

^PNNL_gc859-frn-comments

From: ^PNNL_gc859-frn-comments
Sent: Wednesday, October 29, 2025 3:09 PM
To: Wagner, John: (Constellation Nuclear)
Cc: Markland, JT T: (Constellation Nuclear); Cornejo, Lilia Y: (Constellation Nuclear); Heinrich, Jessica: (Constellation Nuclear)
Subject: RE: OMB Control Number 1901-0287 - Form GC-859 Nuclear Fuel Data Survey Response

Thank you for your comments. Please be aware that your comments were received after the 60-day FRN public comment period ended. With that said, here are our responses to your comments:

1. We will change the reporting projections of discharged assemblies from five cycles to three.
2. Distribution of the projected shutdown cycle dates in Section C.2 will be limited to DOE stakeholders and will be excluded from the data distribution and the summary data available on the website.
3. The text and the table heading will be clarified to:
Projected Final Average Discharge Burnup of the Group. The maximum assembly discharge burnup should be within 5% of the group's average burnup (in MWDt/MTHM). Round the final average burnup to the nearest thousand MWDt/MTHM. For example, a group average discharge burnup of 50,000 MWDt/MTHM would include assemblies with maximum discharge burnups in the range of approximately 47,500 to 52,500 MWDt/MTHM.
4. DOE evaluated all known sources of data relating to nuclear waste and after examining the contents of NRC's data files, DOE determined that NRC form 741 Nuclear Material Transaction Report cannot replace or approximate the information provided in our form because of differences in classification, inconsistency, incompleteness, infrequency, availability, or lack of coverage. This is because the spent nuclear fuel discharge information required by the Standard Contract is at the individual spent nuclear fuel assembly level; whereas NRC form 741 captures transfers/shipments at a higher level.

Respondents to the form GC-859 report assembly-level data on spent nuclear fuel when it is permanently discharged. DOE cannot use the current NRC form 741 because the data does not identify specific assemblies. Fuel vendor information may be insufficient for planning purposes because they might supply information only on deliveries of fresh fuel, which includes isotopic composition. What is missing are projected burnup, enrichment, discharge quantities, and discharge timing.

As required by the Terms of Clearance with OMB, DOE is required to contact the appropriate personnel at NRC to confirm that their Form 741 Nuclear Material Transaction Report does not duplicate Form GC-859 Nuclear Fuel Data Survey.

DOE has received NRC concurrence that NRC Form 741 does not duplicate Form GC-859.

5. DOE paused collection of projected assembly discharge data in Section C.2 starting with the survey covering the July 1, 2013 – December 31, 2017 period. However, reinstating this section is now necessary to provide insight on planned changes in reactor operations, particularly power uprates and the introduction of high-assay low-enriched uranium fuel. These developments will directly impact future spent nuclear fuel characteristics, including enrichment levels and burnup rates. By collecting data on projected assembly discharges, DOE can ensure that it has the necessary information to manage and plan

spent nuclear fuel storage, disposal strategies, and infrastructure investments in light of these anticipated changes. Section C.2 includes improvements for clarity of data being requested.

Best regards,
GC-859 Survey Support Team
<https://gc859.pnnl.gov>

From: Wagner, John: (Constellation Nuclear) <John.Wagner@Constellation.com>
Sent: Tuesday, October 28, 2025 10:40 AM
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Subject: OMB Control Number 1901-0287 - Form GC-859 Nuclear Fuel Data Survey Response

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Hi,

Please see below comments regarding the proposed changes for GC-859 reporting. Apologies for the late response.

The following are items of concern regarding the reinstatement of Section C.2 Projected Assembly Discharges proposed in OMB Control Number 1901-0287:

1. It is strongly recommended that only 3 cycles ahead be requested as after 3 cycles the projected number of assemblies to be discharged, initial heavy metal content for an assembly in the group and the assembly average initial enrichment values will all be of low accuracy due to how fuel designs and core designs are developed. The cycles after 3 represent a high licensee burden with low value for the DOE due to the low fidelity of the data which is possible to be provided.
2. Planned cycle shutdown dates are confidential and not likely to be able to be released. It is requested that planned shutdown dates not be included for projected assemblies discharged.
3. Projected final average discharge burnup within 5% for the groups is not possible to be provided for projected cycles. A maximum discharge burnup could be provided with high accuracy but average exposures at the accuracy being requested for 5 cycles is not possible given how exposures are calculated and core designs are developed.
4. Fuel vendors work with the NRC on reporting the information for fuel that they will be providing. Can the DOE coordinate with the NRC on fuel information for future cycles that has been provided?
5. The reinstatement of Section C.2 adds a lot of additional burden to providing GC-859 data. While planning spent fuel storage, disposal strategies and infrastructure investments are cited can more specifics be provided on the value the DOE sees with each parameter being requested?

Best,
John

John Wagner
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