



Caspian Pipeline Consortium

AGREED:

General Manager, Field Operations

APPROVE:

First Deputy General Director, Operations

R.V. Vasiliev

_____ D. Fahy _____

_____ 19.09.2014 _____

REGULATION On Work to be Performed in the Pipeline Safety Zone

БРА КТК

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1. Purpose and Area of Application

This Regulation defines requirements set to CPC personnel and third parties (hereinafter, contractors) that are involved in construction, refurbishment, maintenance and repair of equipment and facilities and also emergency/incident response in CPC safety zone.

This Regulation is mandatory for observance by all CPC regional divisions and contractors mobilized to perform work at CPC pipeline system facilities.

2. Terms and Definitions

Act-permit shall mean a document issued jointly by Operating Company and Contractor that authorizes the performance of construction and installation at the Company site. Act permit shall be issued as per SNiP12-03-99.

Work-permit shall mean a document authorizing the work performance at CPC facilities.

In accordance with the “Trunk Pipeline Security/Protection Rules”, *the pipeline safety zone* shall mean:

- The land plot along the single-line pipeline surrounded by conventional lines at the distance of 25 m from the pipeline axis on both sides;
- Safety zone around pump stations, tank farms and CTM is a land plot surrounded by a closed line at the distance of 100 m on all sides from the boundary of the above sites.
- Along water crossings – a water segment from the water surface to the bottom enclosed by parallel planes at the distance of 100 m from the axis of outer water crossings;
- Around land pits for emergency product discharge – a land plot surrounded by a closed line at the distance of 50 m on all sides from the boundaries of above sites;

Contractor shall mean a company that performs maintenance, repair, emergency response and construction at CPC facilities.

Authorization to perform work in trunk pipeline safety zone (hereinafter referred to as authorization) shall mean a document authorizing the performance of work in pipeline safety zone to be issued to Contractor by Operating Company. The construction authorization shall be issued as per VSN 31-81 Form, and the pipeline overhaul authorization as per VSN 012-88 Form.

Operating Company shall mean CPC and its regional divisions that operate CPC pipeline system facilities.

3. Regulatory References

This Regulation was drafted in compliance with the following documents:

- VSN 31-81 “Instruction to Perform Construction within Safety Zones of Trunk Pipelines of the Ministry of Oil Industry”;
- RD 39-00147105-015-98 “Rules of Trunk Pipeline Overhaul”;
- RD 08-296-99 “Regulations on Arrangement of Technical Supervision over Compliance with Technical Solutions and Quality of Trunk Pipeline Construction, Overhaul and Refurbishment”;
- PIOT PM-016-2001 “Safety Rules of Electric Units Operation”;

- “Trunk Pipeline Security Rules” approved on 02.24.92;
- SP 36.13330.2012 “Trunk Pipelines”; and
- SNiP 12-03-2001 “Labor Safety in Construction. Part 1. General Requirements”.

4. Procedure of Work Performance in the Pipeline Safety Zone with Contractors’ Involvement

4.1. Prior to the work commencement Contractor shall draft and submit to Operating Company for endorsement the following documents:

- Work performance design;
- Resolution appointing persons in charge of work performance; and
- List of persons involved in work performance.

4.2. The submitted work performance design shall be reviewed by CPC Regional and Moscow Operations within three days upon its submission and endorsed by respective Managers, Pipeline and PS O&M.

4.3. Prior to commencement of construction or repairs in the pipeline safety zone, Operating Company jointly with Contractor shall finalize the position of the axis and actual depth of the underground (trunk or process) pipeline and its facilities, its crossings with underground utility lines, presence of man-made and natural obstacles.

4.4. Position of the pipeline and its facilities shall be determined for the whole area of work performance with CPC responsible for this task.

4.5. Contractor shall perform the pipeline route staking and borehole digging under the work order and work-permit for ground works issued by the Regional Manager, O&M (Deputy MT Manager, Shore Facilities).

4.6. The pipeline route and its facilities within the area of work performance shall be marked with 1.5-2 m high special stakes (directing posts) indicating actual depth of the pipeline laying to be installed every 50 m at pipeline flat segments and every 25 m at rough segments.

4.7. Identification signs shall be installed in places of the relief change, in angles of pipeline turning points, in crossings with other underground utility lines, at the boundaries of soil digging, prior to excavation, at the line valves, and at other hazardous sites (swamped areas, areas with low soil carrying capacity, *etc.*).

4.8. Upon verification of the position of the pipeline axis, jointly with Contractor, CPC shall draw an act for pegging of the pipeline segment or site (Exhibit 1) and act of the pipeline segment delivery (Exhibit 2).

4.9. The act shall enclose the following:

- Layout diagram of the pipeline route or site;
- Sheet containing the depth of pipeline and facilities laying and boundaries of the facility under construction or repair;
- Sheet of valves, fittings and equipment installed;
- Required specifications; coordinates of the pipeline, facilities, utility lines, bore-holes and identification marks;
- Site flow chart with welded connections specified;
- Sheet of pipeline crossings and specifications of utility lines owners to perform work in the vicinity of the crossing;
- Working design.

4.10. Then Contractor shall issue jointly with CPC the act-permit as per SNiP 12-03-2001 (Exhibit 3).

- 4.11. The act-permit shall enclose contractor's safety actions.
- 4.12. Safety actions shall be developed jointly by CPC and its Contractor, while the latter shall ensure their observance.
- 4.13. CPC shall provide the following information to be included into safety actions:
- Traffic routes, travelling speed, and existing pipeline crossings and their furnishing;
 - Pressure reduction to perform work at the pipeline in operation (if required);
 - Communications diagram;
 - Extract from the respective part of the ER Plan.
- 4.14. Based on endorsed work performance designs, acts for pipeline segment pegging, acts for the segment delivery and the act permit, Operating Company shall issue the authorization for work performance in the safety zone (Exhibit 4) as per VSN 031-81 Form, and for pipeline overhaul as per VSN 012-88 Form (Exhibit 5).
- 4.15. During the issuance of this authorization, CPC shall review together with Contractors actions ensuring the pipeline and its facilities integrity to be developed by Contractor, which are the integral part of the authorization.
- 4.16. CPC Regional Operations shall issue the authorization for work performance in the pipeline safety zone in two copies to be approved by the Regional Manager, O&M (Regional Deputy Manager, O&M). The Regional Operations shall retain one copy of the authorization, while Contractor shall receive another one.
- 4.17. After receipt of the authorization for work performance, Contractor shall appoint its engineers and technicians responsible for the work preparation and performance, as well as Operations Supervisor to supervise performance of work by Subcontractor.
- 4.18. Prior to work performance in the safety zone, CPC shall appoint by its Resolution the work supervisor or person responsible for preparatory work and work performance, and ensure their timely arrival at the site of work. The head of Contractor shall be responsible for safety and equipment safekeeping on the territory handed over for repair or construction.
- 4.19. All officers responsible for organization and performance of work must know conditions and procedure of preparation and performance of work at explosive and fire and explosion dangerous facilities and must undergo training and certification in industrial safety and occupational safety in the scope required to manage such work.
- 4.20. All Contractor personnel authorized to perform work in the trunk pipeline safety zone shall receive orientation.
- 4.21. HSE specialist or Regional Manager, O&M, supervising the respective pipeline segment shall conduct the orientation.
- 4.22. The conducted orientation shall be registered in the Orientation Log.
- 4.23. The head of Contractor shall ensure the personnel arrival for orientation.
- 4.24. When hazardous work is performed under a work-permit, orientation should be provided to the work performers regarding organization of safe work performance and actions of personnel in accident/emergency situations.
- 4.25. Prior to the work commencement, completeness of preparatory measures and facility readiness to the work performance should be checked.
- 4.26. In places where the pipeline crosses utilities of third parties a sign should be installed with information on the depth of their location.
- 4.27. If all of the above requirements of this Regulation are met, Contractor is authorized to start the work in the presence of the CPC representative at the work site.

4.28. For performance of work in the pipeline safety zone with the use of cranes and construction equipment, in wells, boreholes, enclosed places with difficult access, for excavation, gas-hazardous, and hot work, Contractor shall receive work permits issued by CPC in due course and in compliance with the CPC regulatory document requirements.

4.29. During performance of hot, gas-hazardous, and ground work, periodical monitoring of air environment for gas pollution should be exercised.

4.30. Prior to the work commencement, permits to perform hot, gas-hazardous, and ground work shall be executed in accordance with requirements of Instructions on safe performance of work # 105, # 107, and # 108.

4.31. In the event that during pipeline excavation cables and/or underground lines have been found, which were not found during the ground work preparation, operations supervisor should suspend the work and inform the facility head thereof. The work may be resumed after the utility owners have been detected and the work procedure has been agreed on with them.

4.32. Should Contractor fail to comply with actions specified in the act-permit, work performance authorization or work permit, CPC representative shall immediately discontinue the work and inform the Regional Management thereof.

4.33. Work may be resumed only against the permit of the Regional Manager (Regional Manager, O&M) made in writing after the remediation of all malfunctions and Contractor's documentary confirmation thereof. All permits and confirmations shall be retained as part of operational documentation until the work is completed.

4.34. If accident situation or unsafe conditions arise, preparatory operations supervisor and operations supervisor should suspend the work forthwith and instruct the performers to take necessary actions for preventing the accident situation and traumatic factor impact on the employees.

Preparatory operations supervisor and operations supervisor may not resume the work unless the accident situation is eliminated, a repeated analysis of air environment is performed (as necessary), safety of working conditions is confirmed, and approval from the facility site head is received for the work continuation.

5. Traffic Rules inside the Pipeline Safety Zone during Repair and Construction or Emergency Response

5.1. Vehicles should only use along-the-route roads that are located no closer than 10 m to the pipeline axis to approach scheduled repair of maintenance sites (SP 36.13330.2012, table 4, Para. 17) and, in case of their lack, accesses and passages agreed on with land users.

5.2. Permanent traffic routes to maintenance, repair and construction sites shall be developed by CPC in the regions and approved by Regional Managers.

5.3. If the routes cross outside utility lines, they shall be agreed on between Regional Operations Department and communication owners.

5.4. At the stage of preparation for construction and repair inside pipeline safety zone Contractor together with CPC regional subdivision based on the detailed design shall develop activities for safe traffic and route map taking into account as follows:

- Detailed design requirements;
- Traffic and fire safety requirements;
- Vehicles operational capabilities;
- Condition of along-the-route roads;
- Condition of access roads;
- Condition of pipeline and outside communication crossings.

5.5. Activities of safe traffic and route map shall be included into CPC pipeline safety activities and shall be an integral part of “Permit to Perform Work in Safety Zone”.

5.6. Movement and transportation of hoists and construction vehicles inside the safety zone should be performed only under work permits. Work permits shall be issued in accordance to Para. 4.28 hereof.

5.7. Work permit should include without fail additional activities given the current status of the pipeline safety zone.

5.8. Prior to commencing work inside safety zone, CPC representative in charge should clarify location of pipeline axis, crossings with the existing communications in accordance to Para 4.7 and Para 4.8 hereof.

5.9. Besides marking pipeline axis it is essential to indicate with temporary signs route for vehicles with indication of crossings, sites of equipment and material unloading, turns, refueling points, parking, *etc.*

5.10. Vehicle route signs should be reflected in the work site and route maps following the route marking completion.

5.11. Vehicle route map shall be given to the person responsible for vehicle admittance to work site.

5.12. Prior to admitting vehicles to work site, the person responsible for vehicle admittance jointly with Contractor driver (operator) shall perform Daily Technical Inspection of a vehicle making a respective record in the vehicle admittance log.

5.13. Prior to admitting vehicles to work site, the responsible person together with Contractor’s medical service representative shall perform without fail daily medical pre-trip examination and briefing to the drivers in regard to the special features of the vehicle route inside the safety zone, they shall register it in orientation log and waybill in the “note” section.

5.14. Vehicles are not allowed to move inside the safety zone at night (during hours of darkness) except for emergency response work.

5.15. Vehicles are allowed to move at night (during hours of darkness) during emergency response work only with the person in charge assigned by emergency response supervisor and accompanying group along the approved routes.

5.16. Road should be flattened out, weak ground reinforced prior to beginning vehicle movement.

5.17. At night (during hours of darkness) or daytime when there is fog or snow that reduce visibility to 10 m speed should be no higher than 3 km/h.

5.18. Maneuvers, turn and reverse movement should be done per the signals of the responsible person and the speed should be no more than 3 km/h.

5.19. It is prohibited to start reverse movement without warning signal.

5.20. Vehicles are not allowed to move inside the pipeline safety zone along the slope of more than 20 degrees.

5.21. Vehicle should pass other vehicle at a safe distance (1 meter or more for motor vehicles and 2 meters or more for other vehicles). Vehicle speed during passing over should be selected with the account of the road surface condition.

5.22. When moving at slope, in glaze sleet and wet weather it is prohibited to change speed abruptly, activate clutch when breaking and make sudden turns.

5.23. Hoisting and digging equipment operation inside the pipeline safety zone during emergency response, repair and construction work should be performed in compliance with requirements set forth in the documents as follows:

- Federal Norms and Rules in the Area of Industrial Safety “Safety Rules of Hazardous Industrial Facilities at Which Underground Structures Are Used”. Resolution # 533 of November 12, 2013; and
- Work Execution Plan.

Regional operating division of CPC

CPC pipeline segment

Pipe diameter _____ mm

Contractor

Location

From KP _____

To KP _____

ACT # _____

For Pegging Pipeline Segment, Site

Date: _____ 20__

Issued by representatives of:

Customer

(company, name, position)

Contractor

(company, name, position)

to certify that the pipeline location was specified according to the “Instruction on Procedure of Pegging and Delivery by Customer of Trunk Pipeline Segments, Civil Construction Sites and Off-site Utilities” and the following work was performed:

1. Additional signs were installed (poles, milestones, *etc.*) on the pipeline route and along the border of the repair line.
2. Stationing was performed on the segment from KP _____ to KP _____ along the whole route, in the crossings over natural and artificial obstacles and underground utilities at KP

(indicate elevations of the installed rappers)

3. The axes of the utilities routes going in the same corridor and the axis of the new route in case of pipeline overhaul with replacement of pipeline were pegged.

Contractor shall be responsible for safety of the signs after pegging.

Delivered by:

CPC representative

(company, name, position) _____ (signature) _____ (date)

Accepted by:

Contractor’s representative:

(company, name, position) _____ (signature) _____ (date)

ACT
OF DELIVERY OF CPC PIPELINE SEGMENT
TO CONTRACTOR FOR OVERHAUL

Date: _____

We, the undersigned, have issued this Act of delivery of pipeline segment
_____, diameter _____ mm from KP
_____ to KP _____, total length _____ for overhauling by
_____ (contractor) for the period from _____ 20__ to
_____ 20__ .

CPC performed the following preparation work:

Under this Act CPC shall provide the following documentation to Contractor:

1. Overhaul plan:
 - explanatory note;
 - drawings;
 - cost estimate;
2. Documents on temporary land allocation:

3. List of crossings of the overhauled segment over utilities with specified locations of the crossings and technical specifications from the utilities owners for the repair work in the area of the crossings:

Note: Customer may deliver documents, which are not specified herein to Contractor at the request of the latter.

CPC representative

(name) (signature) (date)

Contractor's director

(name) (signature) (date)

ACT-PERMIT

TO PERFORM CONSTRUCTION AND INSTALLATION WORK
AT SECTION (AREA)

_____ 200_

(company (organization), district)

We, the undersigned, CPC representative _____

(name, position)

General Contractor's representative responsible for construction and installation work

(name, position)

have issued this Act as follows:

CPC shall provide section (area) bound by the following coordinates:

(axis, marks and drawing number)

to perform _____

(work description)

under supervision of General Contractor's representatives within:

start _____ 20__ end _____ 20__

In order to ensure work safety the following activities should be performed prior to work:

Activity	Deadline	Action by

CPC representative _____

(signature)

Representative of the company that operates
facilities near the construction site _____

(signature)

Contractor's representative _____

(signature)

APPROVED by

(Regional Manager, O&M, name)

(signature)

20__

**AUTHORIZATION
TO PERFORM WORK IN THE CPC PIPELINE SAFETY ZONE**

Work site

(pipeline name)

(diameter, KP)

Work starts at _____ on _____ 20__

Work ends at _____ on _____ 20__

Contractor _____

Supervisor _____

(name, position)

#	Work description and stages.	Responsible for performance (name, position)	Work start time and date	Work end time and date

1. Work supervisor shall be held responsible for safety compliance and pipeline and facility integrity throughout work process.
2. It is prohibited to perform work at the end of term specified herein.

Permit issued by:

Regional Manager O&M:

(signature)

Permit received by:

Contractor's work supervisor:

(signature)

WORK PERMIT

of _____ 20__

It is permitted to perform work

_____ (work description)

at pipeline _____

at section between KP _____ and KP _____

total length _____ m.

Preparation work regulated by the design _____

_____ (list of work)

_____,
should be accomplished in order to start the aforementioned main work within the ROW including but not limited to pipeline pegging performed in full in accordance to design, drawing # _____, acting standards and rules and accepted under Act # _____ of _____ 20__.

CPC representative _____ (name) _____ (signature) _____ (date)

Contractor CEO _____ (name) _____ (signature) _____ (date)