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**Определение категории взаимодействия и оказания поддержки по критериям ВАО АЭС на** \_\_\_\_\_\_\_\_ **АЭС в 20\_\_ г.**

**Determine category of interaction and providing support using WANO Criteria for** \_\_\_\_\_\_\_\_\_\_\_ **NPP for 20\_\_**

**WANO**

**Moscow Centre**

**Determine Category of Interaction**

**and Providing Support Using WANO Criteria**

**for** \_\_\_\_\_\_\_\_\_\_ **NPP**

**for 20**\_\_\_

(Number of report = file name, for example: **PlantName\_C\_20\_\_**)

\_\_\_\_\_\_\_\_\_ **(city)**

\_\_\_\_\_\_\_\_\_\_\_ **(year)**

|  |  |  |
| --- | --- | --- |
| **APPROVED BY:** |  | **APPROVED BY:** |
| **(\_\_\_\_\_\_\_\_\_\_\_\_\_ Plant Director)** |  | **Director of WANO-MC**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mikhail Chudakov**  **«\_\_\_\_»\_\_\_\_\_\_\_\_\_20\_\_** |
| **AGREED BY:**  **(NPP responsible person)** |  | **AGREED BY:**  **Deputy Director of WANO-MC**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sergey Frolov**  **Deputy Director of WANO-MC**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sergey Vybornov**  **Head of the WANO-MC On-Site Representatives Group**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Anatolii Chukharev** |
|  |  | **DEVELOPED BY:**  **(WANO-MC site representative)** |

**Methods to Determine Category of Interaction and Providing Support Using WANO Criteria**

**Main principals of categorization**

* Criteria should be objective, measurable and/or unambiguous.
* Criteria should be based on the results of WANO programmes.
* NPPs, being in a specific phase of their life-time cycle, need special attention.
* Categories refer only to a given NPP and they are not intended for comparing NPPs.

**Interaction categories determined against WANO Criteria**

* А
  + regular interaction between the WANO MC on-site representative and plant personnel
  + apart from the regular support to be rendered once a year at the site, the NPP offers its support to other WANO-MC NPPs, receives benchmarking visits, arranges workshops and seminars, provides PR, TSM and workshop experts whose number exceeds that given in the criteria, and supplies information on the NPP strengths and good practices
* B
* regular interaction between the WANO MC on-site representative and plant personnel
  + as a rule, support is rendered once a year
* C
* interaction between the WANO-MC Leadership and NPP Management
* additional support activities are arranged
* D
* interaction between the WANO-MC Governing Board Chairman and Utility Executives
* Increased support is arranged to improve operational safety, additional support missions are organized to address problematic areas
* E
  + in addition to the interaction parties specified in category D, interaction may involve the WANO Managing Director and WANO Governing Board Chairman
  + significantly increased support is arranged to improve the operational safety, additional support missions are undertaken to address problematic areas, if necessary, reinforced operational safety monitoring is undertaken by the WANO-MC Secretariat

**Areas used for categorisation.**

1. Fulfilment of WANO Membership obligations
   1. Conducting WANO peer reviews
   2. Submitting event reports to WANO
   3. Submitting WANO performance indicators
   4. Providing experts to be involved in WANO programs
   5. Providing experts to fill in WANO vacancies
2. Operational performance
   1. Peer Review results
   2. WANO performance indicators
   3. Plant events
   4. Improvement actions

**NPP assigning for category of interaction[[1]](#footnote-1):**

A: 2nd and 3rd limits of all criteria are not reached, with the NPP offering its support to other WANO-MC NPPs, receiving benchmarking visits, arranging workshops and seminars, providing PR, TSM and workshop experts whose number exceeds that given in the criteria, and supplying information on the NPP strengths and good practices

B: 2nd and 3rd limits of all criteria are not reached

C: indicator of not more than two criteria reached the 2nd limit by either of the two areas used for categorization 1. "Fulfilment of WANO Membership obligations" or 2 "Operational performance"

D: indicator of one or more criteria reached the 3rd limit or indicators of 3 and more criteria reached the 2nd limit by either of the two areas used for categorization 1. "Fulfilment of WANO Membership obligations" or 2 "Operational performance"

E: in the previous year, the plant fell in category D, with no improvements in the problematic areas

NPPs fall under category “C” (if there are no conditions for a transition to category “D” or “E” by other criteria) under the following conditions:

* first start-up units at the site and/or start-up units after long-term preservation
* first power unit at the site is on preparation phase of in-depth modernization process, life-time extension, installed capacity increase;
* power unit on stage of decommissioning with nuclear fuel on it within 3 years;
* power unit shutdown for the period of over 6 months with nuclear fuel;
* NPP (NPP utilities) in the process of significant organizational changes, affecting distribution of roles and responsibilities for nuclear safety (for example, change of ownership, and other changes that affect distribution of roles and responsibilities for nuclear safety);
* first nuclear power plant of this type in utility;
* NPP with communication challenges;
* NPP where it is difficult for experts to get access to NPP or difficult for experts to have trips outside NPP

**Assessment of \_\_\_\_\_\_\_\_\_\_\_\_ NPP status against WANO Criteria**

| **Criteria \ Limits** | **Limit 1** | **Limit 2** | **Limit 3** | **Description of criteria status** | **Actual Limit** |
| --- | --- | --- | --- | --- | --- |
| 1. **Fulfilment of WANO Membership obligations** | | | |  |  |
| 1.1. Conducting WANO peer reviews | * compliance with the time terms of WANO peer reviews or equivalent reviews | * failure to meet the time terms of WANO peer reviews or equivalent reviews for over a year | * failure to meet the time terms of WANO peer reviews or equivalent reviews for over 2 years |  |  |
| 1.2. Submitting event reports to WANO | * Providing WANO with the reports on all events falling under WANO criteria[[2]](#footnote-2) | * failure to provide WANO with at least three reports on the events falling under WANO criteria for the last year | * failure to provide WANO with more than 3 reports on the events falling under WANO criteria for the last year |  |  |
| 1.3. Submitting WANO performance indicators | * submitting information on all WANO performance indicators | * failure to submit information on all performance indicators for the last year | * failure to submit information on all performance indicators for the last two years |  |  |
| 1.4. Providing experts to be involved in WANO programs by WANO request | * providing no less than one expert per unit to be involved in WANO programmes outside the NPP over the last year | * providing less than one expert per unit to be involved in WANO programmes outside the NPP over the last year | * failure to provide experts to be involved in WANO programmes outside the NPP over the last year |  |  |
| 1.5. Providing experts to fill in WANO vacancies by WANO request | * providing experts to fill in WANO vacancies over the last year | * failure to provide experts to fill in WANO vacancies over the last year | * failure to provide experts to fill in WANO vacancies over the last 2 years |  |  |
| 1. **Operational performance** | | | |  |  |
| **2.1. Peer Review results** | | | |  |  |
| * Availability of AFI important to nuclear safety[[3]](#footnote-3) (*the criterion is used after Peer Review prior to Follow-Up Review)* *\* The criterion will be used after issuing a new version of “Guidelines for Conduct of Peer Reviews”* | * none | * 1 | * 2 and more |  |  |
| * Availability of AFI on Safety Culture *(the criterion is used after Peer Review prior to Follow-Up Review)* | * none | * 1 | * 2 and more and/or 1 and more repeated |  |  |
| * Availability of repeated or continuing AFIs in the conducted Peer Review  *(the criterion is used after Peer Review prior to Follow-Up Review) \* The criterion will be used after issuing a new version of “Guidelines for Conduct of Peer Reviews”* | * availability of no more than 2 repeated AFI [[4]](#footnote-4) * availability of no more than 4 continuing AFI[[5]](#footnote-5) | * availability of 3-4 repeated AFI * availability of 5-6 continuing AFI | * availability of 5 and more repeated AFIs * availability of 7 and more continuing AFI |  |  |
| * Status of AFIs from previous Peer Reviews identified in Follow-Up Peer Review *(the criterion is used after Follow-Up Review prior to Peer Review)* | * satisfactory status (level A or B) [[6]](#footnote-6) for all AFIs important to nuclear safety   and   * satisfactory status (level A or B) for all AFIs on Safety Culture   and   * satisfactory status (level A or B) for at least 80% of all AFIs | * unsatisfactory status (level C) for no more than 1 AFI important to nuclear safety   or   * unsatisfactory status (level C) for no more than 1 AFI on Safety Culture * unsatisfactory status (level C) for more than 20% of all AFIs | * unsatisfactory status (level C) for 2 and more AFIs important to nuclear safety   or   * unsatisfactory status (level C) for 2 and more AFIs on Safety Culture   or   * AFI status is unchanged (level D) for any AFI |  |  |
| **2.2. WANO performance indicators[[7]](#footnote-7)** | | | |  |  |
| * Achieving long-term goals[[8]](#footnote-8) on key performance indicators[[9]](#footnote-9) for the last year, calculated by the formula: K = number of indicators that have not achieved long-term goals[[10]](#footnote-10)/ number of units | * К≤1 | * 1 <К<3 | * К≥3 |  |  |
| * Change of indicator (transition to the lower quarter among NPPs of WANO-MC) [[11]](#footnote-11) | * NPP consistently demonstrates improvement of indicators or there is transition to a lower quarter for no more than 2 indicators compared with the last year | * transition to a lower quarter for 5 indicators compared with the previous year | * transition to a lower quarter for more than 6 indicators compared with the previous year |  |  |
| **2.3. NPP events** | | | |  |  |
| * Significance of event[[12]](#footnote-12) | * absence of “Significant” level events | * availability of “Significant” level events | * availability of events of categories 1.4 and 1.5 [[13]](#footnote-13) |  |  |
| **2.4. Improvement Activities** | | | |  |  |
| * Development of corrective actions program addressing AFIs after PR | * developed within the required time term | * developed with violation of the required time term | * undeveloped |  |  |
| * TSM appropriateness for AFIs, addressed in “Summary” of PR Report | * at least one TSMs held for AFIs, addressed in “Summary” of PR Report within a year after PR | * no TSMs held for AFIs, addressed in “Summary” of PR Report within a year after PR | * no TSMs held for AFIs, addressed in “Summary” of PR Report, within 2 and more years in succession |  |  |
| * Progress status of SOER recommendations | * less than 25% of the reviewed SOER recommendations have status “Further actions required”, based on WANO review results | * 25% or more of the reviewed SOER recommendations have status “Further actions required”, based on WANO review results | * 50% and more of the reviewed SOER recommendations have status “Further actions required”, based on WANO review results |  |  |
| * Development of corrective actions addressing TSM recommendations | * TSM corrective actions plan developed and implemented within the required time term | * TSM corrective actions plan developed but the activities are performed incompletely or the time terms are violated | * TSM corrective actions plan is not developed |  |  |

Results of the assessment of \_\_\_\_\_\_\_\_\_\_\_\_ NPP status against WANO Criteria:

|  |  |  |  |
| --- | --- | --- | --- |
| **Group of criteria \ Limit** | **Limit 1** | **Limit 2** | **Limit 3** |
| 1. Fulfilment of WANO Membership obligations |  |  |  |
| 1. Operational performance |  |  |  |

Availability of special conditions for\_\_\_\_\_\_\_\_\_\_\_ NPP to fall under category “C” (if there are no conditions for a transition to category “D” or “E” by other criteria):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Result of determination of Category of interaction and providing support according to the Methods:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NPP category of interaction and providing support is \_\_\_\_\_

1. Any criterion from Section 2, Operational performance, shall be considered as having reached Limit 2 or 3 if at least one of its sub-criteria has reached the respective Limit. [↑](#footnote-ref-1)
2. Criteria for event submitting to WANO are established in the WANO document «Operating Experience Programme. Reference Manual». [↑](#footnote-ref-2)
3. AFI important to nuclear safety – the definition will be presented in a new version of the WANO-MC document “Guidelines for Conduct of Peer Reviews”. [↑](#footnote-ref-3)
4. Repeated AFIs - the definition is in “Guidelines for Organization of Support to NPP of Member Organization of WANO Moscow Centre” 2.10. [↑](#footnote-ref-4)
5. Continuing AFIs - the definition is in “Guidelines for Organization of Support to NPP of Member Organization of WANO Moscow Centre” 2.11. [↑](#footnote-ref-5)
6. AFI status based on Follow-Up Peer Review results - the definition is given in the WANO-MC document “Guidelines for Conduct of Peer Reviews” [↑](#footnote-ref-6)
7. The mean values for 3 previous years are used for this criterion. [↑](#footnote-ref-7)
8. Long-term goals – goals, set forth in the WANO Long-Term Plan for the WANO key performance indicators. [↑](#footnote-ref-8)
9. Key Performance Indicators – the WANO indicators, which specify the long-term goals: FLR – Forced Loss Rate, CRE – Collective Radiation Exposure, ISA – Industrial Safety Accident, SSPI – Safety System Performance Indicator [↑](#footnote-ref-9)
10. The individual performance targets are based on all units and stations achieving results that are better than the 2007 lowest quartile values. [↑](#footnote-ref-10)
11. For this criterion does not take into account the following performance indicators: CPI - Chemistry Performance Indicator, CISA – Contractor Industrial Safety Accident Rate. For indicators UCF – Unit Capability Factor and CRE – Collective Radiation Exposure use average values over 4 years. [↑](#footnote-ref-11)
12. Significant events – criterion, defined according to the WANO document “WANO Programme on Use of Operating Experience. Reference Manual”. [↑](#footnote-ref-12)
13. The event categories are given in the WANO document “Operating Experience Program. Reference Manual”. [↑](#footnote-ref-13)