

Standard Operating Procedure (SOP)

██████████ Diesel Delivery (Fill) For stand-alone Main Tanks for ██████████ Engines.

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Description of Work

Use this procedure for Diesel fuel fills on ██████████ sites with ██████████ engines.



Important: Do not perform this procedure if you are not qualified or on any sites that do not have Caterpillar or Cummins Generator Sets.

Before starting this procedure, note the following guidelines:

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- Always work safely and prioritize safety over performance and speed.
- Always follow all applicable [Environmental documentation](#).
- Provide security with the names of vendors and support services that will be on site to assist with this procedure.
- Follow the correct escalation path to ensure the right personnel are notified at the right time. If you don't know the correct escalation path for this emergency, contact the Facility Operations Center (FOC) at ██████████ and the site's facility manager (FM) for guidance.

Safety Requirements

Follow the [Safety Briefing](#) procedure to identify safety hazards and correctly mitigate those hazards to minimize risk to personnel.

- For assistance understanding the safety requirements for this procedure, contact your regional safety engineer at ██████████ or go to ██████████ to access data center safety documentation.






This procedure includes:

- Working at heights with fall hazards greater than 6 feet/1.83 meters, not including ladders (refer to the Safety Briefing for detailed instructions)
- Only required staff should be in the area during testing.

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Important Indicators and Acronyms

The following indicators identify critical steps in this SOP:

Graphic Symbol	Indicates
	Change of state
	Safety alert
	Rollback here, if necessary
	Stop, validate/verify/go no go
	Important note

For acronyms and abbreviations that aren't defined in this procedure, refer to the ██████████.

Vendor Information

If a vendor is participating in this SOP, provide the following information (add rows as necessary):

Item	Description
Company Name	
Service Contact Information (24x7)	

Note: Ensure vendors are briefed on the work they will be doing. Vendors must review Safety, Security, and other DC rules.

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Employee Information

Provide information about everyone participating in this SOP (add rows as necessary).

Group	Name / title	Alias/Contact #	Role	Initials
<i>Internal (blue badge)</i>				
	EOT		Checks and rollback	
	EOT		Monitoring BMS	
<i>External (Vendor)</i>				
	Driver		Delivering fuel	
<i>Escalation Contacts</i>				

Expected Alarms

Provide a complete list of all alarms expected to occur during this procedure.

No expected alarms

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Affected Equipment

List all equipment that will be worked on, shut off, or locked out during this procedure.

Equipment Name	Manufacturer	Model #	Serial #	Rating/Capacity
Main Diesel Tank Manual Valves				
Main Diesel tank Actuators				






















Required PPE, Tools, and Materials

List the personal protective equipment (PPE), tools, and materials needed to do this procedure.

PPE/Tools/Materials	Reason needed
Laptop	BMS - To ensure that the fuel level does not exceed limits
Universal Panel Key	To open Fuel connection point enclosure on diesel yard
Safety glasses	General PPE
Safety Boots	General PPE
Hi-Visibility Clothing	General PPE
nitrile or latex gloves	General PPE
Aprons (optional)	General PPE
Spill Kit	To prevent or contain diesel spills.


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Pre-Work and Mitigation Steps

Section 1: Perform Pre-Work and Mitigation Steps				Completed by AWS
Step	Location	Equipment	Action/Task	<input checked="" type="checkbox"/>
1.1	DCEO Office	N/A	  DCEO to assess MCM and ensure risk assessment has been provided for unloading fuel.	
1.2	DCEO Office	N/A	  Verify proper safety equipment and additional forms/permits.	
1.3	DCEO Office	N/A	 Check local weather conditions.	
1.4	DCEO Office	N/A	 Prior to the arrival of the fuel delivery contractor, notify security personal.	
1.5	Office	N/A	 Print off Diesel ADR Checklist from Policy and Complete before proceeding	<input type="checkbox"/>
1.6			 Points to note for the diesel delivery system. <ul style="list-style-type: none"> • Actuator closes at 85% of tank total capacity. • High alarm at 90% of tank total capacity. • High high alarm at 95% of tank total capacity. • Alarms are not local and are only received on BMS (So BMS monitoring is essential) 	<input type="checkbox"/>
1.7	Office	N/A	  Monitoring of BMS is essential to ensure that during filling a faulty actuator will not result in overfilling of the tank and diesel in the bunded area.	<input type="checkbox"/>
1.8	Office	N/A	  If there is no wifi reception on the top of the tanks then monitoring of BMS will need To be carried out by a second EOT. If BMS monitoring is remote ensure a clear line of communication is available and working.	<input type="checkbox"/>
1.9	Office	N/A	  If monitoring of the BMS for the tank farm area is not available or has timed out then stop and escalate.	<input type="checkbox"/>
1.10	Office	BMS	Take note of how many liters are in each main tank _____ Liters.	<input type="checkbox"/>
1.11	Office	N/A	Calculate how many liters are required and inform the driver _____ Liters.	<input type="checkbox"/>
1.12	Office	N/A	Identify the role of each person participating in the procedure, and identify each person's assigned location and each person's roles/responsibilities.  Additional personnel may be required for monitoring of BMS.	<input type="checkbox"/>
1.13	Tank Farm		  Ensure that there are no works taking place in the immediate area.	<input type="checkbox"/>
1.14	Tank Farm	Diesel tank farm	  Check Diesel bund and filling area have no leaks.	<input type="checkbox"/>
1.15	Tank Farm/ Office	Diesel tank farm/ BMS	  Ensure interceptor tank is free of alarms.	<input type="checkbox"/>
1.16	Tank Farm	Diesel fill center	Ensure that the delivery driver has the correct adapter for our diesel fill pipe.	<input type="checkbox"/>

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1.17	Tank Farm/Office	Laptop/BMS	Ensure the tank farm BMS is been monitored.	<input type="checkbox"/>
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Summary: Pre-work data is collected. Safety meeting is conducted. Roles and responsibilities are assigned. Teams have been notified.

If any discrepancies are found in steps 1.1 through 1.17 immediately stop and escalate








Procedure

Section 2: Procedure - Filling of Main Diesel Tanks				Completed by AWS
Step	Location	Equipment	Action/Task	<input checked="" type="checkbox"/>
   If at any point in this section the tank over fills proceed to Section 4: Rollback—.				
2.1	Security Gate	N/A	When fuel vendor arrives on site, Security personnel must notify AWS personnel of all fueling activities and remain present during all fueling activities.	
2.2	Security Gate	N/A	 DCEO personnel will obtain a bill of loading from the fuel vendor truck operator to verify that it specifies the correct fuel product (ultra-low Sulphur diesel fuel) and specify the volume to be delivered.	
2.3	Security Gate	N/A	AWS Security personnel unlock gate (as applicable) and direct the driver to the fuel reloading bay.	
2.4	At fuel reloading bay	N/A	Fuel delivery vendor turns off truck motor unless required for unloading.	
2.5	At fuel reloading bay	N/A	 Wear proper personal protective equipment (PPE)—high visibility vest, safety boots, safety glasses, and safety gloves.   Ensure spill kits are fully stocked, including drain plugs.	
2.6	At fuel reloading bay	N/A	DCEO to deploy Barrier & Signage prior to fueling	
2.7	At fuel reloading bay	N/A	DCEO to perform checks on Fuel delivery driver: <ul style="list-style-type: none"> Level of English is adequate; That the driver has a valid ADR Card; The driver is familiar and trained with loading and unloading processes; That the traffic management arrangements have been communicated to and understood, including pedestrian interfaces; That the driver is informed verbally of the local site hazards; 	

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			<ul style="list-style-type: none"> That a DSG note is provided; Transport documents to be provided. 	
2.8	At fuel reloading bay	N/A	 Conduct a safety inspection of the delivery area: <ul style="list-style-type: none"> Ensure there is a serviceable fire extinguisher available on the fuel truck and in the generator enclosure. Smoking or any activity that can cause sparks or flames is prohibited during fuel transfer operations. Cover all down-gradient storm drains prior to fueling activities. Appropriate covers, mats and drain plugs to be deployed to form active secondary containment. Ensure mats are placed under all fuel delivery pipe joints Ensure appropriate spill control equipment is readily available to clean up small spills, which at a minimum will include granular absorbent, absorbent pads and booms, shovels, and an empty drum. 	
2.9	At fuel reloading bay	Fuel connection panel	DCEO personnel will unlock and open the fuel connection point cabinet door using Universal Panel Key and check that a drip tray is in position beneath the fuel hose connection.	
2.10	At fuel reloading bay	Fuel connection panel	Fuel delivery vendor removes the cam lock cap that covers the fuel line.	
2.11	At fuel reloading bay	Fuel connection panel	Fuel delivery vendor connects the hose to the fuel line  keep the main lever valve closed.	<input type="checkbox"/>
2.12	At fuel reloading bay	Diesel cabinet	 DCEO personnel will verify the current amount of product in each diesel tank by indication on corresponding indicator panels located adjacent to cabinet. Fuel Level: _____ Litres	<input type="checkbox"/>
2.13	At fuel reloading bay	N/A	DCEO will verify delivery volume with Truck Operator. Truck Operator will adjust unloading pump to load the Diesel tanks with only the requested and verified volume. Expected Fuel Delivery: _____ Litres	<input type="checkbox"/>
2.14	Tank Farm	BMS/Walk through	Let the driver know that he can start the filling operation	<input type="checkbox"/>
2.15	At fuel reloading bay	Fuel connection panel	  Fuel delivery vendor opens the main lever valve in fuel connection panel and commences refueling  In the event of a spill proceed to the rollback steps.  In the event of a Fuel High Level alarm immediately secure fuel loading.	
2.16	At fuel reloading bay	Control Panel/BMS	DCEO continuously monitors the BMS and or Fuel Fill Panel during refueling to ensure tanks do not overfill.	


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2.17	Tank Farm	Diesel Tanks	Position yourself on the tank that will reach 85% first/next for rollback purpose.	<input type="checkbox"/>
2.18	Tank Farm/Office	Laptop/BMS	 Monitor the filling to prevent overfilling.	<input type="checkbox"/>
2.19	Tank Farm/Office	BMS	If a high-level alarm is triggered, or there is a spill or leak happens, DCEO will stop work immediately and assess the reason for alarm prior to deciding to continue refueling	
2.20	At fuel reloading bay	N/A	When designated Diesel Tank has reached its required level, vendor should stop refueling process.	
2.21	Tank Farm	Diesel Tank Fill Actuator	 Ensure all actuators close at 85% full.	<input type="checkbox"/>
2.22	Tank Farm	Bund and Fill area	  Check Diesel bund and fuel reloading bay have no spill.	<input type="checkbox"/>
2.23	At fuel reloading bay	Fuel connection panel	DCEO will supervise as the Truck Operator disconnects loading hose, ensuring that all product remains in the hose or is contained in the spill container (if applicable) and secures the fill cap back on the fuel tank inlet.	
2.24	At fuel reloading bay	N/A	<p> Truck operator cleans up any oil spills, including any product contained in the spill container (if applicable) before leaving area. Prior to departure, the driver and DCEO personnel are required to do a visual walk around inspection of the fuel truck.</p> <p>  DCEO personnel must file trouble ticket if any spill was observed.</p>	
2.25	At fuel reloading bay	Diesel Fill Pipe Connection	DCEO personnel shall verify condition of fill pipe area to ensure that any spills have been addressed. DCEO personnel shall document this information on the bill of lading.	
2.26	DCEO Office	Permit Folder	DCEO shall retain copies of the bill of lading and fuel loading receipt in the Permit to Operate binder.	
2.27	At fuel reloading bay	N/A	DCEO to Remove any barrier deployed storm drain covers, and pink mats.	

 **Stage Summary: Filling of all standalone Main Diesel Tanks has been completed.**





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Validation Steps

Section 3: Verify Normal Operations				Completed by AWS
Step	Location	Equipment	Action/Task	<input checked="" type="checkbox"/>
3.1.	Tank Farm	N/A	Each main tank fill actuator is now in the closed position.	<input type="checkbox"/>
3.2.	Tank Farm	Excel	Fill readings match vendors readings.	<input type="checkbox"/>
3.3.	Tank Farm	Sop	There are no leaks in the bund or fill area.	<input type="checkbox"/>
3.4.	Tank Farm/ Office	BMS and Readout in tank area if available	Take note of how many liters are in each main tank _____ Liters.	<input type="checkbox"/>
3.5.	Tank Farm	Delivery docket	Take note of how many liters were delivered by the driver _____ Liters.	<input type="checkbox"/>
3.6.	Tank Farm/ Office	Laptop/ BMS	BMS shows each tank fill actuator in the closed position	<input type="checkbox"/>
 Stage Summary: Validation data is collected. Filling has been completed and delivery quantity verified.				

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Rollback Steps

Section 4: Rollback—Rollback—				Completed by AWS
Step	Location	Equipment	Action/Task	<input checked="" type="checkbox"/>
4.1	Tank Farm	Diesel Tank fill valve	 On the main diesel tank that is over filling, turn off the manual fill valve on the top of the tank	<input type="checkbox"/>
4.2	Tank Farm	Fill point	 Alert the driver to stop filling	<input type="checkbox"/>
4.3	Tank Farm	Diesel Tank fill valve	 On the remaining main tanks turn off the manual fill valve on the top of the tank.	<input type="checkbox"/>
4.4	Tank farm and fuel reloading bay	SPCC Plan	In the event of a spill, refer to the SPCC Plan and follow the instructions. Notify CE, FM and Regional Environmental Engineer.	
4.5	Tank farm and fuel reloading bay	Fill point And Gen	Perform spill clean-up if required.	
4.6	Tank Farm	Phone/ Radio	Escalate through the proper escalation path	<input type="checkbox"/>
 Stage Summary: Delivery has been halted and issue escalated.				

**██████████ AZ Diesel Delivery (Fill) For stand-alone
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Technical / Related Documentation

Title	Issue/Revision
<Provide link to TAB data>	

Comments

Following the procedure, use this section to identify any issues or additional information for future use.

**████████ AZ Diesel Delivery (Fill) For stand-alone
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Document Information

Version	Date	Author(s)	Reviewed by	Approved by
1.0	08/10/ 2022	████████		
1.1	08/10/ 2022	████████		
1.2	14/12/22	████████		