

Oilfield Questions & Answers

July 1, 2021

1) **Q** Is a permit required for regular maintenance, engine repairs, if changes in kind occur on same site (includes manifold controls, or burner repairs or replacement)?

A If the complete engine or if the complete tank heater is replaced, then a replacement permit is required. Everything else is maintenance. A licensed gas fitter is required to do it or have done under the supervision of a licensed gas fitter.¹

¹**Bulletin: 09/18/2006**

2) **Q** Is one propane tank \$35 dollars, two tanks \$70.00 as per fee schedule?

A Two or more tanks on the same wellhead site and installed at the same time = \$35 up to a combined (aggregate) capacity of 5000 USWG when connected to a common manifold.²

²**2018 Fee Schedule**

3) **Q** Can a generic drawing be developed and agreed c/w gas valve train, type of gas and pressure can be identified and numbered for its specific application and accept this on all similar installation when referred to as pre-approved numbered plan?

A Yes – but only for remote single wellhead battery tank heaters up to 1 million btuh, and for combustors. These are the only TSASK field approvals that remain valid if the tank heater or combustor is relocated to another Saskatchewan location and we are properly notified to update our records.³

³**Bulletin: 09/18/2006**

4) **Q** Once we have a combustion analysis for a specific burner indicating no formation of carbon, is a Low Gas Pressure Switch (PSLL) required?

A TSASK Gas Inspections will issue a variance for the field approval of tank heaters up to 1 million btuh, at remote single wellhead battery sites only, that a PSLL is not required. Each variance is site specific to meeting these criteria. All other sites and equipment must be B149.3 compliant.⁴

⁴**Bulletin: 09/18/2006**

5) **Q** If all components on manifold withstand working gas pressure, is a High Gas Pressure Switch (PSHH) required?

A TSASK Gas Inspections will issue a variance for the field approval of tank heaters up to 1 million btuh, at remote single wellhead battery sites only, that a PSHH is not required. Each variance is site specific to meeting these criteria. All other sites and equipment must be B149.3 compliant.⁵

⁵**Bulletin: 09/18/2006**

6) **Q** One problem in the oil patch is with the liquid level controller floats accumulating sediment and sand which creates nuisance shutdowns. Can we accept the Kimray pneumatic pressure controller or a temperature controller?

A Yes.⁶

⁶**Bulletin: 09/18/2006**

7) **Q** Are flame safety requirements as per B149.3 -10 to be used?

A Yes. 4 seconds (or 90 seconds for under 400,000 btuh using a thermocouple).⁷

⁷**Bulletin: 09/18/2006 and per Section 9.1 of CSA B149.3-10**

8) **Q** Does all underground cathodic protection required on yellow jacket tubing need to be monitored?

A Yes. They need to have a maintenance plan to ensure it is monitored.⁸

⁸**Bulletin: 09/18/2006**

9) **Q** In plants where it would be impossible to smell gas odourization, are gas sensors acceptable?

A Yes. There is no need to odorize a pump jack located outside. Any occupied enclosure needs gas to be odorized. Non-occupied enclosures are permitted non-odourized gas if equipped with gas detection and ventilation.⁹

⁹**Bulletin: 09/18/2006**

10) **Q** Is 100% pilot flame safeguard required?

A No. (Manual lighting of pilot burners is allowed but not a recommended practice) Refer to 8.3.1 & 8.3.2 for clarification. (Not Recommended)¹⁰

¹⁰**Bulletin: 09/18/2006**

11) **Q** Section 9.1 of code requires 4 second shutdown, would we accept 60 to 90 seconds shutdown?

A 90 seconds for inputs 400,000 Btuh or less
4 seconds for inputs greater than 400,000 Btuh¹¹

¹¹**Bulletin: 09/18/2006 and per Section 9.1 of CSA B149.3-10**

12) **Q** Can we continue to use Danfoss valves as temperature control valves?

A As an operating control, not a safety valve, and the pressure rating of the valve must exceed the maximum allowable operating pressure of the valve train. Brass body valves are only permitted in upstream oil and gas service when the gas contact surfaces are steel (for example, Danfoss valves).¹²

¹²**Bulletin: 09/18/2006**

13) **Q** Who are the burner drawings sent to for approval and approximately how long will it take?

A Field approval applications are to be sent to Doug Hird at doug.hird@tsask.ca. Applications are normally reviewed within 2 weeks of receiving the necessary information.¹³

¹³**Bulletin: 09/18/2006**

14) **Q** If oil companies have an employer's licence, can they charge the permit fees and pay them in 90 days?

A No. In order for a permit to be valid it has to be paid.
Use of the Internet entry system would facilitate processing.¹⁴

¹⁴**Bulletin: 09/25/2006**

15) **Q** If a fire tube is changed and the same burner is used is a permit required?

A No. But all burner fuel trains must meet code by January 1, 2015.¹⁵

¹⁵**Bulletin: 09/25/2006 and 01-2013**

16) **Q** If a control box is CSA approved, does a CSA approved installer have to install box or can an Instrument tech install control box?

A The gas fitter is responsible for making sure that the controls work properly. For information regarding the responsibilities under the *Electrical Inspections Act*, refer to TSASK Electrical Inspections.¹⁶

¹⁶**Bulletin: 09/25/2006**

Q Is a high temp limit control required on a tank heater?

A 13.4.1 requires that a high temp limit shall be used where it is possible for the controlled temperature to exceed a safe limit. (This is also OH&S requirement). If stack temp is monitored, then that could be the high limit.¹⁷

¹⁷**Bulletin: 09/25/2006**

17) **Q** Will we accept air tests performed to B31 code?

A Yes, if the B31 (proof of strength tests) can match or exceed the pressure and duration that the B149.1 requires. Our tests are leak tests. B31 code is for higher pressures than we normally deal with.¹⁸

¹⁸**Bulletin: 09/25/2006**

18) **Q** Where do we get copies of the B149.3?

A Check the CSA web site (www.shopcsa.ca) or call 1-800-463-6727.¹⁹

¹⁹**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

19) **Q** Can a large company with multiple installations submit permits monthly?

A No. Permits are required before the work can commence. Commencing work without a permit may be considered an unreported installation and be subject to penalties.²⁰

²⁰**Bulletin: 10/25/2014**

20) **Q** When you apply on-line do you get a copy back?

A Yes, there is access to all submitted permits and history.²¹

²¹**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

21) **Q** Where do flare stacks fall with these code requirements?

A B149.3-20 provides mandatory requirements for flares across Canada.

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- 22) **Q** Can instrument technicians work as a gas technician?
- A** No. Instrument technicians need to be under the direct supervision of a licensed gas fitter and a final inspection is required by a licensed gasfitter for everything but identified maintenance.²³
- ²³**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**
- 23) **Q** Who is responsible if there is an incident after installation?
- A** The licensed gas contractor that permits the installation is responsible for the original installation. The Owner is thereafter responsible. TSASK will return to site should an investigation be warranted due to incident.²⁴
- ²⁴**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**
- 24) **Q** What type of fuel shutdown is required for gensets, pumpjacks, screwjacks, etc?
- A** TSASK requires that all stationary equipment must be installed in accordance with applicable codes.²⁶
- ²⁶**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**
- 25) **Q** What is required for regulator venting to outside?
- A** All relief vents must be vented to the outside. No size reductions are allowed. **See B149.3 for current code clauses.**
- 26) **Q** What fresh air supply is required for a catalytic heater?
- A** Ventilation at floor and ceiling levels is required. The heater installation instructions will provide information as well as the B149.1 code.²⁷
- ²⁷**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**
- 27) **Q** Can unlicensed operators disconnect lines to check for freezing/blockage?
- A** This is allowed as long as the instrument technicians are disconnecting the line, cleaning, and re-connecting. Due diligence needs to be followed and training for this process needs to be in place by the operator.²⁸
- ²⁸**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

28) **Q** Can unlicensed operators exchange heaters in an emergency situation? What if they are under supervision/re-inspection by a licensed gas fitter or company?

A Only a licensed gas fitter or someone working under supervision of a licensed gas fitter can replace or repair equipment.²⁹

²⁹**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

29) **Q** What is required for existing buildings or heaters in order to meet code? Are they "grandfathered"? If "grandfathered", what about regulator venting?

A Each installation is different. A safety survey shall be conducted and hazardous issues addressed immediately. Non-immediate issues must be addressed within a reasonable time acceptable to the Authority. Any site where a fuel supply line is opened it must be brought up to code. Regulator venting should always be to code; if wrong, change it. As of January 1, 2015, all equipment utilizing gas as a fuel in the oil and gas industry shall be certified or approved and installed according to code and Saskatchewan Codes of Practice.³⁰

³⁰**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

30) **Q** What is required for burners in treaters and batteries?

A CSA approval or field approved by TSASK. Starting in 2019, gas-fired oilfield equipment can be certified to CSA/ANSI 3.21:19, Industrial gas-fired natural draft heaters for installation in oil and gas process applications, or otherwise be field approved to B149.3.³¹

³¹**Bulletin: 03/30/2007 & 05/16/2007(04-2008) and 01-2013**

31) **Q** What systems are approved for use in the Oil and Gas Industry?

A Refer to manufacturers and confirm their approval status to code requirements. CSA approval is acceptable on complete units. Other fuel-burning equipment is subject to Field Approval by TSASK.³²

³²**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

32) **Q** Can instrumentation technicians install, repair, or work on any components in a gas system?

A Instrumentation techs can do maintenance only. Replacing or installing new piping or equipment requires a licensed gas contractor.³³

³³**Bulletin: 03/30/2007**

33) **Q** What drawings are required to be submitted for TSASK approval if CSA components are being used? What about non-CSA approved?

A See the TSASK web site (Field Approval Program) for complete listing of requirements.³⁴

³⁴**Bulletin: 03/30/2007 & 05/16/2007(04-2008)**

34) **Q** When are existing treaters required to be brought up to code - any "Grandfather" clause?

A As of January 1, 2015, all equipment utilizing gas as a fuel in the oil and gas industry shall be certified or approved. Previously approved equipment was certified to the version of the code that was adopted in Saskatchewan at the time of the approval. These certifications are valid for as long as the equipment is not relocated or modified. Equipment, which is relocated, modified, or has never been approved since installation must be certified or approved to the current version of the code by January 1, 2015, or in accordance with a TSASK-approved schedule.³⁵

³⁵**Bulletin: 03/30/2007 & 05/16/2007(04-2008) and 01-2013**

35) **Q** When existing and previously field-approved equipment requires an upgraded or replacement BMS, is a permit or new field approval required?

A A gas permit is not required since the gas system is not affected. Provided that the sequence of operations remains the same with the new BMS, the original field approval tag is in place, and that TSASK is notified of the Make/Model Number and Serial Number of the new BMS and the original field approval number off the tag, the new BMS may be installed without a new field approval. TSASK will update the original field approval file at no cost. Failure to provide this information however will void the original field approval.

36) **Q** What is Gas Inspection's definition of a sour gas service?

A Clause 5.4 of the CSA Z662 code defines sour service. See the second page of the TSASK Gas Inspections field approval application form.³⁷

³⁷**Bulletin: 04/29/2007**

37) **Q** Some oil companies are using hydrostatic testing for gas lines as described in the ASME B31.3 standard. Can something be done to stop this practice?

A See Saskatchewan Code of Practice to B149.1 (6.22). Hydrotesting is an allowable practice on shop-fabricated piping spool pieces, and by special permission from TSASK, such as on piping systems having a test pressure at or exceeding 30% of Specified Minimum Yield Strength.

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- 38) **Q** Where should TSASK labels be put on tank heaters?
- A** Put the tag on the manifold. The burner model will be listed on the field approval form and can be checked if swapping out is suspected. TSASK identification number and serial number must match.
- 39) **Q** If the supplementary fuel on flare stacks is only used for flame stabilization (pilot keeps going out) does the fuel train have to comply with the B149.3 code?
- A** See B149.3-20 for the mandatory requirements for flares across Canada.
- 40) **Q** Procedure is asking that all components on a fuel train have to be certified. Kimray, Danfoss and Terice are control devices that are commonly used and are not certified. How is this handled?
- A** Our field approval would cover these devices since no standard exists that could be used to certify them.⁴¹
- ⁴¹**Bulletin: 05/14/2007**
- 41) **Q** Some propane companies are not submitting temporary permits for tank heaters, or delaying submitting permits. By the time they return to site, it is electrified, and the propane is no longer required. What can be done?
- A** Permits are still required even after the fact for equipment and tanks per the applicable fee schedule.⁴³
- ⁴³**Bulletin: 08/24/2007**
- 42) **Q** Do replacement engines have to be permitted?
- A** Yes, under the Act they must be considered like any other equipment.⁴³
- ⁴³**Bulletin: 08/24/2007**
- 43) **Q** Different installing contractors are working on a site, one doing propane, one doing the tank heater another installing the engine and another the piping. Who permits what and who is liable for what?
- A** If one contractor cannot be encouraged to supervise and submit a permit to cover all equipment, then each alteration or addition will have to be permitted by the installing contractor. They must describe what they performed in the work description of the permit.⁴⁴
- ⁴⁴**Bulletin: 08/24/2007**

44) **Q** What requires a permit?

A The installation of any gas piping leading to and including the installation of any equipment that consumes gas, may include but not limited to: Line Heaters, Glycol Dehydrators, Catalytic Heaters, Glycol ReBoilers, Tank Heaters, Treaters, Engines, Steam Boilers, Steam Generators, Propane Vaporizers, Butane and Propane Injection systems up to the inlet of injection pump(s), and propane fuel containers having an aggregate capacity of 420 lbs. or greater.⁴⁵

⁴⁵**Bulletin: 08/24/2007**

45) **Q** What is the extent of TSASK Gas Inspections jurisdiction on a production site?

A We have authority for all types of fuel gas (natural gas, propane, butane, hydrogen, raw gas, casing gas, landfill gas, digester gas) when it is flowing to a burner downstream of the source or delivery point. For propane systems, this is the storage tank and everything downstream of the tank (the delivery point being the truck). For utility natural gas distribution systems, this is everything downstream of the meter or metering station. For sales gas, we are the authority only from any take-off that is used for fuel gas. For raw gas used only for consumption with no sales, we are the authority from wellhead to burner, including the distribution system to the burner.⁴⁶

⁴⁶**Bulletin: 08/24/2007**

46) **Q** What variations from the B149.1 have we allowed so far?

A Variations are found in the Saskatchewan Codes of Practice to CSA B149.1, B149.2 and B149.3. Some Codes of Practice are more stringent than the minimum requirements in the national code and some are less stringent.⁴⁷

⁴⁷**Bulletin: 08/24/2007**

47) **Q** Not all equipment is certified for sour gas. Does certified equipment have to be use for sour gas?

A TSASK will watch for NACE compliant materials to be used in all components in contact with sour gas.⁴⁸

⁴⁸**Bulletin: 08/24/2007**

48) **Q** Some propane companies are holding permits until the companies decide who will submit permits. What can be done?

A Tank set permits are required before the work can commence. Withholding a permit may be considered an unreported installation and be subject to penalties.⁴⁹

⁴⁹**Bulletin: 10/25/2013**

49) **Q** Are the structures that house equipment in the oil patch considered a building as defined in the code?

A No. Structures used in the patch are considered protective shacks. Shacks may contain equipment but are not designed for occupancy. Shacks containing an office, coffee-break room or sleeping quarters are considered occupied spaces and are thus considered buildings as defined in the code.⁵⁰

⁵⁰**Bulletin: 08/24/2007**

50) **Q** Is a permit required if a propane tank is replaced with another propane tank?

A If there is a change of suppliers, a permit will be required. If the propane supplier is replacing the tank for recertification or is replacing the propane tank with a tank of equal or less volume, no permit is required, provided the original tank was installed under permit. If not, there is no “grandfather” and the new tank will require a permit.⁵¹

⁵¹**Bulletin: 05/16/2007**

51) **Q** Replacing a new regulator in the field. If the old regulator is obsolete and a new one is required which has the same characteristics, is it a replace in kind and who can replace it?

A After ensuring this is a replacement in kind, it must be replaced by, or under the supervision of, a licensed gas fitter.⁵²

⁵²**Bulletin: 04/04/2008**

52) **Q** Can we purchase parts from one company to install on another burner system and would these cause problems in approvals?

A TSASK Gas Inspections requires that all components and their installation meet the applicable codes and Code of Practice and are designed for their intended use.⁵³

⁵³**Bulletin: 04/04/2008**

53) **Q** In engine shacks, can a tradesperson change an orifice as per company procedure(s)? An example would be changing to propane vs. casing gas.

A Yes this can be done by a qualified person. An operator would not be considered qualified. Consideration must be allowed for different pressures and heating value of fuel being consumed.⁵⁴

⁵⁴**Bulletin: 04/04/2008**

54) **Q** One company performs engine swap and another pulls permit and inspects it. Is this acceptable?

A Yes this is acceptable and is currently performed today. Permits are required before the work can commence. Commencing work without a permit may be considered an unreported installation and be subject to penalties.⁵⁵

⁵⁵**Bulletin: 10/25/2014**

55) **Q** Who can replace a burner?

A This work shall be done by a licensed Gas Contractor.⁵⁶

⁵⁶**Bulletin: 04/04/2008**

56) **Q** Can an operator adjust a regulator if a written procedure is supplied and who has to create the procedure?

A This can be performed by an operator if a procedure is supplied. The procedure can be created by the vendor or the oil company.⁵⁷

⁵⁷**Bulletin: 04/04/2008**

57) **Q** How long is a permit good for? For example, new well completion will use propane and casing gas. Line gas may be added in 6 months. Does vendor require a new permit or can existing permit be used if same vendor?

A The permit is valid for the life of the installation; however, the permit must include all work contemplated at the time of issue. Major changes in the scope of work will require a new permit.⁵⁸

⁵⁸**Bulletin: 04/04/2008**

58) **Q** Can an operator change a spring on a regulator in engine shack?

A Operators cannot change a regulator. Only qualified personnel can perform this function.⁵⁹

⁵⁹**Bulletin: 04/04/2008**

59) **Q** Presently, two companies perform deficiency work. How do we handle this as one vendor has to sign work?

A The party to whom the deficiency is issued is responsible to sign and submit the deficiency form.⁶⁰

⁶⁰**Bulletin: 04/04/2008**

60) **Q** At what point do the codes have jurisdiction?

A **Codes do not have jurisdiction.** TSASK Gas Inspections has jurisdiction as prescribed under legislation. To provide these prescribed duties, TSASK adopts the use of national codes as applicable. To the most commonly used national codes, TSASK also writes and enforces Codes of Practice for their use in Saskatchewan. When required, TSASK also refers to other internationally-accepted codes where they provide more explicit direction than offered by the national codes for a given situation.⁶¹

⁶¹Bulletin: 04/04/2007

61) **Q** Is it acceptable for an operator to replace the propane cylinder and relight a propane fired catalytic heater in a portable separator shack?

A Yes.⁶²

⁶²Bulletin: 03/12/2007

62) **Q** Why do I have to obtain a field approval in Saskatchewan?

A A field approval is required to certify the minimum safety standards for every piece of equipment utilizing any gaseous fuel for fuel purposes (including raw gas, produced gas, casing gas, natural gas, propane, hydrogen, or any mixtures including these gases), which is not otherwise certified to an acceptable code adopted for use in Saskatchewan. At a date to be determined in coordination with other provincial jurisdictions across Canada, all gas-fired stationary engines will need to be certified to UL2200 or otherwise be field approved. All other equipment must bear the mark of a recognized third-party testing agency if they fall under the scope of a specific equipment code. Equipment that does not fall under the scope of an adopted code must meet the minimum requirements under the latest edition of CSA B149.3.

63) **Q** Some components on field approved burners do not have the required certification approvals or temperature rating, how can they be used?

A Because the manufacturing industry may not currently have an approved product inspections has adopted a tried and trued methodology. That is to say we will accept what has been used and proven until such time manufactures meet industry needs. If a certified product becomes available, it must be used.

64) **Q** Is an Alberta or British Columbia gas license good in Saskatchewan?

A No. A company must have a valid Saskatchewan Gas Contractor's license. An individual must have a valid Saskatchewan gas fitter's license. More information is available through Gas and Electrical Licensing.

65) **Q** A company recently purchased new tank burners which later were found out were not approved, what now?

A Buyer beware. Burners will have to be replaced with approved equipment. If in doubt, please call your local inspector.

66) **Q** We have sent in field approval application and it takes a long time.

A Approvals should be completed in 2 weeks or less.

Note: Many applications are received in partial, incomplete or incorrect condition. Please ensure all the requirements are met. TSASK Gas Inspections cannot define if each component meets the requirements of the code unless a complete description of each component is provided – including manufacturer’s name and model number. It should go without saying that the Tag Numbers on drawings must match the Tag Numbers in the Bill of Material. Any questions please call Doug Hird.

67) **Q** Under what circumstances is a field approval required?

A A field approval is required to certify the minimum safety standards for every piece of equipment utilizing any gaseous fuel for fuel purposes, and which is not otherwise certified to an acceptable code adopted for use in Saskatchewan. At a date to be determined, all gas-fired stationary engines will need to be certified to UL2200 or otherwise be field approved. All other equipment must bear the mark of a recognized third-party testing agency if they fall under the scope of a specific equipment code. Equipment that does not fall under the scope of an adopted code must meet the minimum requirements under the latest edition of CSA B149.3.

68) **Q** Under what circumstances does a field approval become invalid and a new field approval is required?

A Field approved equipment must be tested for performance in their final location. Field approvals are valid for this location only. If the equipment is relocated or modified, a new field approval must be conducted. Maintenance on field approved equipment is permitted and components may be replaced like-for-like without affecting the validity of the field approval. An upgrade to any component in the fuel train will require a new field approval. Piping alterations are allowed under an alteration permit as long as the relative arrangement of the components remains the same.

TSASK has made the following concessions to these rules:

a) Tank heaters under one million btuh may be relocated from lease to lease without affecting the field approval – provided that the original field approval tag is intact, the reinstallation is conducted under permit,

and the new lease location and original field approval tag number are provided to TSASK to update the field approval file. Failure to do so will result in an unreported and new field approval.

- b) Certain portable equipment (test trailers, line heaters) may be relocated from lease to lease without affecting the field approval – provided that the original field approval tag remains intact, and that the reinstallation and fuel connection is conducted under permit including propane tank set permits if required. Failure to do so will result in an unreported and new field approval.
- c) Combustors may be relocated from lease to lease without affecting the field approval – provided that the original field approval tag remains intact, and that the reinstallation and fuel connection is conducted under permit including propane tank set permits if required. Failure to do so will result in an unreported and new field approval.

69) **Q** Can pressure switches or pressure transmitters be isolated for the purposes of testing?

A TSASK Gas Inspections has agreed with the oilfield industry that the current practice of setting and maintaining high and low pressure switches in place increases accuracy and maintainability in the interest of safety. Therefore, the following variance to B149.2-10 clause 7.6.10 for oilfield applications is granted:

A safety limit or a safety relief device shall not be isolated, bypassed, or in any way made ineffective by a valve or other device, except in oilfield applications where ¼ turn isolation ball valves are permitted on high and low pressure switches under the following conditions:

- a) these isolation valves may only be closed to permit setting and testing the switch in place,
- b) the operation of the appliance must be monitored manually at all times that a switch isolation valve is closed, and
- c) the valves must be lockable and locked in the open position at all times except when the switch is undergoing setting and testing in place (car-seals are only permitted in place of a lock on fenced and gated facilities having restricted access and having a corporate car-seal program in place).

Any oilfield company choosing to exercise this option must have and maintain written procedures and training in the use and operation of high and low pressure switch isolation valves within which these conditions are minimum requirements.⁷⁰

⁷⁰Bulletin: 01/01/2014