

# TECHNICAL MEMORANDUM

То:	Nevada Environmental Response Trust
Cc:	Nevada Division of Environmental Protection United States Environmental Protection Agency
From:	David Bohmann and Bounkheana Chhun
Date:	April 20, 2018
Subject:	AP-5 Operation and Maintenance Summary – March 2018 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 March 2018 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 March 2018 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 March 2018.

# SOLIDS WASHING AND DECANT WATER TRANSFER

Throughout March 2018, routine procedures for washing the solids and transferring decant water were followed. A total of approximately 151,999 gallons of AP-5 wash water was decanted from the Process Tanks and transferred to the Day Tank in March 2018. A summary of daily AP-5 wash water volumes that were decanted from the Process Tanks and transferred to the Day Tank in March 2018 are used from the Process Tanks and transferred to the Day Tank in March is provided in the attached Table 1. The cumulative total of AP-5 wash water volumes that were decanted from the Process Tanks and transferred to the Day Tank is presented in Table 2a. The cumulative total of Stabilized Lake Mead Water (SLMW) added to the Process Tanks for sediment washing is presented in Table 2b. Note that the SLMW flowmeter readings presented in the routine inspection forms (Attachment A) include both the volume of SLMW added to the Process Tanks for sediment washing and for dilution of AP-5 wash water during transfer (discussed below) and flushing of the lines following each batch transfer.

Once the AP-5 wash water has been decanted from the Process Tanks and transferred to the Day Tank, Envirogen Technologies, Inc. (ETI) transfers the water to the Receiving Tank and subsequently blends the AP-5 water with extracted groundwater for treatment by the Fluidized Bed Reactors. ETI controls and operates the transfer of the AP-5 wash water from the Day Tank to the Receiving Tank, which includes an option to dilute the AP-5 wash water with SLMW to achieve a consistent concentration at the Receiving Tank. The dilution setting is adjustable and has a default setting of 3% perchlorate. During the month of March 2018, the average batch concentration was 2.0% based on in-line mass flow meter readings. ETI completed transfer of AP-5 wash water in March 2018 without further dilution.

# **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 3 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. These methods are summarized below.

AP-5 wash water was sampled from each Process Tank on March 21, 2018 and submitted for perchlorate analysis (Method 314.0). An estimate of the mass of perchlorate removed from each Process Tank based on the monthly sample results and the estimated remaining perchlorate mass is presented in Table 3 and shown on Figure 1. These estimates are based on a single monthly sample from each Process Tank.

Due to the limitations of conducting the mass estimates using a single point sample, the total mass removal and total remaining mass in the Process Tanks was also estimated using 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. This method for estimating mass removal relies on continuous readings as opposed to a single point sample, but is based on meter readings as opposed to laboratory data. An estimate of the total mass of perchlorate removed from the Process Tanks based on the mass flow meter readings and the estimated total remaining perchlorate mass is presented in Table 4.

The total perchlorate mass removed 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 single monthly samples from each Process Tank. The initial, comprehensive perchlorate mass estimate developed for the Process Tanks revealed significant variability in individual perchlorate sample results within each tank. Therefore, the mass estimates calculated from monthly 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 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 Tables 3 and 4 and 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 5. Since the mass flow meter is correlated to

perchlorate concentrations, estimates of the mass of ammonia removed from each Process Tank is based only on the method using sample results.

Monthly samples were collected from the Process Tanks for analysis of ammonia at the same time as the monthly perchlorate samples in March 2018. An estimate of the mass of ammonia removed from each Process Tank and the estimate remaining ammonia mass is presented on Table 5 and shown on Figure 3.

# **ROUTINE INSPECTIONS**

Routine inspections were conducted throughout March 2018. 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 month of March 2018. The findings of the inspections are provided below:

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

# **Secondary Containment**

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

- No damage to the secondary containment liner was observed.
- Stormwater accumulated on the secondary containment liner and in equipment pad sumps and was pumped to Process Tanks on March 11, 2018.

# **Tanks and Equipment**

Process Tanks T-201, T-202 and T-203, and Day Tank T-204 were inspected on a routine basis in March 2018. 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.
- A bearing noise in the drive end of the motor in the mixer was observed on Process Tank T-202 on March 27, 2018. The bearing was greased, and no additional noises were observed.
- A vibration in the electrical motor was observed on the T-201 mixer in March. Monitoring is ongoing and no increase in vibrations or oil temperature were observed during routine inspections. A visual inspection by an authorized representative conducted on March 20, 2018 determined the vibrations are typical of those associated with the gear unit and do not pose a risk.

# **MONTHLY INSPECTION**

The monthly inspection was conducted on March 28, 2018. Monthly inspections are conducted to provide a more thorough investigation of major equipment and parts and to confirm functionality of key control and interlock components. The monthly inspection form is provided in Attachment B. A summary of the findings is provided below:

- Spare parts for operation of the AP-5 slurry treatment system were present and stored on site.
- The permanent air compressor and controls were tested and operational.
- 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.

# **NON-ROUTINE TASKS**

Non-routine tasks included evaluating ammonia and perchlorate removal trends and continued preparation for AP-5 Pond closure.

Additional samples of residual cemented/calcified material in the AP-5 Pond were collected as part of the field testing conducted in December 2017. Testing was completed and results were received in March 2018.

The trends for ammonia and perchlorate removal rates were evaluated for the period of November 2017 to March 2018. Over that period, the overall trend for monthly mass removal quantities is decreasing for both ammonia and perchlorate. Perchlorate was removed at a higher rate compared to ammonia, which is expected due to the higher concentrations of perchlorate. The Trust will be meeting with NDEP and EPA in April 2018 to present a long-term treatment approach for both perchlorate and ammonia until treatment is no longer required.

The Process Hazard Analysis report for the pond closure procedures was received in March 2018. The procedures and being revised to address the final recommendations and identified safeguards. Pond closure equipment procurement and initial mobilization activities started in March 2018. The transfer of residual solids from the pond to the Process Tanks is expected to begin in April 2018.

## **TRUST CERTIFICATION**

## AP-5 Operation and Maintenance Summary – March 2018

#### 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

hat in dividually US Signaturé: , 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

4/20/18

Date:

# **CERTIFIED ENVIRONMENTAL MANAGER CERTIFICATION**

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

Description of Services Provided: Prepared AP-5 Operation and Maintenance Summary for March 2018.

led. Hansen

April 20, 2018

Date

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

Nevada CEM Certificate Number: 2167 Nevada CEM Expiration Date: September 18, 2018

# **Tables**

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

Dete	T-201	T-202	T-203	Daily Total
Date	(Gallons)	(Gallons)	(Gallons)	(Gallons)
1-Mar	-	-	-	-
2-Mar	38,236	-	-	38,236
3-Mar	-	-	-	-
4-Mar	-	-	-	-
5-Mar	37,026	-	-	37,026
6-Mar	-	-	-	-
7-Mar	-	-	-	-
8-Mar	-	38,284	-	38,284
9-Mar	-	-	-	-
10-Mar	-	-	-	-
11-Mar	-	38,453	-	38,453
12-Mar	-	-	-	-
13-Mar	-	-	-	-
14-Mar	-	-	-	-
15-Mar	-	-	-	-
16-Mar	-	-	-	-
17-Mar	-	-	-	-
18-Mar	-	-	-	-
19-Mar	-	-	-	-
20-Mar	-	-	-	-
21-Mar	-	-	-	-
22-Mar	-	-	-	-
23-Mar	-	-	-	-
24-Mar	-	-	-	-
25-Mar	-	-	-	-
26-Mar	-	-	-	-
27-Mar	-	-	-	-
28-Mar	-	-	-	-
29-Mar	-	-	-	-
30-Mar	-	-	-	-
31-Mar	-	-	-	-
Total	75,262	76,737	-	151,999

Notes:

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

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

Month	T-201 (Gallons)	T-202 (Gallons)	T-203 (Gallons)	Monthly Total (Gallons)
July 2017	38,377		20,906	59,283
August 2017	8,868		9,454	18,322
September 2017		22,819		22,819
October 2017		117,200		117,200
November 2017	26,567	65,048	98,171	189,786
December 2017	88,449	43,485	71,600	203,534
January 2018	95,673	81,036	59,577	236,286
February 2018	108,564	55,620	122,012	286,196
March 2018	75,262	76,737	-	151,999
Cumulative Total	441,760	461,945	381,720	1,285,425

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

Month	T-201 (Gallons)	T-202 (Gallons)	T-203 (Gallons)	Monthly Total (Gallons) <sup>1</sup>
July 2017	22,775		6,150	28,925
August 2017	13,970		7,860	21,830
September 2017		20,010		20,010
October 2017		131,247		131,247
November 2017	27,360	65,435	75,440	168,235
December 2017	43,570	39,585	5,485	88,640
January 2018	24,135	30,685	64,205	119,025
February 2018	92,020	22,475	126,845	241,340
March 2018	81,685	79,270	-	160,955
Cumulative Total	305,515	388,707	285,985	980,207

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.

## Table 3. Estimate of Perchlorate Mass in Process Tanks Based on Tank Samples

		Mass in T-201 (lbs)	Mass in T-202 (Ibs)	Mass in T-203 (Ibs)	Total Monthly Mass Removed (lbs)	Total Perchlorate Mass In Process Tanks (Ibs)
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
Approx.Mass Removed	September 2017	-	12,547	-	12,547	553,540
ss Ren	October 2017	-	59,663	-	59,663	493,878
x.Ma	November 2017	10,605	32,571	40,418	83,594	410,284
Appro	December 2017	41,090	16,693	28,582	86,365	323,919
	January 2018	36,195	25,360	19,639	81,195	242,724
	February 2018	26,727	13,925	29,020	69,672	173,051
	March 2018	12,248	12,168	-	24,415	148,636
Ending	Perchlorate Mass	19,242	74,651	54,743		148,636

#### 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 single point samples from each tank.

#### Table 4. Estimate of Perchlorate Mass in Process Tanks Based on Batch Transfers

		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
,ed	August 2017 <sup>2</sup>	6,000	581,860
temov	September 2017	10,706	571,154
Jass F	October 2017	49,990	521,163
Approx.Mass Removed	November 2017	74,231	446,933
Apı	December 2017	73,066	373,867
	January 2018	69,363	304,504
	February 2018	73,247	231,257
	March 2018	25,321	205,935
Ending	Perchlorate Mass	205,935	

#### Notes:

1 - 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.
2 - 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.

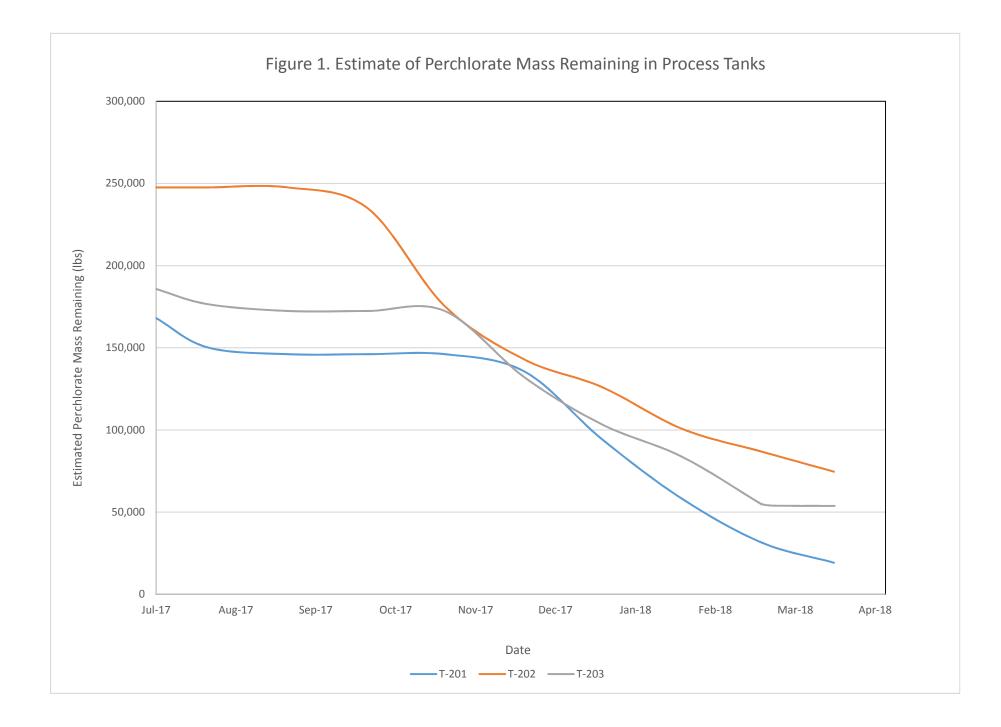
## Table 5. Estimate of Ammonia Mass in Process Tanks

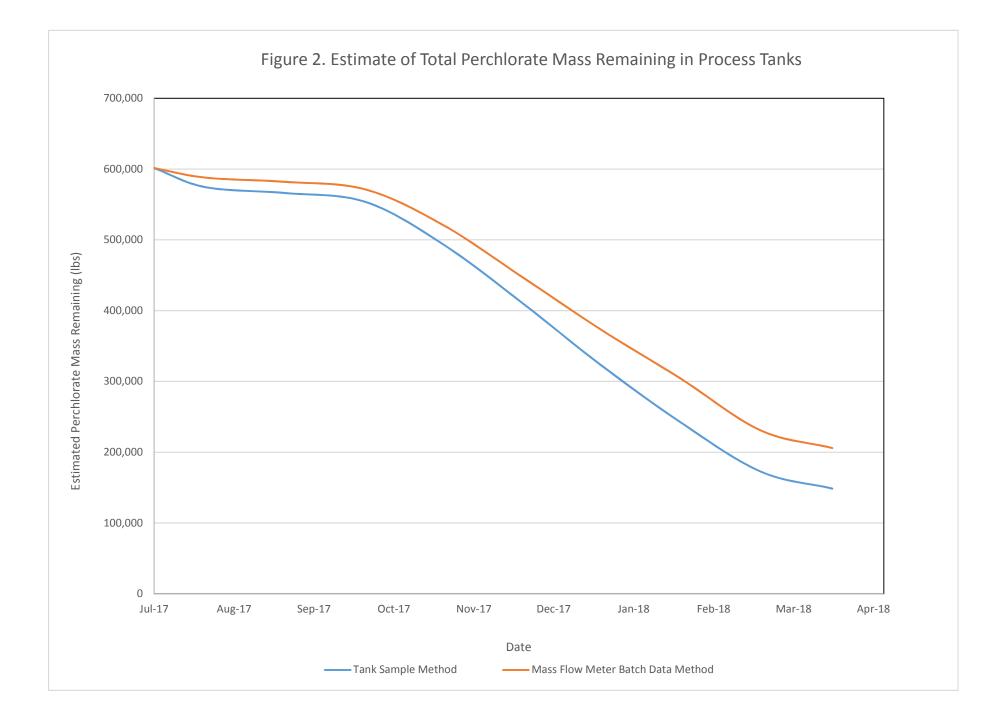
		Mass in T-201 (lbs)	Mass in T-202 (Ibs)	Mass in T-203 (Ibs)	Total Monthly Mass Removed (lbs)	Total Ammonia Mass In Process Tanks (Ibs)
Initial A	Ammonia Mass <sup>1</sup>	18,217	22,343	20,277		60,837
	November 2017	1,323	3,979	4,490	9,792	51,045
rox. emoved	December 2017	3,974	1,778	2,659	8,411	42,634
Approx. Mass Removed	January 2018	3,353	3,009	2,163	8,526	34,108
	February 2018	2,945	1,509	3,564	8,017	26,091
	March 2018	1,445	1,441	_	2,886	23,206
Ending	Ammonia Mass	5,177	10,627	7,402		23,206

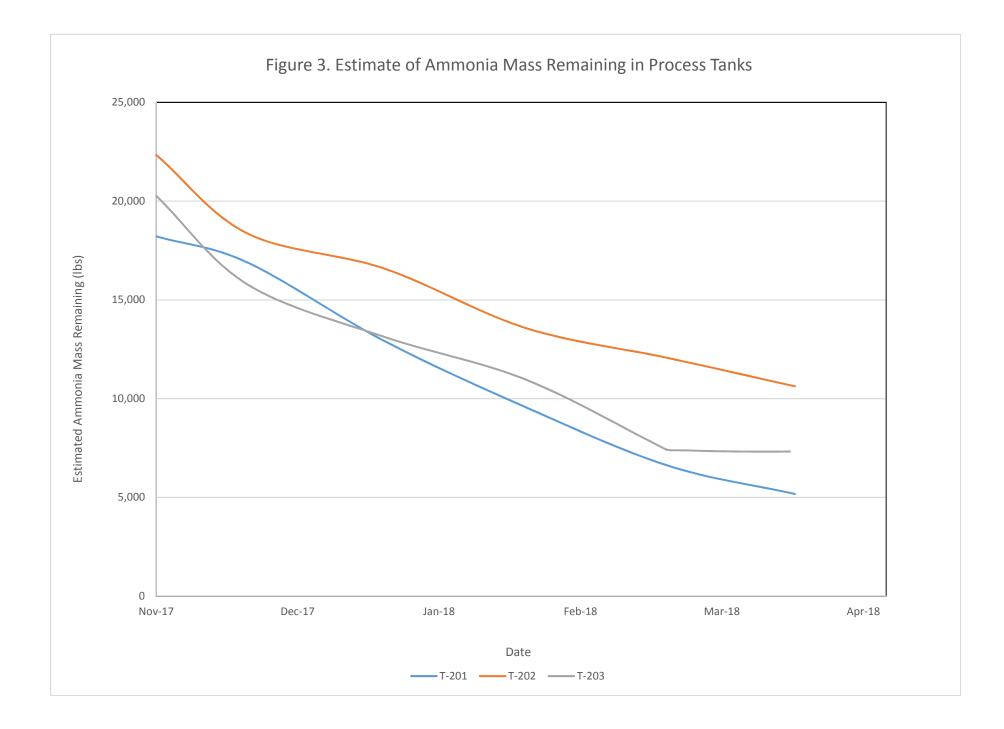
Notes:

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.

# **Figures**







# Attachment A Phase III O&M Routine Inspection Forms

Date: 3/1/18 Time: 0750 Inspec	ctor Initials: <u>LG I</u>	-
PROCESS PIPING INSPECTION		
1. Observe piping between Process Tank secondary containment and	FBR secondary contain	ment.
Any leaks, punctures, damage, bulges visible?	Yes*	NO
2. Observe piping in Process Tank secondary containment area.		$\cup$
Any leaks, punctures, damage, bulges visible?	Yes*	No
3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter	east of Process Tanks.	$\cup$
Flowmeter: 1,771, 315 (gallons)		
SECONDARY CONTAINMENT INSPECTION		
4. Perform 360 perimeter walk to observe liner system for potential v	vear 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 If Yes, pump storm water into one of the process tanks.

## PROCESS TANKS AND DAY TANK INSPECTION

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

	Т-2	201	Т-2	202	T-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Ves	No*	res	No*	(es)	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	Т-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?	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 <u>51°</u> Oil temperature	73	57/85	78	56/4°F	78	SL- °F

٧o

Date:

Time:

6 S. Hanse

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.)

**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	11 11951) T
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Da	te: <u>3/2/18</u> Time: <u>1700</u>	Inspector Initials:	KGH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containme	ent and FBR secondary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	- No
2.	Observe piping in Process Tank secondary containment area	a. Interim	
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: 1,812,190 (gallons)	vmeter east of Process T	anks.
SE	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pot	ential wear and tear.	0
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	Na

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

## PROCESS TANKS AND DAY TANK INSPECTION

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

	T-201 T-202		T-203		T-204			
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	res	No*	ves	No*	es	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:

- LU	Т-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?	Yes	No	ves	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	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 Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature $\underline{08}$ Oil temperature	82	LeleoF	96	Ø <b>₽</b> °F 94	94	66 °F

(Nd

18 Date:

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.

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.)

**Operator Signature:** 

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

	K05 PHASE III O&M ROUTINE INS	<b>PECTION FORM</b>	Л
Da	te: <u>3/3/18</u> Time: <u>1550</u> Ins	pector Initials:	JRTS
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment a	and FBR secondary	containment.
	Any leaks, punctures, damage, bulges visible?	Yes*	N
2.	Observe piping in Process Tank secondary containment area.		•
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowme	ter east of Process	Tanks.
	Flowmeter: <u>1, 812,665</u> (gallons)		
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potenti	al 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.		

## PROCESS TANKS AND DAY TANK INSPECTION

- 7. Air Temperature: <u>55</u>°F
- 8. 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?	Yes*		Yes*	No	Yes*	6	Yes*	Ì
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Tes	No*	NA	NA

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

	Т-2	201	T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Precipitate or crystals present on tank sides or mixer impeller? If yes, wash down with SLMW.	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*
Is there adequate oil in Process Tank mixers?	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*
Oil temperature	82	2 °F	78	5 °F	80	°F

3/18 Date: 3

Time: 1550

Inspector Initials: JRR

**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.)

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: 3/4/18 Time: 1705 Inspector Initials: 1<5/1
PRO	DCESS PIPING INSPECTION
1.	Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes* No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes*
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: $1,813,080$ (gallons)
SEC	ONDARY CONTAINMENT INSPECTION
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes

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

## PROCESS TANKS AND DAY TANK INSPECTION

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

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	es	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.	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 <u><math>59</math></u> Oil temperature	101	94 °F	110	61 °F	109	59 °F

Nο

Date:

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

Lyb & Hansen

Inspector Initials: \_

12GIN

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.)

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	11 22 11 244
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: 3/5/18 Time: 1630 Inspector Init	ials:	K4H	<u> </u>
PR	OCESS PIPING INSPECTION			
1.	Observe piping between Process Tank secondary containment and FBR se	condary	containme	ent.
	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: 1,829,100 (gallons)	Process	Tanks.	
SEC	CONDARY CONTAINMENT INSPECTION			
4.	Perform 360 perimeter walk to observe liner system for potential wear an	d tear.		,
	Any leaks, punctures, or other damage visible?	Yes	1	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

#### 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-2	202	T-2	203	Т-:	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	es	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
Yes*	No	Yes*	No	Yes*	No
Yes	No	Ves	No	Jes	No
Yes	Ng	Yes	No	Yes	Na
Yes	No*	Yes	No*	Yes	No*
Yes	No*	Yes	No* 62	Yes	No*
70	G3 F	112-	¶3°F	105	120 F
	Yes* Yes Yes Yes Yes	Yes No Yes No Yes No* Yes No*	Yes*NoYes*YesNoYesYesNoYesYesNo*YesYesNo*YesYesNo*YesYesNo*Yes	Yes*NoYes*NoYesNoYesNoYesNoYesNoYesNo*YesNo*YesNo*YesNo*YesNo*YesNo*YesNo*YesYesYesNo*YesYesYesNo*YesYesYesNo*Yes	Yes*NoYes*NoYes*YesNoYesNoYesYesNoYesNoYesYesNo*YesNo*YesYesNo*YesNo*YesYesNo*YesNo*YesYesNo*YesNo*YesYesNo*YesNo*YesYesNo*YesNo*YesYesNo*YesNo*YesYoYes1123°F105

Occounted From T-701 37K yellowy Page 1 of 2

K05 Phase III Inspection Form\_17011\_05

Date:

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

Inspector Initials: <u>KGH</u>

NOTES:

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

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

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

## COMMENTS:

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

1 Hanen **Operator Signature:** 

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

Dat	te: <u>3/6/18</u> Time: <u>1125</u> Inspector Initi	als: <u>K4</u>	<u>l·ſ</u>
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR sec	·	ment.
	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 F	vrocess Tanks.	0
	Flowmeter: 1, 857, 320 (gallons)		
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and	tear.	
	Any leaks, punctures, or other damage visible?	Yes	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		
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-2	201	T-2	202	T-2	.03	Т-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	(e)
All decant valves and transfer valves locked out?**	Ves	No*	Yes	No*	Ves	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	es	No*I	Yee	No*	NA	NA

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

	Т-2	T-201		T-202		203
Visible oil leaks from gear box?	Yes*	No	Yes*	Nd	Yes*	NO
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	es	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	(NO)	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	(rés)	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><math>0\mathcal{F}</math></u> Oil temperature	101	€9°F	111	<sup>4</sup> <sup>4</sup> γ <sup>∞</sup> F	102	<sup>6</sup> 5 °F
		96		10		22

3/6/18 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.)

Vibration is still an issue T. 201 motoheld. Hanser

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	II. II. II.
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

Yes\*

No

Date	:/7/14	Time: 0835	Inspector Initials:	KGH
	/ / CESS PIPING INSPECTION	-		
1. C	Observe piping between I	Process Tank secondary conta	inment 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: 1,857,740 (gallons)

## SECONDARY CONTAINMENT INSPECTION

4.	Perform 360 perimeter walk to observe liner system for potential wear	r and tear.	A
	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	Ng
6.	Is there storm water accumulation in equipment pad sumps?: If Yes, pump storm water into one of the process tanks.	Yes	No

## PROCESS TANKS AND DAY TANK INSPECTION

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

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

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

	T-2	T-201		T-202		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?	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?**	Nes	No*	Yes	No*	res	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>5<math>2^{\circ}</math></u> Oil temperature	167	€/°F	110	58°F	109	59 °F
		-86		85		81

Date:

Inspector Initials:

KG11

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.)

Vibration in electrical T=201 morta

Time:

**Operator Signature:** 

led Hanse

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	- 0.01
Field Operations Manager	Kyle Hansen	(801) 949-6663	
Project Manager	David Bohmann	(303) 704-9527	
Program Manager	Dan Pastor	(303) 588-0901	
Site Health & Safety	Karen Luna	(702) 217-8173	t t
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	te: 3/8/18 Time: 1810 Inspector I	nitials:	KSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR	secondary o	containment.
	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*	Ne
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east Flowmeter: 1,882, 100 (gallons)	of Process	Tanks.
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? If Yes, pump storm water into one of the Process Tanks.	Yes	No

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

## PROCESS TANKS AND DAY TANK INSPECTION

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

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	Ño*	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	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	Ng
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>(070</u> Oil temperature	110	)°F	138	Ş∫ °F	115	°F

Decout to day

Np

18 Date:

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

Inspector Initials: \_

K41-1

**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.)

**Operator Signature:** 

Ryle J. Hanses

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	e: <u>3/9/18</u> Time: <u>0805</u> Inspector Ini	itials:	KGH
PRO	CESS PIPING INSPECTION		
1. (	Observe piping between Process Tank secondary containment and FBR se	econdary	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. I	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east o Flowmeter: 18350 (gallons)	f Process	Tanks.
SECO	ONDARY CONTAINMENT INSPECTION		
4. 1	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. I	s there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		
6. I	s there storm water accumulation in equipment pad sumps?:	Yes	NO
	If Yes, pump storm water into one of the process tanks.		100

## 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*	Ves	No*	Yes	No*	NA	NA

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

	Т-2	201	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	(N)
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*	Ves	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u>5</u> Oil temperature	10	₿°F	10	Z °F	108	°F

Date:

Inspector Initials:

12917

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.)

le D. 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

Date:

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

Yes\*

No

## PROCESS PIPING INSPECTION

- 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible?
- 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: \_\_\_\_\_\_\_ 902, (250 \_\_\_\_\_\_ (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

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

<i><i>и и</i></i>	T-2	201	— T-2	202	T-203	
Visible oil leaks from gear box?	Yes*	No	Yes*	No/	Yes*	(1)0
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Ves	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	B
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 $( \underline{c}, \underline{k}^D )$ Oil temperature	10	3 °F	106	°F	100	( °F

Inspector Initials: <u>F94</u>

Date: 3/00/08

\* - Notify Site Implementation Manager immediately if any of these conditions are observed and thoroughly NOTES:

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

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.

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

T-ZOI motor viloration same.

Red Hauser

**Operator Signature:** 

MERGENCY CONTACTS:		Phone #	Comments
<u>Fitle</u>	Name	(907) 723-2646	
ite Implementation Manager	Brad Maynard		
	Kyle Hansen	(801) 949-6663	
ield Operations Manager	David Bohmann	(303) 704-9527	
Project Manager		(303) 588-0901	
Program Manager	Dan Pastor	(702) 217-8173	
Site Health & Safety	Karen Luna	(610) 348-7197	
Corporate Health & Safety	Michelle Gillie		and the second second second
	Courtney Flores	(770) 845-6281	Reference Quote # 142770051
Process Engineer		(702) 538 2292	Reference Customer # 1439334
Emergency Generator (United Rentals)	Heath Barnard	(//02) 000	

Dat	: <u>3/11/18</u> Time: <u>1545</u> Inspector Initials: <u>K4H</u>
PRC	CESS PIPING INSPECTION
1.	Observe piping between Process Tank secondary containment and FBR secondary containment Any leaks, punctures, damage, bulges visible? Yes* No
2.	Observe piping in Process Tank secondary containment area.
	Any leaks, punctures, damage, bulges visible? Yes* No
	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>1, 90-3, 470</u> (gallons)
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear.
	Any leaks, punctures, or other damage visible? Yes No
5.	s there storm water accumulation greater than 1 foot? Yes No If Yes, pump storm water into one of the Process Tanks
6.	s there storm water accumulation in equipment pad sumps?: (Yes) 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?**	fes	No*	Yes	No*	es	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Nes	No*	NA	NA

1 H	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?	les	No	tes	No	ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	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 69 Oil temperature	10	≪ °F	72	- °F	110	<b>f</b> °F

Date:

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

Inspector Initials: KG (4

**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.)

wellong from T-202 Decart

T-201 motor viloved ton same.

**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: 3/12/18 Time: 0950	Inspector Initials:	165H
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment	nt and FBR secondary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
2.	Observe piping in Process Tank secondary containment area.	ing a sub-	
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: $1, 932, 350$ (gallons)	meter east of Process T	ānks.
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for pote	ential wear and tear.	
	Any leaks, punctures, or other damage visible?	Yes	(10)
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 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?**	res	No*	es	No*	Nes	No*	NA	NA
Are transfer pumps ready for service?	res	No*	res	No*	es	No*	NA	NA

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

	T-2	201	T-2	202	П 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	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 Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO Oil temperature	[1]	°F	10	ス°F	(0)	o °F

Nó)

3/12/18 Date:

Time:

Inspector Initials: \_\_\_\_\_ Key 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.)

T-201 motor still has Vibration 144014.

**Operator Signature:** 

l. 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

Dat	Time: $\frac{\mathcal{O}945}{\mathcal{O}945}$ Inspector Init	tials: $Kc$	5 H
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR se Any leaks, punctures, damage, bulges visible?	condary contain Yes*	Mo
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 east of Flowmeter: <u>1,940,750</u> (gallons)	Process Tanks.	Ŭ
4.	Perform 360 perimeter walk to observe liner system for potential wear an 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?:	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-2	201	Т-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*	Ø
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Ves	No*	NA	NA
Are transfer pumps ready for service?	res	No*	Yes	No*	les	No*	NA	NA

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

	T-2	201	T-2	202	I. IT-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?	Nes	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*	Nes	No*	res	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperatureO 2.º Oil temperature	- I-i	∫ °F	10	6 °F	116	°F

k05 Phase III Inspection Form\_17011\_05 Page

13/18 Date:

Time: \_\_\_\_\_ Inspector Initials: K4H

NOTES:

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

#### COMMENTS:

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

T-201 Vibration is the same

**Operator Signature:** 

le S. 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	- L
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:	3/14/18	
	_/_/	

Time: 1145 Inspector Initials: KSH

Yes\*

Νo

#### **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:	1.940	1,760	_ (gallons)
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#### SECONDARY CONTAINMENT INSPECTION

4. Perform 360 perimeter walk to observe liner system for potential wear	r and tear.	
Any leaks, punctures, or other damage visible?	Yes	(No)
5. Is there storm water accumulation greater than 1 foot?	Yes	No
If Yes, pump storm water into one of the Process Tanks.		<u> </u>
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-2	201	Т-2	202	<sup>□</sup> 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?**	es	No*	res	No*	(Yes)	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	Ves	) No*	NA	NA

	T-2	201	П Т-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?	Yes	No	res	No	es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No.	Yes	NO
Mixer running and turbulence/vortex observed?**	(Yes)	No*	Tes	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-	ך °F	91	ク °F	91	∕o °F

3/14/18 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.)

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	201 — O.
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: $3/15/18$ Time: 0955 Inspector Initials: $25/14$
PRC	DCESS PIPING INSPECTION
1.	Observe piping between Process Tank secondary containment and FBR secondary containment.
	Any leaks, punctures, damage, bulges visible?
2.	Observe piping in Process Tank secondary containment area.
	Any leaks, punctures, damage, bulges visible? Yes* (No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>ノ, 94の, うんの</u> (gallons)
SEC	CONDARY CONTAINMENT INSPECTION

- 4. Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes 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-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*	(ZO
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	ves	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	Yes	No*	fes	No*	NA	NA

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

ПТИ П м.	T-2	201	Т-2	202	Ш 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	Ves	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	
Mixer running and turbulence/vortex observed?**	(Yes)	No*	(Yes	No*	es	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 $57^{\circ}$ Oil temperature	87	Z°F	77	°F	80	)°F

1 1 1

Yes

3/15/18 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.)

vibration has noton T-201 not gotten worse.

6 S. Hann **Operator Signature:** 

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

Dat	te: <u>3/16/18</u> Time: <u>0810</u> Inspector Initials:	KSH
PRO	DCESS PIPING INSPECTION	9
1.	Observe piping between Process Tank secondary containment and FBR secondary containment and secondary	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 Process T Flowmeter: 94 ( (gallons)	anks.
SEC	CONDARY CONTAINMENT INSPECTION	

4.	Perform 360 perimeter walk to observe liner system for poter	itial 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:

Yes

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	) <sub>Yes*</sub>	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

	Т-2	201	T-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	(No)	Yes*	(No)
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No* (	Yes	No*	(res )	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MANA Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature $\underline{-48^{\circ}}$ Oil temperature	ų,	)_ °F	9	₩ °F	99	5 °F

18 Date:

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.)

Ryle S. H. **Operator Signature:** 

Time:

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	IIV III I
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	I KOM HE I
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date:	3/17/18	Tim

ne: 1156 Inspector Initials: <u>KGf</u>

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: 1941, Cors (gallons)

#### SECONDARY CONTAINMENT INSPECTION

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

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*	ND	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	I I T-2	202	= T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Ves	No	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*	(res)	No*	res	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>58</u> Oil temperature	8	4°F	80	Ĵ°F	88	°F

Date: Inspector Initials: Time: **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.)

1. 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>3/18/18</u> Time: <u>1240</u>	econdary containment and FBR secondary es visible? Yes* ry containment area. es visible? Yes* Water (SLMW) flowmeter east of Process	K-GH
	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containme Any leaks, punctures, damage, bulges visible?		· ~
2.	Observe piping in Process Tank secondary containment area Any leaks, punctures, damage, bulges visible?		No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flow Flowmeter: $1.941$ , $620$ (gallons)	wmeter east of Proces	s Tanks.

#### SECONDARY CONTAINMENT INSPECTION

4.	Perform 360 perimeter walk to observe liner system for potential we	ar and tear.	6
	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*	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*	Ves	No*	NA	NA

	T-2	201	L 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*	res	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>63</u> Oil temperature	9	°F	9(	¢ ℃	8	9°F

Date:

Time:

KSH Inspector Initials:

**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.)

l. J. Hansen

#### **EMERGENCY CONTACTS:**

**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

Dai	te: <u>3/19/18</u> Time: 1205 Inspector	Initials:	KGH
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR	secondary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
2.	Observe piping in Process Tank secondary containment area.		E
	Any leaks, punctures, damage, bulges visible?	Yes*	(No)
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east	of Process 1	fanks.
	Flowmeter: 1,942,030 (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	Ne
5.	Is there storm water accumulation greater than 1 foot?	Yes	No
	If Yes, pump storm water into one of the Process Tanks.		6
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	Na

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

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

#### **PROCESS TANKS AND DAY TANK INSPECTION**

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

	T-2	201	T-2	202	T-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:

4285 3389

4379

	T-2	201	Т-2	202	T-2	203
Visible oil leaks from gear box?	Yes*	(No)	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		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 ////A Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature $\cancel{09}$ Oil temperature	9.	<b>∽</b> F	10	₿ °F	10	7 °F

Date: 3/19/18 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.)

yle S. Hansen

#### **EMERGENCY CONTACTS:**

**Operator Signature:** 

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

Dat	te: <u>3/20/18</u> Time: <u>1030</u> Inspect	or Initials:	KSH
PR	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and F	BR secondary con	tainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		0
	Any leaks, punctures, damage, bulges visible?	Yes*	NO
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter e Flowmeter: $1,942,035$ (gallons)	ast of Process Tan	ıks.
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential we	ear and tear.	0
	Any leaks, punctures, or other damage visible?	Yes	Na
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	Nø
	If Yes, pump storm water into one of the process tanks.		and the second

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

		T-201		T-202		.03
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?	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	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>56</u> Oil temperature	99	°F	0	6 °F	10	4°F

Date:

Inspector Initials:

KG14

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.)

**Operator Signature:** 

Reled Harse

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:	3	21	14	
	-			

Time: 0825

Inspector Initials: \_

K511

No

#### PROCESS PIPING INSPECTION

- 1. Observe piping between Process Tank secondary containment and FBR secondary containment. Any leaks, punctures, damage, bulges visible? Yes\* No
- 2. Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes\*
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: 1,942.060 (gallons)

#### SECONDARY CONTAINMENT INSPECTION

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

#### PROCESS TANKS AND DAY TANK INSPECTION

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

	T-201		T-202		T-203		T-204	
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	ŇA
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	res	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature <u><u><u></u></u>O Oil temperature</u>	104	°F	10'	٦°F	103	°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.)

T-201 Still has vibration in motor

**Operator Signature:** 

gle S. Hansı

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

22/18 Date:

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

Inspector Initials: \_

KSA

**NOTES:** 

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#### COMMENTS:

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

**Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	1
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

Da	te: 3/22/18 Time: 1100	Inspector Initials:	KSH
PR	OCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary contair	ment and FBR secondary c	ontainment.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment a	area.	0
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) f Flowmeter: <u>1,942,065</u> (gallons)	flowmeter east of Process T	anks.
SE	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? If Yes, pump storm water into one of the Process Tar	Yes nks.	No
6.	Is there storm water accumulation in equipment pad sur If Yes, pump storm water into one of the process tan	•	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*1	Yes	No*	NA	NA

		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 N/A Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperatureO1 <sup>e</sup> Oil temperature	10	3 °F	10	¶°F	10	7°F

Dat	e: <u>3/23/18</u> Time: <u>1145</u> Inspector Initial	ls: <u>¥G</u> h	/
PRO	DCESS PIPING INSPECTION		
1.	Observe piping between Process Tank secondary containment and FBR second	ndary containi	nent.
	Any leaks, punctures, damage, bulges visible?	Yes*	No
2.	Observe piping in Process Tank secondary containment area.		
	Any leaks, punctures, damage, bulges visible?	Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Pr	ocess Tanks.	
	Flowmeter: 1,942,065 (gallons)		
SEC	ONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and t	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.		0
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	(Ng)

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

#### PROCESS TANKS AND DAY TANK INSPECTION

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

	Т-2	201	Т-2	202	Т-2	203	T-2	204
Visible damage or leaks/stains? (inspect all welds and nozzles/valves)	Yes*	No	Yes*	No	Yes*	No	Yes*	No
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	es	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-201		T-202		203	
Visible oil leaks from gear box?	Yes*	NO	Yes*	No	Yes*	NO	
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	Yes	No	
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	No	
Mixer running and turbulence/vortex observed?**		No*	Yes	No*	Yes	No*	
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste MA Management Plan?		No*	Yes	No*	Yes	No*	
Ambient air temperatureO Oil temperature		°F	9	7 °F	10	¢∕ °F	

ŝ

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.)

1. Tank

#### **Operator Signature:**

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	and the second second
Project Manager	David Bohmann	(303) 704-9527	Star and
Program Manager	Dan Pastor	(303) 588-0901	Y I MARINE
Site Health & Safety	Karen Luna	(702) 217-8173	a line and march
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	12 16 1 1 1 1 1 1
Process Engineer	Courtney Flores	(770) 845-6281	Carlos and the second
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Date: 3/24/18	Ti
---------------	----

ime: 0915 Inspector Initials: KSH

Yes\*

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?
- 3. Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>1,942,780</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	No
5.	Is there storm water accumulation greater than 1 foot?	Yes	Ng
	If Yes, pump storm water into one of the Process Tanks.		C R
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	Nd
			0

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	) <sub>No*</sub>	NA	NA

	Т-2	201	T-2	202	T-2	.03
Visible oil leaks from gear box?	Yes*	No	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	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	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 temperatureO Oil temperature	9	8 °F	96	۴	99	۴F

Date:	R	1241	18	Time:
	-7	11		

Inspector Initials: Kig H

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.)

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>3/25/18</u> Time: 1415 Inspector Initials: KG	6
PR	OCESS PIPING INSPECTION	
1.	Observe piping between Process Tank secondary containment and FBR secondary contain Any leaks, punctures, damage, bulges visible? Yes*	No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible? Yes*	No
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tanks. Flowmeter: <u>1942, 785</u> (gallons)	
SEC	CONDARY CONTAINMENT INSPECTION	
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes	No

	Any leaks, panetares, or other damage visible:	163
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:

	<sup>°</sup> Т-2	201	<sup>°</sup> 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

#### 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	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*	res	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	G	8 °F	8	∽_ °F	8	8°F

Nd

Na

18 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.)

Hann **Operator Signature:** 

Title	Name	Phone #	Comments
Site Implementation Manager	Brad Maynard	(907) 723-2646	
Field Operations Manager	Kyle Hansen	(801) 949-6663	
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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

	te: $3/20/18$ Time: 09/0 Inspector Initials	<u> </u>	<u>н</u>
	Observe piping between Process Tank secondary containment and FBR second	dary containm 'es*	No
2.	Observe piping in Process Tank secondary containment area. Any leaks, punctures, damage, bulges visible?	'es*	Nd
3.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Pro Flowmeter: 1942, 810 (gallons)	cess Tanks.	
SEC	CONDARY CONTAINMENT INSPECTION		
4.	Perform 360 perimeter walk to observe liner system for potential wear and te	ar.	$\bigcirc$
	Any leaks, punctures, or other damage visible? Y	es	No
5.	Is there storm water accumulation greater than 1 foot? Y	es	NO

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

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

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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

811.11.11.1	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	(es	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	Nò
Mixer running and turbulence/vortex observed?**		No*	Yes	No*	es	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 $49^{\circ}$ Oil temperature	83	°F	- ك	7 °₽	78	°Ę

3/20/18 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.)

Ryled Hannen **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	Vi 11
Corporate Health & Safety	Michelle Gillie	(610) 348-7197	
Process Engineer	Courtney Flores	(770) 845-6281	
Emergency Generator (United Rentals)	Heath Barnard	(702) 538 2292	Reference Quote # 142770051 Reference Customer # 1439334

Dat	ite: 3/27/18 Time: 0940 Inspector Initials: K	5 H
PR	OCESS PIPING INSPECTION	
1.	Observe piping between Process Tank secondary containment and FBR secondary conta	linment.
	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.	Record reading on Stabilized Lake Mead Water (SLMW) flowmeter east of Process Tank Flowmeter: $1942, 845$ (gallons)	5.
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.	

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

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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

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

	T-201		T-202		T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	es	No	Yes	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.		No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**		No*	Yes	No*	es	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 $57^{\circ}$ Oil temperature	7.4	°F	70	₽ °F	70	<b>€ °</b> F

(No)

Date:

Time:

Inspector Initials:

KAH

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.)

202 motor Enlaged bearing. Slig - noise quieted. gled 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

Date: 3/28/14

## Time: 1010 Inspector Initials: K-4-H

Yes\*

Ne

#### **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: 1942, 845 (gallons)

#### SECONDARY CONTAINMENT INSPECTION

Perform 360 perimeter walk to observe liner system for potential we	ar 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	
	Any leaks, punctures, or other damage visible? 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 greater than 1 foot? Yes 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?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Yes	No*	res	No*	Yes	No*	NA	NA

	T-2	201	T-202		T-2	203
Visible oil leaks from gear box?	Yes*	Nò	Yes*	No	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?		No	Yes	No	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 M Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature $( O \mathcal{L}^{\circ} )$ Oil temperature	10	רא °F	16	₿℉	(0	(°F

28/18 Date:

Inspector Initials:

16 17

**NOTES:** 

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

Time:

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

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

#### COMMENTS:

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

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## **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	1
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: 3/29/18 Time: 1025 Inspector Initials: K4H	<i></i>
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: <u>1,942, 847</u> (gallons)	
SEC	CONDARY CONTAINMENT INSPECTION	
4.	Perform 360 perimeter walk to observe liner system for potential wear and tear. Any leaks, punctures, or other damage visible? Yes	

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

#### PROCESS TANKS AND DAY TANK INSPECTION

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

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

L M	T-2	201	Т-2	202	100 T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	N	Yes*	No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	No
Mixer running and turbulence/vortex observed?**	(Yes	No*	Yes	No*	Yes	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste///A Management Plan?		No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature		4 °F	11	3°F	10	∛°F

Date:

Time: \_\_\_\_\_ Inspector Initials: \_\_\_\_K C 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.)

**Operator Signature: EMERGENCY CONTACTS:** 

#### Title Phone # Name 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 Michelle Gillie **Corporate Health & Safety** (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

Date:

Time: \_\_\_\_\_\_ I (200 \_\_\_\_\_\_ Inspector Initials: \_\_\_\_\_\_ K&/\_\_\_\_

#### **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.

#### 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*	Ro
All decant valves and transfer valves locked out?**	Yes	No*	Yes	No*	Yes	No*	NA	NA
Are transfer pumps ready for service?	Tes	No*	Yes	No*	Yes	No*	NA	NA

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

	T-2	201	— Т-2	02	T-2	203
Visible oil leaks from gear box?	Yes*	No	Yes*	(No)	Yes*	- No
Has routine wash down of precipitate/crystals on tank sides and mixer impeller been completed?	Yes	No	Yes	No	Ves	No
Mixer off as part of sediment washing process? If Yes, draw an "X" through answers to next question.	Yes	No	Yes	No	Yes	
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	i	°F	10	۴	100	7 °F

K05 Phase III Inspection Form\_17011\_05



Yes\*

30/18 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.)

1 Hansu

## **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:	3/31/18	Time:
-------	---------	-------

Inspector Initials: 125H

#### **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: <u>1,943,720</u> (gallons)

#### SECONDARY CONTAINMENT INSPECTION

4.	Perform 360 perimeter walk to observe liner system for potential v	vear and tear.	
	Any leaks, punctures, or other damage visible?	Yes	NO
5.	Is there storm water accumulation greater than 1 foot?	Yes	Nd
	If Yes, pump storm water into one of the Process Tanks.		2
6.	Is there storm water accumulation in equipment pad sumps?:	Yes	Ro
	If Yes, pump storm water into one of the process tanks.		

#### PROCESS TANKS AND DAY TANK INSPECTION

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

	Т-2	201	Т-2	202	T-2	203	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

	Т-а	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	Ne
Mixer running and turbulence/vortex observed?**	Yes	No*	Yes	No*	les	No*
Are used oil containers labelled and stored appropriately, in accordance with the Site Waste N h Management Plan?	Yes	No*	Yes	No*	Yes	No*
Ambient air temperature Oil temperature	114	} • F	(2	,−3 °F	((9	°F

3/31/18 Date:

Inspector Initials:

KG1-

**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.)

le S. Hann

**EMERGENCY CONTACTS:** 

**Operator Signature:** 

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

# Attachment B Phase III O&M Monthly Inspection Forms

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

Da	te: _	3/30/18	Time: 0810	Inspector Initials:	JR_	L	1001
1814	CDCC		DADTO				
		T MATERIALS AND all spare parts pre- If no, list which pa		orm Site Implementation N	Yes Manager:		No
2	٨٠٥	13 16 1				an chine an	
۷.	Are	-	s, resources, and supplies to pe eds to be ordered and inform S		er:	C. MARK	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	V				
P-202	$\overline{\mathbf{V}}$	1.2			in s xingili
P-203	$\overline{\mathbf{V}}$	1.2		h dijenje k h	
P-204	$\overline{\mathbf{V}}$				a share and restrict
P-205	$\square$		1		
P-206	$\overline{\checkmark}$				

#### 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:

THE REPORT OF A REPORT OF A	1101 <b>T-</b> 2	201		202	T-2	203	т. т.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:\_\_\_\_\_

Date: 3/30/

Time: 0845

Inspector Initials:

#### INSPECT PROCESS TANK MIXERS

5. Visual inspection from top of each Process Tank:

	T-201	T-202	T-203	
Is there adequate oil in Process Tank mixer motors?	es No*	es No*	Yes No*	
Control panel mixer run time**	8649,0 hrs	8545,5 hrs	\$639.6 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:

Date of Next	
<b>Replacement or</b>	
Maintenance	Comments
AU9 1, 2018	
Aug 1,2018	
Dec 15, 2018	
Aug 1, 2018	
Adril 16,2018	
Jan 26,2019	
ADr. 1 18,2018	
1401 2112018	
- <u>-</u>	
	Replacement or           Maintenance           Auj 1, 2018           Aug 1, 2018           Aug 1, 2018           Dec 15, 2018

#### 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**

3/30/18 Date:

Time: 0845 Inspector Initials: JR

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