

PER TRI REACTOR HYDROBLASTING LIST

DATE: _____ WORK ORDER # _____ REACTOR # _____

INSTRUCTIONS:

This form is to be returned to Per-Tri reactor foreman after all the jobs have been completed. The form itself is a reminder for the foreman, mechanics, and operators and a record for operations. Because we would like to keep a clean record and because of the nature of the job, this form will have an identical laminated copy to assist the hydroblasters in the field. The original copy will stay with the lead operator until the job is completed. The lead operator will issue the laminated copy to the hydroblasters when they pick up their vehicle entry permit.

Because there will be some interaction between the hydroblasters and the lead operator, the foreman following the job or the lead operator is to sign and date the form prior to moving the equipment to another section.

MATERIAL NEEDED BY HYDROBLASTERS

Note: This material is to be brought with the service company when they report to do the job. Delays caused by not having the equipment necessary to do the job is the responsibility of the contractor and the lead operator will make a note of such delays in the form signed by him. This list does not include the equipment absolutely necessary to perform the task or any equipment required by the contractor.

1. Flashlights
2. Breathing protection (Personal respiratory protection beyond the escape respirator)
3. Face shields
4. Gloves
5. Boots
6. Slicker suits

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PREPARATIONS

- _____ 1. Get vehicle entry permit from Per Tri control room
- _____ 2. Re-position STOP sign after entering the unit
- _____ 3. Connect foot pedal waste water to fitting provided on the South side of reactors' structure. For safety reasons you do not have to connect the shotgun lance to this system.

NOTE: This list is divided into logical stop points. Do not ask operations to inspect any items until you are satisfied that it is clean and that you are ready to sign the list. You may ask operations for help in identifying an item on this list.

DONE BY	INSPECTED	
_____	_____	1. Clean reactor rupture disk nozzles
_____	_____	2. Clean dome thermowell nozzles
_____	_____	3. Clean charging nozzle
_____	_____	4. Clean catalyst addition nozzle
_____	_____	5. Clean inside dome (do not to enter)
_____	_____	6. Clean tubes from the top of reactor the best you can without entering the dome area
_____	_____	7. Verify that the flange area on all the blasted nozzles are clean.

NOTE: The lead man or foreman is to go into the control room and notify the lead operator that this section is completed and he is ready for inspection before he moves the equipment. Signing this form by both, contractor and the lead operator, means that the blasters could move their equipment and continue the job.

DATE: ____/____/____
TIME: ____ AM PM

CONTRACTOR FOREMAN: _____
LEAD OPERATOR: _____

_____	_____	8. Clean reactor tubes from ground level (including flange surfaces)
_____	_____	9. Clean both mixed feed headers. including mixing tee and drains
_____	_____	10. Line mole both bayonets
_____	_____	11. Line mole organics feed line from demister to mixing tee (organic block valve must be open)
_____	_____	12. Line mole demister drain line into vaporizer drum
_____	_____	13. Clean vaporizer drum
_____	_____	14. Line mole pad out header from vaporizer to header valve
_____	_____	15. Line mole blowdown header from vaporizer to header valve
_____	_____	16. Clean feed line from header block valve to vaporizer drum (including bypass loop) ORIFICE PLATE MUST BE

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OUT OF LINE

17. Shot-gun cyclone inlet/outlet
nozzles and flange surfaces

18. Clean catalyst catch pot up to
cyclone

DATE: ____/____/____ CONTRACTOR FOREMAN: _____
TIME: ____ AM PM LEAD OPERATOR: _____

19. Clean demister

20. Clean vapor lines at blasting wall
(including pressure transmitter
nozzle)

21. Clean vaporizer reboiler

22. Clean reactor heads. This includes
the O2 risers and organics orifices

23. Clean individual feed piping by
blasting wall

DATE: ____/____/____ CONTRACTOR FOREMAN: _____
TIME: ____ AM PM LEAD OPERATOR: _____

PLACE HIGHEST PRIORITY ON REACTOR. AREA UNDER THE REACTOR
NEEDS TO BE CLEANED (DRUM WET CATALYST AND SET DRUMS BY THE
BLASTING WALL BY 7:30AM. USE PLASTIC DRUMS AND PUT CAPS ON
BUT DO NOT SECURE THE LIDS WITH THE RING)

IMPORTANT NOTICE:

HYDROBLASTERS ARE TO NOTIFY THE LEAD OPERATOR WHEN THE CLEAN-
UP AND DRESSING IS COMPLETED AND THE LEAD OPERATOR IS TO MAKE
SURE THAT DRUMS ARE STICKERED WITH "HAZARDOUS WASTE" STICKERS
LOCATED IN THE LEFT TOP DRAWER OF LEAD OPERATOR DESK.
THE STICKER SHOULD READ AS FOLLOWS:

SHIPPING NAME: Hazardous Waste. Solid. N.O.S.. ORM-E.
NA9189. RQ (D028. D039. D033)

UN OR NA#: 9189

WASTE NO.: D028. D039. D033

LABEL THE STICKERS ON THE RIGHT UPPER CORNER WITH "CATALYST
WASH DOWN FROM NO. ____ PER TRI REACTOR". THE ACCUMULATION
DATE IS TO BE FILLED WHEN THE STICKER IS PLACED ON THE DRUM.

- ____ 1. Placed one "HAZARDOUS WASTE" sticker on each drum of
catalyst for a total of ____ drums.

- ___ 2. Inspected the area and found it satisfactory
- ___ 3. Drum lids were not secured by the service company.
Call shift mechanics to secure the lids.
- ___ 4. There are no drums out of the copper contaminated
area
- ___ 5. Reactor dome is clean after the tubes were blasted
from under the reactor
- ___ 6. Released the hydroblasters at ___ AM PM

TIME: ___ AM PM LEAD OPERATOR: _____

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