



Authority for Nuclear Safety and
Radiation Protection

NAcP - final edition 2019

Third update of the National Action Plan of the Kingdom of the Netherlands for the follow-up of post-Fukushima Dai-Ichi related activities

The Netherlands, March 2020

Abstract

This is the third update and final version of the National Action Plan (NACp) of the Kingdom of The Netherlands for the follow-up of the actions related to the Fukushima Dai-ichi accident at the single NPP in The Netherlands (Borssele) as well as at the governmental bodies involved.

The first version of the NACp was produced in 2012 and updated twice: in 2014 and 2017. The NACp contains both the stress test actions for the NPP Borssele identified in the national stress test analysis and review, and actions for the NPP Borssele and for the regulator from other sources: the IAEA-action plan (2011), ENSREG recommendations (2012), recommendations from the 2nd extraordinary meeting of the Convention on Nuclear Safety (2012), and the IAEA IRRS mission to The Netherlands (2014).

Stress test actions for Borssele

After having completed more than 90% of the actions by 2017, EPZ (owner of NPP Borssele) has now completed the remaining four stress test actions, two in 2018, one in 2019 and the last one in January 2020. ANVS has positively confirmed the 100% completion by inspection (see table 2 of para 1.1.4.). The 'stress test' has now been completed.

Actions based on other sources

Also almost all other actions of the NACp have been closed. Out of six remaining actions, since 2017 three have been closed in 2018-2019. For the three remaining actions completion is ongoing. Since reporting on these remaining issues is also required in the framework of the Convention on Nuclear Safety, it has been decided that this version of the NACp concludes the series of NACPs of The Netherlands.

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Introduction

This section starts with the purpose and scope of this document and then explains the background of the post-Fukushima National Action Plan (NAcP).

Purpose and Scope

All 46 planned actions identified in the national stress test analysis and review of NPP Borssele have been completed by EPZ (the owner and licence holder). See para 1.1.4, table 2 of this report.

More than 90% of the actions were already completed in 2017, four remaining actions were completed in 2018 (2), 2019 (1) and January 2020 (1). The completion has been positively confirmed by the ANVS by inspection.

Almost all other actions for the NPP Borssele and for the regulator from other sources than the stress test have also been completed. From the six remaining actions in 2017, three were closed in 2018-2019. Completion of the remaining three actions is ongoing. Two of these actions are related to recommendations from the 2014 Integrated Regulatory Review mission (IRRS) which during the 2018 IRRS Follow-up mission were closed on the basis of progress made and confidence in its effective completion. ANVS is working on effective completion. The third remaining action stems from the IAEA action plan, to consider invitation of an EPREV mission, a national decision. ANVS has developed a process plan for the steps and parties involved in order to arrive at a decision.

The reporting guideline of the Convention of Nuclear Safety (CNS) requires reporting on these three remaining actions too. Therefore this report is the last in the series of NAcPs. Further follow-up of the remaining actions will be reported in the framework of the CNS.

This report gives only an update on actions that were not yet completed in the second update of the NAcP (2017).

Background

In 2011, the licensees of NPPs in the EU produced their reports ('Licensee Reports') on the 'stress test' of their facilities, in accordance with the ENSREG specifications. In a second step, the regulatory bodies evaluated these reports, and reported their findings in 'National Reports' and submitted these to ENSREG end of 2011.

In December 2012, National Action Plans (NAcPs) on the follow-up of post-Fukushima actions, were submitted to ENSREG. The NAcP contained 46 national stress test actions for the NPP Borssele, but also a large number of actions based on recommendations in the IAEA-action plan (2011), the Summary Report of ENSREG (2012), the report of the extraordinary meeting of the Convention on Nuclear Safety (2012) and the IAEA IRRS mission (2014) to the Netherlands.

Both in 2014 and 2017, updates (progress reports) of the first NAcP were published. The 2017 edition presented the status of implementation by December 2017.

In previous versions of the National Reports for the CNS (2013, 2016, 2019), The Netherlands reproduced and updated the summary table (table 8-1 of the NAcP) related to the NPP Borssele stress test measures of the NAcP to reflect the situation at the publication date¹, to share them with the Contracting Parties to the CNS and the general public.

¹ In the 2019 edition of the National Report for the CNS, this reporting was limited to those measures that were still outstanding at the time of the publication of the 2016 edition.

1 Completion of Actions since the 2nd NAcP update report

1.1 Actions completed since the publication of the 2nd update of the NAcP

In this section, actions completed since publication of the 2nd update report of the NAcP are listed. The numbers in the first column of the table refer to the numbers used in previous editions of the NAcP.

Furthermore, it has been indicated in which Part (I, II, III, IV or Annex) of the previous NAcPs, an action was listed.

1.1.1 Part I: Topics (1) External events, (2) Design Issues, and (3) Severe Accident Management (SAM)

All remaining actions identified in Part I are covered by the remaining stress test actions addressed in Part IV, table 2 and are therefore closed.

1.1.2 Part II: Topics (4) National Organisations, (5) Emergency Preparedness and Response (EP&R), and (6) International Cooperation

Table 1 Actions of Part II completed since publication of the 2nd update report of the NAcP

No Action	Topic	Action	Status
5.11, 5.12, 5.13	EP&R	<p>Develop framework & mechanism for remediation in relation to implementation of Council Directive 2013/59/Euratom. Including developing strategy & guidance documents for EP&R organisations.</p> <p>Note: this was also a recommendation (No. R22) from the 2014 IRRS mission to the Netherlands.</p>	<p>During the 2018 IRRS Follow-Up mission, R22 was closed on the basis of progress made and confidence in its effective completion.</p> <p>The Council Directive has been transposed into Dutch regulation. Furthermore, documents that detail the operational structure of nuclear emergency preparation and response have been updated. These are the National Emergency Plan for Radiation incidents: NCS (Dutch: 'Nationaal Crisisplan Stralingsincidenten') and the NCS Response Plan. With respect to remediation, the NCS Response Plan makes provision for scaling down and the transition to aftercare and restoration in case of nuclear or radiological emergencies.</p> <p>Further developments on related topics will be reported in future editions of the national report for the Convention on Nuclear Safety.</p>

No Action	Topic	Action	Status
6.5 (131), item d.	International cooperation	Effectiveness of Operating Experience Feedback (OEF) should be assessed and its implementation should be included in peer reviews. Note: this was also a recommendation of the 2014 IRRS mission (R6).	In the 2018 IRRS Follow-Up mission, R6 was closed on the basis of progress made and confidence in the effective completion as ANVS has developed a well-structured system for operating and regulatory experience collection and feedback. Further developments on related topics will be reported in future editions of the national report for the Convention on Nuclear Safety.

1.1.3 Part III: Generic activities and conclusions from National Review and related discussions

In the 2017 edition of the NAcP, Part III only mentioned that: “All licensees with nuclear installations have undertaken a Complementary Safety Assessment (a.k.a. stress test) to assess the robustness of their facilities. This applies to waste management facilities, research reactors, nuclear research laboratories, and the enrichment plant”.

Therefore, there are no actions in Part III to report on.

1.1.4 Part IV: National implementation of activities with schedules

Part IV of the 2017 update report of the NAcP reported on actions on the part of EPZ (licensee of Borssele NPP) and actions on the part of the competent regulatory authority. The two tables below show the progress to date.

Table 2 Actions of Part IV on the part of licensee EPZ completed since publication of the 2nd update report of the NAcP

No Action	Topic	Action	Status
9	SAM	Reduction of time needed to connect mobile diesel generator to emergency grid 2 to two hours	Completed in 2018 with a confirmatory test during a refuelling outage.
27A	SAM	Implementation of a more robust Spent Fuel Pool (SFP) level instrumentation dedicated to SAM	Implementation was delayed, but finished in 2019 . It proved to be difficult to find SFP-level instrumentation qualified for use under SAM conditions, and once found, implementation had to be postponed until the refuelling outage in 2019.

No Action	Topic	Action	Status
33	Design issue	Study seismic margin assessment and implementation of measures to increase seismic robustness	Various studies were conducted and all completed. The actual implementation of the last measures was completed in January 2020 , which was one month after its scheduled finish date.
38	Design issues	Study aircraft impact on safety functions	Various studies were conducted and all completed in 2018 .

Table 3 Actions of Part IV on the part of the competent regulatory authority completed since publication of the 2nd update report of the NAcP

No Action	Topic	Action	Status
RB-4.007	National organisation	The Netherlands is implementing the IAEA action plan.	Completed, although one decision has been postponed, refer to section 1.1.5 of the present report (action 3.1).
RB-4.009	National organisation	Implementation in the Dutch regulations of the update of the WENRA RL for existing reactors as published in September 2014 and based on the Fukushima Lessons Learned	Completed. The major part of RLs was already part of the existing national regulations. In 2018 , remaining RLs were implemented as new licence conditions.
RB-4.010	National organisation	Implementation in the NPP of the update of the WENRA RL for existing reactors as published in September 2014 and based on the Fukushima Lessons Learned	Completed. Confirmation of the implementation of the RLs was completed in 2019 .
RB-6.008	International cooperation	Regarding improvement of regulatory experience feedback, implement IRRS recommendations R6 before IRRS follow-up mission. Note: this refers to action 6.5 in table 1.	During 2018 , the IRRS FU mission closed this action on the basis of progress made with confidence in effective completion. Further information on completion will be provided in the framework of the CNS.

1.1.5 Annex A: IAEA Action Plan

The Annex A of the 2nd update report of the NAcP reported on the progress of implementation of the IAEA Action Plan in the Netherlands. Then all actions were completed, but one decision was pending. Refer to table below.

Table 4 Status of actions in IAEA Action Plan for the Netherlands since publication of the 2nd update report of the NAcP

No Action	Action	Status
3.1	Decision about EPREV mission will be taken after the completion of the 2014 IRRS mission (i.e. end of 2018 when the FU-mission is held). Decision in 2019.	The decision to invite an EPREV mission is a national decision, involving several organizations. First steps of the decision-making process were taken in 2019; more steps will be taken in 2020. Future developments will be reported in the framework of the CNS.

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