



Readiness Review Process

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Number	Date	Changes
0	07/15/05	<ul style="list-style-type: none">• This procedure cancels and supersedes SV-425.1 in its entirety• Incorporates requirements associated with NNSA-HQ as Startup Authority• Includes interactions with Chief, Defense Nuclear Safety• Incorporates title change from Deputy Assistant Secretary for Corporate Safety Assurance to Deputy Assistant Secretary for Facility Safety

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List of Acronyms

CDNS	Chief, Defense Nuclear Safety (NA-2.1)
DASFS	Deputy Assistant Secretary for Facility Safety (EH-2)
DOE	Department of Energy
FR	Facility Representative
IP	Implementation Plan
NNSA	National Nuclear Security Administration
ORR	Operational Readiness Review
POA	Plan of Action
PSO	Program Secretarial Officer
RA	Readiness Assessment
SNR	Startup Notification Report
SR	Department of Energy - Savannah River Operations Office
SRIP	Savannah River Implementing Procedure
SRSO	National Nuclear Security Administration – Savannah River Site Office
STAR	Site Tracking, Analysis, and Reporting

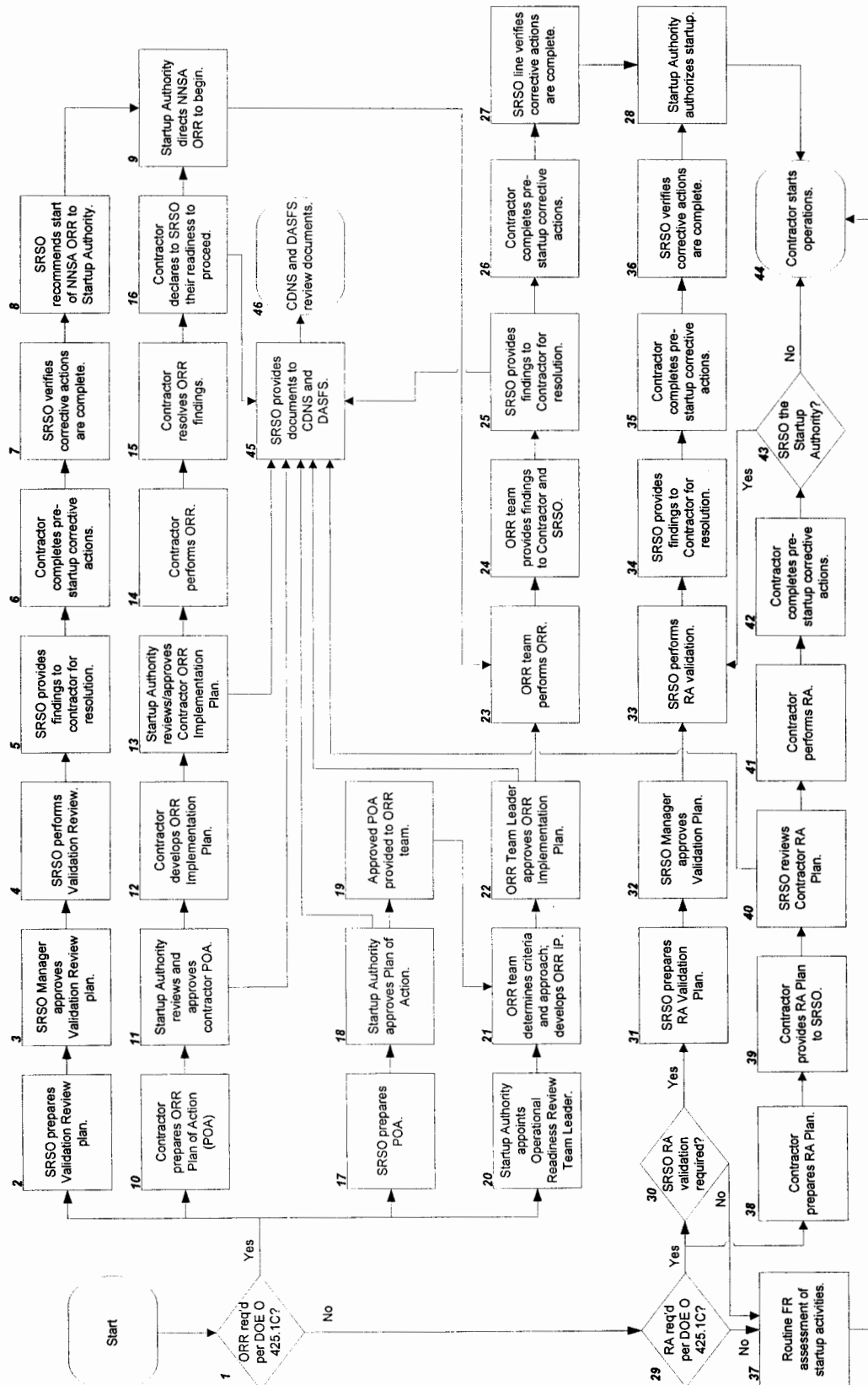
1.0 Purpose and Scope

Reference 2.1 provides specific requirements for the review processes required prior to the authorization to initiate operations in nuclear facilities. This process description provides the local implementing instructions which the National Nuclear Security Administration – Savannah River Site Office (SRSO) will use for the startup or restart of facilities under its cognizance. SRSO will use these instructions in lieu of the SRIP 400, Chapter 425.1, which is used by the Savannah River Operations Office (SR).

2.0 References

- 2.1 DOE O 425.1C, *Startup and Restart of Nuclear Facilities*
- 2.2 DOE-STD-3006-2000, *Planning and Conduct of Operational Readiness Reviews*
- 2.3 SRIP 400, Chapter 425.1, rev. 2, *Nuclear Facility Startup Approval Process*
- 2.4 Letter RB-03-0078, E. L. Wilmot to S. A. Johnson, *Quarterly Startup Notification Reports*, dated 5/15/03
- 2.5 Memorandum, Brooks (NA-1) to Distribution, *Clarification of Roles and Responsibilities in Critical Functional Areas*, dated 01/02/03
- 2.6 Memorandum, Bodman (S-1) to NA-1, *Delegation of Authority for DOE O 425.1C, Startup and Restart of Nuclear Facilities*, dated 02/15/05
- 2.7 Memorandum, Brooks (NA-1) to NA-2 and NA-10, *Delegation of Authority for Order 425.1C, Startup and Restart of Nuclear Facilities*, dated 04/20/05

Figure 1 – Readiness Review Process Map



Process Instructions (See Figure 1 for the Process Map)

Step	Who Does It	What Happens
<p>1 Determine whether an Operational Readiness Review (ORR) is required per DOE O 425.1C.</p>	<p>Contractor, SRSO</p>	<ul style="list-style-type: none"> • The Contractor and SRSO have initial discussions to determine correct review process. • The Contractor formally proposes a review process to SRSO via the Startup Notification Report (SNR). The review process is determined in accordance with DOE O 425.1C. See Attachment 1 for processing of SNRs. • SRSO endorses/approves the Contractor proposal. <p>Note 1: The Startup Authority is also the approval authority for the required documentation. Note 2: See additional interface with step 29.</p>
<p>2 SRSO prepares Validation Review plan.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO line personnel prepare a Validation Review plan in accordance with DOE O 425.1C. This plan provides line management validation that the facility is ready to operate. • Validation Review plan is distributed to appropriate SRSO personnel for review and comment. • SRSO provides draft Validation Review plan to Chief, Defense Nuclear Safety (CDNS) for review and comment. • SRSO line personnel resolve comments. • SRSO line personnel submit Validation Review plan to SRSO Manager for approval. <p>Note: This activity is performed concurrently with step 10, 17, and 20.</p>
<p>3 SRSO Manager approves Validation Review plan.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO Manager approves Validation Review plan.
<p>4 SRSO performs validation review.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO line personnel perform a review of the facility in accordance with the Validation Review plan; this review will include an assessment of the Contractor ORR. • SRSO documents results of this assessment in a formal report. • SRSO categorizes findings as pre-startup or post-startup.

Step	Who Does It	What Happens
5 SRSO provides findings to the Contractor for resolution.	SRSO	<ul style="list-style-type: none"> SRSO line formally provides findings, in writing, to the Contractor for resolution.
6 Contractor completes pre-startup corrective actions.	Contractor	<ul style="list-style-type: none"> Contractor enters findings into Site Tracking, Analysis, and Reporting (STAR) system database. Contractor corrects all pre-startup findings. Contractor develops a schedule to correct all post-startup findings.
7 SRSO verifies that corrective actions are complete.	SRSO	<ul style="list-style-type: none"> SRSO line personnel verify that corrective actions for all pre-startup findings are complete and acceptable. SRSO line personnel verify that an adequate schedule has been developed to correct post-startup findings.
8 SRSO recommends start of NNSA ORR to Startup Authority.	SRSO	<ul style="list-style-type: none"> SRSO line personnel recommend to the Startup Authority that the NNSA ORR be authorized to begin. <p>Note1: Startup authority may have been delegated to the SRSO Manager. Note 2: If NNSA-HQ retains startup authority, SRSO Manager will recommend to NNSA-HQ that NNSA ORR begin.</p>
9 Startup Authority directs that the NNSA ORR begin.	Startup Authority	<ul style="list-style-type: none"> Startup Authority provides formal direction, in writing, to the NNSA ORR Team Leader to begin the NNSA ORR.
10 Contractor prepares an ORR Plan of Action.	Contractor	<ul style="list-style-type: none"> Contractor prepares an ORR Plan of Action (POA) in accordance with DOE O 425.1C. Contractor submits ORR POA to SRSO for review, comment, and endorsement/approval. <p>Note: This activity is performed concurrently with steps 2, 17, and 20.</p>

Step	Who Does It	What Happens
<p>11</p> <p>Startup Authority approves Contractor ORR POA.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO reviews Contractor ORR POA and provides comments. • SRSO provides Contractor ORR POA to CDNS for review and comment. • Comments are resolved between Contractor and SRSO. • SRSO line personnel recommend to the Startup Authority that the ORR POA be approved. • Startup Authority approves Contractor ORR POA. <p>Note1: Startup authority may have been delegated to the SRSO Manager.</p> <p>Note 2: If NNSA-HQ retains startup authority, SRSO Manager will recommend to NNSA-HQ that Contractor ORR POA be approved.</p> <p>Note 3: See additional interface with step 45.</p>
<p>12</p> <p>Contractor develops an ORR IP.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • An independent review team within the Contractor organization prepares an ORR Implementation Plan (IP) which describes the lines of inquiry associated with their review. • Contractor-approved ORR IP is formally submitted to SRSO.
<p>13</p> <p>Startup Authority approves Contractor IP.</p>	<p>Startup Authority</p>	<ul style="list-style-type: none"> • SRSO reviews Contractor ORR IP and provides comments as necessary. • SRSO provides Contractor ORR IP to CDNS for review and comment. • Comments are resolved between Contractor and SRSO. • Startup Authority approves Contractor ORR IP. <p>Note1: Startup authority may have been delegated to the SRSO Manager.</p> <p>Note 2: If NNSA-HQ retains startup authority, SRSO Manager will recommend to NNSA-HQ that Contractor ORR IP be approved.</p> <p>Note 3: See additional interface with step 45.</p>
<p>14</p> <p>Contractor performs ORR.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • Independent Contractor team performs the ORR in accordance with the approved IP. • Independent Contractor team categorizes findings as pre-start or post-start. • Independent Contractor team prepares a formal written report in accordance with DOE O 425.1C. • Independent Contractor team presents findings to Contractor line organization for resolution.

Step	Who Does It	What Happens
15 Contractor resolves ORR findings.	Contractor	<ul style="list-style-type: none"> • Contractor enters findings into STAR system database. • Contractor line organization resolves findings, correcting pre-start findings and developing a schedule to correct post-start findings.
16 Contractor declares to SRSO their readiness to proceed.	Contractor	<ul style="list-style-type: none"> • Contractor line organization declares in writing to SRSO that all pre-start findings are corrected and a schedule for correction of post-start findings was developed, and that they are ready to proceed to operations. • Contractor submits final ORR report to SRSO. <p>Note: See additional interface with step 45.</p>
17 SRSO prepares POA.	SRSO	<ul style="list-style-type: none"> • SRSO line organization prepares the NNSA ORR Plan of Action in accordance with DOE O 425.1C. • NNSA POA is distributed to appropriate SRSO personnel for review and comment. • SRSO provides NNSA ORR POA to CDNS for review and comment. • Comments are incorporated into the NNSA POA. • NNSA POA is subsequently submitted to SRSO Manager for endorsement/approval. <p>Note: This activity is performed concurrently with steps 2, 10, and 20.</p>
18 Startup Authority approves NNSA POA.	Startup Authority	<ul style="list-style-type: none"> • Startup Authority approves NNSA ORR POA. <p>Note1: Startup authority may have been delegated to the SRSO Manager. Note 2: If NNSA-HQ retains startup authority, SRSO Manager will recommend to NNSA-HQ that NNSA POA be approved. Note 3: See additional interface with step 45.</p>
19 NNSA POA provided to ORR team.	Startup Authority	<ul style="list-style-type: none"> • NNSA POA is formally transmitted to the leader of the independent NNSA ORR team.

Step	Who Does It	What Happens
20 Startup Authority appoints NNSA ORR Team Leader.	Startup Authority	<ul style="list-style-type: none"> • Startup Authority formally appoints (in writing) the NNSA ORR Team Leader. • Startup Authority may suggest potential team members to NNSA ORR Team Leader. <p>Note: This activity is performed concurrently with steps 2, 10, and 17.</p>
21 NNSA ORR team determines criteria and approach, develops ORR IP.	NNSA ORR team	<ul style="list-style-type: none"> • NNSA ORR team, using DOE O 425.1C, DOE-STD-3006-2000, and NNSA POA, prepares the NNSA ORR IP.
22 NNSA ORR Team Leader approves ORR IP.	NNSA ORR Team Leader	<ul style="list-style-type: none"> • The NNSA ORR Team Leader reviews the NNSA ORR IP, the criteria, review, and approach documents, and the lines of inquiry, and provides comments to the NNSA ORR team. • Upon resolution of comments, the NNSA ORR Team Leader approves the ORR IP. • The NNSA ORR Team Leader provides the IP to SRSO. <p>Note: See additional interface with step 45.</p>
23 NNSA ORR team performs ORR.	NNSA ORR team	<ul style="list-style-type: none"> • After approval of ORR IP and direction from the Startup Authority to begin the ORR, NNSA ORR team performs ORR. • Daily exit meetings are held with Contractor to discuss schedules, issues, and findings. • NNSA ORR team determines whether findings require pre-startup or post-startup resolution.
24 ORR team provides findings to Contractor and SRSO.	NNSA ORR team	<ul style="list-style-type: none"> • NNSA ORR team provides findings to Contractor at a final exit meeting. • NNSA ORR team generates a formal ORR report in accordance with DOE O 425.1C and DOE-STD-3006-00. • NNSA ORR team provides formal ORR report to SRSO.

Step	Who Does It	What Happens
<p>25</p> <p>SRSO provides findings to Contractor for resolution.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO formally transmits findings, categorized as pre-startup or post-startup, to the Contractor for resolution. <p>Note: See additional interface with step 45.</p>
<p>26</p> <p>Contractor completes pre-startup corrective actions.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • Contractor enters findings into STAR system database. • Contractor corrects all pre-startup findings. • Contractor develops a schedule to correct all post-startup findings.
<p>27</p> <p>SRSO verifies corrective actions are complete.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO line personnel verify that corrective actions for all pre-startup findings are complete and acceptable. • SRSO formally documents verification of corrective actions and maintains documentation with the ORR POAs, IPs, and Final Reports. • SRSO line personnel verify that an adequate schedule has been developed to correct post-startup findings. • SRSO line personnel recommend to Startup Authority that facility startup be authorized. <p>Note1: Startup authority may have been delegated to the SRSO Manager.</p> <p>Note 2: If NNSA-HQ retains startup authority, SRSO Manager will recommend to NNSA-HQ that facility startup be authorized.</p>
<p>28</p> <p>Startup Authority authorizes startup.</p>	<p>Startup Authority</p>	<ul style="list-style-type: none"> • Startup Authority provides in writing formal authorization to begin facility operations. <p>Note: If a revision to an Authorization Basis document was required, the Authorization Agreement must be revised and approved by the Contractor and submitted to SRSO for approval.</p>

Step	Who Does It	What Happens
<p>29</p> <p>Determine whether a Readiness Assessment (RA) is required per DOE 425.1C.</p>	<p>Contractor, SRSO</p>	<ul style="list-style-type: none"> • The Contractor and SRSO have initial discussions to determine correct review process. • The Contractor formally proposes a review process via the SNR. The review process is determined in accordance with DOE O 425.1C. • Startup Authority approves the Contractor proposal. <p>Note1: Startup authority may have been delegated to the SRSO Manager.</p> <p>Note 2: If NNSA-HQ retains startup authority, SRSO Manager will recommend to NNSA-HQ that the SNR be approved.</p> <p>Note 2: See additional interface with step 38.</p>
<p>30</p> <p>Determine whether SRSO will perform an RA validation.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • If the Contractor is the Startup Authority, SRSO must determine whether to perform a validation of the Contractor's RA. • SRSO documents the decision regarding the validation in a formal memorandum to file. • If SRSO is the Startup Authority, a validation of the Contractor's RA shall be performed.
<p>31</p> <p>SRSO prepares RA Validation Plan.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO line personnel prepare an RA Validation Plan in accordance with DOE O 425.1C and DOE-STD-3006-2000. A graded approach should be used for the development of the Validation Plan; the depth and breadth of the Validation Plan should be commensurate with the magnitude of the startup. An example of the Validation Plan can be found in SRIP 400, Chapter 425.1. • SRSO distributes the RA Validation Plan to appropriate personnel for internal review and comment. • SRSO resolves any comments received as a result of the review. • SRSO provides the RA Validation Plan to the SRSO Manager for approval.
<p>32</p> <p>SRSO Manager approves RA Validation Plan.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO Manager approves the RA Validation Plan.

Step	Who Does It	What Happens
33 SRSO performs RA validation.	SRSO	<ul style="list-style-type: none"> • SRSO line personnel perform validation of Contractor Readiness Assessment in accordance with the RA Validation Plan. • SRSO determines whether findings require pre-startup or post-startup corrective action.
34 SRSO provides findings to Contractor for resolution.	SRSO	<ul style="list-style-type: none"> • SRSO formally transmits findings, categorized as pre-startup or post-startup, to the Contractor for resolution.
35 Contractor completes pre-startup corrective actions.	Contractor	<ul style="list-style-type: none"> • Contractor enters findings into STAR system database. • Contractor corrects all pre-startup findings. • Contractor develops a schedule to correct all post-startup findings.
36 SRSO verifies corrective actions are complete.	SRSO	<ul style="list-style-type: none"> • SRSO line personnel verify that corrective actions for all pre-startup findings are complete and acceptable. • SRSO line personnel verify that an adequate schedule has been developed to correct post-startup findings. • SRSO recommends startup to Startup Authority.
37 Routine FR assessment of startup activities.	SRSO	<ul style="list-style-type: none"> • If neither an ORR nor an RA is required per DOE O 425.1C, the Contractor is the Startup Authority and develops/conducts an appropriate review. • A Facility Representative from SRSO will perform a routine assessment of the Contractor's startup review.
38 Contractor prepares an RA plan.	Contractor	<ul style="list-style-type: none"> • Contractor prepares a Readiness Assessment plan in accordance with DOE O 425.1C and the Contractor 12Q manual.
39 Contractor provides RA plan to SRSO.	Contractor	<ul style="list-style-type: none"> • Contractor provides an approved copy of the RA plan to SRSO.

Step	Who Does It	What Happens
<p>40</p> <p>SRSO reviews Contractor RA Plan.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO reviews Contractor RA Plan and provides comments, if applicable. • SRSO provides Contractor RA Plan to CDNS for review and comment. • SRSO resolves comments with Contractor. • SRSO Manager approves Contractor RA Plan. SRSO approval of Contractor RA Plan is not required if the Contractor is the Startup Authority. <p>Note: See additional interface with step 45.</p>
<p>41</p> <p>Contractor performs RA.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • Contractor performs RA in accordance with the approved RA plan. • Contractor determines whether findings require pre-startup or post-startup corrective action. • Contractor enters findings into STAR system database.
<p>42</p> <p>Contractor completes pre-startup corrective actions.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • Contractor corrects all pre-startup findings. • Contractor develops a schedule to correct all post-startup findings.
<p>43</p> <p>Is SRSO the Startup Authority?</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • If SRSO is the Startup Authority (previously determined and documented via the SNR), then SRSO must perform RA validation and verify the completion of the pre-start corrective actions. • If the Contractor is the Startup Authority, then SRSO verification of the completion of the pre-start corrective actions is not formally required; however, SRSO may decide to perform routine Facility Representative oversight of the completion of the corrective actions.
<p>44</p> <p>Contractor starts operations.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • Contractor initiates facility operations.
<p>45</p> <p>SRSO provides documents to CDNS and DASFS.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • In accordance with DOE O 425.1C, the Contractor ORR POA, Contractor ORR IP, NNSA ORR POA, NNSA ORR IP, Contractor RA plan, Contractor ORR report, and NNSA ORR report are provided to the Deputy Assistant Secretary for Facility Safety (EH-2). • Documents are also provided to Chief, Defense Nuclear Safety (NA-2.1).

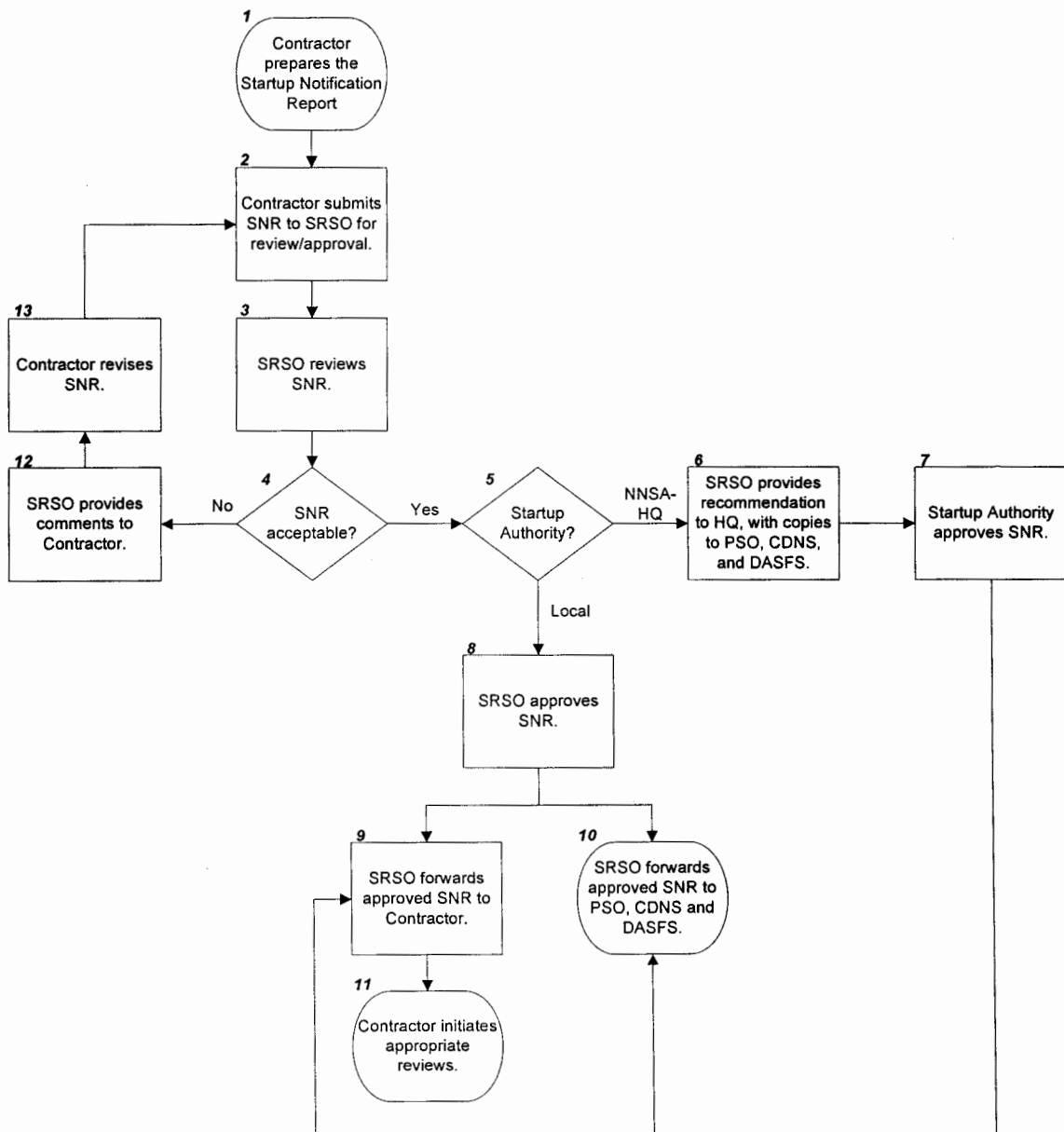
Step	Who Does It	What Happens
46 DASFS and CDNS review submitted documents.	CDNS, DASFS	<ul style="list-style-type: none"><li data-bbox="630 363 1349 432">• DASFS and CDNS review submitted documents and provide comments to SRSO as necessary. <p data-bbox="630 468 1414 537">Note: CDNS (NA-2.1) and DASFS (EH-2) approval of these documents is <u>not</u> required.</p>

Attachment 1 – Startup Notification Process

Reference 2.1 provides specific requirements for handling Startup Notification Reports (SNRs). This Attachment provides the implementing instructions which SRSO will use for handling these SNRs.

In accordance with Reference 2.4, SNRs should be submitted to SRSO on a semi-annual basis.

Figure 2 – Startup Notification Report Process Map



Step	Who Does It	What Happens
<p>1</p> <p>Contractor prepares SNR per DOE O 425.1C.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • The Contractor initiates discussions with SRSO regarding the proposed facility startup reviews. • The Contractor receives initial verbal agreement regarding the required type of review. • The Contractor prepares an SNR in accordance with DOE O 425.1C. The semi-annual submission of this report is acceptable per Reference 2.4. <p>Note: The Startup Authority is also the approval authority for the required documentation.</p>
<p>2</p> <p>Contractor submits SNR to SRSO for review and approval.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> • The Contractor formally submits the SNR to SRSO for review and approval.
<p>3</p> <p>SRSO reviews the SNR.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO performs formal review the SNR for acceptance.
<p>4</p> <p>SNR acceptable?</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO formally determines whether the startup process proposed by the Contractor is acceptable.
<p>5</p> <p>Startup Authority?</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • SRSO formally determines the appropriate Startup Authority.
<p>6</p> <p>SRSO provides recommendation to Startup Authority.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • If the Secretary of Energy or designee is determined to be the Startup Authority, SRSO formally recommends acceptance of the SNR. <p>Note: Delegation of startup authorities is in accordance with References 2.5, 2.6, and 2.7.</p>
<p>7</p> <p>Startup Authority approves SNR.</p>	<p>S-1 or designee</p>	<ul style="list-style-type: none"> • Startup Authority approves the SNR. • Upon approval, SNR is returned to SRSO.
<p>8</p> <p>SRSO approves SNR.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> • If SRSO Manager is determined to be the startup authority, SRSO must approve the SNR.

Step	Who Does It	What Happens
<p>9</p> <p>SRSO forwards approved SNR to Contractor</p>	<p>SRSO</p>	<ul style="list-style-type: none"> SRSO forwards the approved SNR to the Contractor.
<p>10.</p> <p>SRSO forwards approved SNR to PSO, CDNS, and DASFS.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> The approved SNR is formally submitted to the Program Secretarial Officer (PSO), CDNS (NA-2.1), and to the Deputy Assistant Secretary for Facility Safety (DASFS)(EH-2) for information.
<p>11</p> <p>Contractor initiates appropriate reviews.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> The Contractor initiates the appropriate reviews in accordance with DOE O 425.1C and Contractor 12Q manual.
<p>12</p> <p>SRSO provides comments to Contractor.</p>	<p>SRSO</p>	<ul style="list-style-type: none"> If the SNR is determined to be unacceptable, SRSO must provide formal written comments to the Contractor for corrective action.
<p>13</p> <p>Contractor revises SNR.</p>	<p>Contractor</p>	<ul style="list-style-type: none"> Contractor revises the SNR, incorporating SRSO comments. Contractor formally resubmits SNR to SRSO (see step 2).