS bearing wear. -un

**Operator Signature:** 

Kyled 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	
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>9/z6/19</u> Time: <u>1600</u> Inspector Initia	als:/<	1.511
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary contain	ment.
	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 F Flowmeter: $4,750,350$ (gallons)	rocess Tanks.	
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	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-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*	Tes	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?	Yes	No	res	No	Aes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		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 Oil temperature	Ø	°F	4	& °F	87	°F

9/26/19 Date:

Time: 1600

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.)

Hers reduce varina wear 000 Gallous -702 7-203 CO

**Operator Signature:** 

. J. 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

Da	te: <u>9/27/19</u> Time: <u>1000</u> Inspector Initi	ats:/	24 <u>H</u>
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary contai	nmen
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		à
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.		rocess Tanks.	<u> </u>
	Flowmeter: 4,750, 680 (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	No
	If Yes, pump storm water into one of the Process Tanks.		$\leq$
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	No
	If Yes, pump storm water into one of the process tanks.		$\smile$

#### 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

0	T-2	201	T-2	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?	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	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>84</u> Oil temperature	8	5°₽	8	4°F	8	ζ°F

Date:	9/	27	119	
	1	1		

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.)

run intermittently to reduce bearing wear. Mixers

**Operator Signature:** 

I 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>9/28/19</u>	Time: <u>67/10</u>	Inspector Initials:	KG(
PR	/ / OCESS PIPING INSPECTION			
1.	Observe piping between Pr Any leaks, punctures, d	÷	tainment and FBR secondary o Yes*	ontainment. No
2.	Observe piping in Process T Any leaks, punctures, d	-	nt area. Yes*	No
3.	-	d Lake Mead Water (SLM)	W) flowmeter east of Process T ;}	anks.
SEC	ONDARY CONTAINMENT IN	ISPECTION		
4.	Perform 360 perimeter wal	k to observe liner system f	for potential wear and tear.	
	Any leaks, punctures, o	r other damage visible?	Yes	(Ng)
5.	Is there storm water accum	ulation greater than 1 foo	t? Yes	Nd
	If Yes, pump storm wate	er into one of the Process	Tanks.	
6.	Is there storm water accum If Yes, pump storm wate	ulation in equipment pad er into one of the process	• • • • • • • • • • • • • • • • • • • •	(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*	Ves	No*	Yes	No*	NA	NA

	T-2	T-201		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?	Wes	No	Ves	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	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 <u>77</u> Oil temperature	70	°F	71	∕g °F	75	∕ °F

28/19 Date:

Time:

Inspector Initials: \_\_\_\_\_K\_/

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 Micera er mittentl ÙЛ 1 Ween bean **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	
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Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

	<b>K05 PHASE III</b>	<b>O&amp;M ROUTINE</b>	<b>INSPECTION FORM</b>
--	----------------------	------------------------	------------------------

Da	te: <u> 1/29/19</u> Time: <u>1445</u> Inspector In	itials:	KGH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR se	econdary co	intainment,
	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 o Flowmeter: $4,757,245$ (gallons)	f Process Ta	anks.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear a	nd tear.	$\sim$
	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	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?	Nes	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?	ves	No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Tres	No	ves .		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 Oil temperature	79	°F	6	Ó °F	79	°F

k05 Phase III Inspection Form\_17011\_05

29/19 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.)

indermitter Nieve Cun UCP reach l 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>9/30/19</u> Time: <u>1200</u> Inspector Initia	als: <u>K</u>	94
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ondary containr	nent.
	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.		rocess Tanks.	-
	Flowmeter: 4,757,265 (gallons)		
SEC	CONDARY 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	(No)

DROCECE	TANUC		DAV	TANK	INCOCCTION
PROUESS	LAINKS	AND	DAT	TAINK	INSPECTION

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

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?**	Yes	No*	es	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Yes	No*	NA	NA

	T-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?	Yes	No	les	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	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 Management Plan?	Yes	No <sup>*</sup>	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	יר	-(°F	75	°F	7	₹ °F

9/30/19 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.)

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**Operator Signature:** 

Kyled 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

# Attachment B Phase III O&M Monthly Inspection Forms

		K05 PHASE III O&M MONTHLY INSPECTION FOR	М	
Da	te: _	<u>63019</u> Time: 0900 Inspector Initials: <u>-</u>	TR/JB	_
IN:	5PEC	T MATERIALS AND PARTS	_	
1.	Are	e all spare parts present?: If no, list which parts need to be ordered and inform Site Implementation Mana 	Yes	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 Manager:	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		
P-203		
P-204	$\overline{\mathbf{V}}$	
P-205		
P-206	$\overline{\mathbf{A}}$	20

#### **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	т-а	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?	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:\_\_\_\_\_

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

Date:

Time: <u>0900</u> Inspector Initials: JR/JB

#### **INSPECT PROCESS TANK MIXERS**

5. Visual inspection from top of each Process Tank:

	T-2	T-201		T-202		203
Is there adequate oil in Process Tank mixer motors?	Yes	No*	Yes	No*	Yes	No*
Control panel mixer run time**	9521	/ hrs	1590	/ hrs	nrs 9654.81	

#### **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:

	Date of Next	
	<b>Replacement or</b>	
Activity	Maintenance	Comments
Replace 3" decant transfer hoses	2/1/2020	
Replace 3" solid transfer hoses	2/1/2020	
Replace 1.5" SLMW flush hose	2/15/2020	
Replace 3" stainless steel doublesphere expansion joints	2/1/2020	
Replace air compressor filter element	10/16/2022	
ervice air compressor	1/26/2021	
Change process tank mixer gear box oil**	114/2020	
Grease gear seals on process tank mixer	12/21/2019	

#### **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:** 

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

Date: \$39/19

Time: 0900 Inspector Initials: JR/JB

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 FORM						
Date: <u>9/39/19</u>	Time: <u>0600</u> In:	spector Initials: <u>JRB</u>					
INSPECT MATERIALS ANI	PARTS						
1. Are all spare parts pr	esent?:	Yes	No				
If no, list which p	arts need to be ordered and inform Site In	nplementation Manager:					
2. Are all safety materia	ls, resources, and supplies to perform wo	rk present? (Tes	No				
If no, list what ne	eds to be ordered and inform Site Implem	entation Manager:					

#### 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	$\checkmark$	All transfer pumps are in good condition and working order
P-202	$\checkmark$	
P-203	$\checkmark$	
P-204	$\checkmark$	
P-205	$\checkmark$	
P-206	V	

#### **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-3	201	T-2	202	T-2	203	T-2	204
Check what level the High-High alarm signals – is it consistent with the set points?	(Te)	No*	ß	No*	ſes	No*	œ	No*
Test reset procedure - were there any issues?	Yes*	NO	Yes*	10	Yes*	No	Yes*	(A)
Are all alarm status lights in good working order?	Tes	No*	(Yes)	No*	Yes	No*	(es	No*
Are the shut-off devices in good working order?	Ves	No*	Tes	No*	<i>i</i> es	No*	Yes	No*
Visible damages to the alarm cords and cables?	Yes*	(Na)	Yes*	1	Yes*	(ND)	Yes*	No

Notes:

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

Date: 9/30/19

Time: <u>0600</u>

Inspector Initials: JRB

#### **INSPECT PROCESS TANK MIXERS**

5. Visual inspection from top of each Process Tank:

	T-2	T-201		202	T-203		
Is there adequate oil in Process Tank mixer motors?		No*	(Ve)	No*	ø	No*	
Control panel mixer run time**	9521	g hrs	9590.	💪 hrs	9655.	3 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	Date of Next Replacement or Maintenance	Comments
Replace 3" decant transfer hoses	2/1/20	comments
Replace 3" solid transfer hoses	2/1/20	
Replace 1.5" SLMW flush hose	2/15/20	
Replace 3" stainless steel doublesphere expansion joints	2-11/20	
Replace air compressor filter element	10/16/22	· · · ·
Service air compressor	1/26/21	· · · · · · · · · · · · · · · · · · ·
Change process tank mixer gear box oil**	1/4/20	
Grease gear seals on process tank mixer	12,61/10	

#### **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:

K05 Phase III Inspection Form\_17011\_03

Page 2 of 3

Tetra Tech, Inc.

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

9/30/19 Date: \_\_\_

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ł

Time: 0600 Inspector Initials: JRB

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	
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Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334