

## NRCREP Resource

**From:** Cudworth, Jon [Jon.Cudworth@tetrattech.com]  
**Sent:** Thursday, May 08, 2008 11:21 AM  
**To:** NRCREP Resource  
**Subject:** Comments on Limited Work Authorizations; Solicitation of Public Comment  
**Attachments:** Comments on Draft LWA ISG.doc; Comments on Draft LWA ISG.pdf

Please see attached comments. I have included a PDF version in case you have difficulty opening the Microsoft Word version..

<<Comments on Draft LWA ISG.doc>>  
<<Comments on Draft LWA ISG.pdf>>

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1                   **Comments on Proposed Interim Staff Guidance (ISG) COL/ESP-ISG-004**  
2                   **Comments by Jon Cudworth**

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4  
5 The following comments are in response to a Nuclear Regulatory Commission (NRC)  
6 solicitation of public comment on draft interim staff guidance on limited work authorizations.<sup>1</sup>  
7

8     **1.     C.II.2.2.1 Environmental Impacts of Construction and Preconstruction**  
9

10       The draft text indicates that preconstruction and construction activities could occur  
11 concurrently and that preconstruction impacts would be evaluated as cumulative impacts.  
12 This raises the following two issues:  
13

- 14     1a.   First, by indicating that preconstruction activities could occur concurrently with  
15 construction activities, the draft ISG language goes beyond the regulation. The  
16 regulation and the supplemental information from the publication of the final rule<sup>2</sup>  
17 use the term "preconstruction" only in discussing activities that would take place  
18 prior to construction. NRC refers variously to SSCs (systems, structures, and  
19 components) installed before receipt of an LWA, construction permit, or combined  
20 license; site preparation activities; and activities necessary to support construction  
21 and operation. In the supplemental information, in response to a comment, NRC  
22 did seem to acknowledge that non-jurisdictional construction could take place  
23 concurrent with jurisdictional construction activities.<sup>3</sup> However, neither the  
24 commenter nor NRC used *preconstruction* in their discussion. Thus, one cannot  
25 say that the regulatory language requires that impacts from concurrent  
26 preconstruction and construction activities must be addressed as cumulative  
27 impacts.  
28
- 29     1b.   Second, this is an incorrect usage of "cumulative impacts" as the phrase is defined  
30 by Council on Environmental Quality (CEQ) regulation 40 CFR 1508.7. That  
31 definition indicates that a cumulative impact is the addition of an impact from the  
32 proposed action to an impact from another action. This would not be the case if  
33 preconstruction and construction activities occur concurrently. In such a case, both  
34 sets of impacts would be the result of the same action, namely, NRC issuance of a  
35 construction permit,<sup>4</sup> and the preconstruction impacts would be indirect effects as  
36 that phrase is defined at 40 CFR 1508.8.<sup>5</sup> Put another way, if NRC denied the  
37 construction permit, preconstruction activities would halt. The continuation of  
38 preconstruction activities after NRC issuance of a construction permit, therefore,  
39 would be the result of the NRC action.  
40

41       It may seem inconsistent that impacts from preconstruction activities conducted  
42 before permit issuance are cumulative impacts but impacts from the same kind of

<sup>1</sup> Office of New Reactors; Interim Staff Guidance; Limited Work Authorizations; Solicitation of Public Comment, Nuclear Regulatory Commission, Federal Register Vol. 73, No. 68, April 8, 2008, page 19118.

<sup>2</sup> Limited Work Authorizations for Nuclear Power Plants, Nuclear Regulatory Commission, Federal Register Vol. 72, No. 194, October 9, 2007, pages 57415-57447.

<sup>3</sup> Ibid., page 57421.

<sup>4</sup> "Construction permit" could be a construction permit or a limited work authorization under 10 CFR 50 or a combined license under 10 CFR 52.

<sup>5</sup> Council on Environmental Quality regulations use "impact" and "effect" interchangeably.

activities conducted after permit issuance are indirect impacts. However, this is the result of the definitions of *cumulative impacts* and *indirect impacts*. Indirect impacts are defined as impacts that occur later in time or farther removed in distance from the agency action. Impacts that occur before the agency action cannot be indirect impacts. Cumulative impacts, however, are defined to include the results of past actions.

A corollary of the correct application of the CEQ definitions is that there is no reason to segregate construction impacts from post-construction-permit non-jurisdictional impacts. They would all be impacts of the NRC action, and CEQ and NRC regulations do not require segregating indirect impacts. The only value of segregating pre-permit cumulative impacts from post-permit impacts is to allow evaluation of the no-action alternative (pre-permit impacts are included as impacts of no action). NRC made this clear in the LWA rulemaking by indicating that the effects of pre-construction non-jurisdictional activities will be considered in order to establish a baseline against which the incremental effect of the NRC action would be measured. This factor would not be present after permit issuance.

Attachment A provides suggested changes to the draft ISG text.

#### 2. C.IV.6.1.2 Environmental Report

The text indicates that the environmental report should be organized consistent with and provide the information discussed in NUREG-1555. Because NUREG-1555 is written to be applicable to staff preparing an environmental impact statement, the draft ISG language should be revised to indicate, consistent with RG 1.206 Section C.II.2, that NUREG-1555 exists and may provide useful guidance.

#### 3. General

The draft guidance uses the term "preconstruction" to include activities that are outside the NRC jurisdiction to approve or disapprove but that occur concurrent with activities that are within the NRC jurisdiction. This leads to a communications nightmare trying to explain how preconstruction activities can take place after start of construction. NRC should consider using the phrase "non-jurisdictional" as the umbrella phrase that includes activities that occur prior to start of nuclear-safety-related construction (i.e., preconstruction) and activities that occur concurrent with construction activities but that have no nexus to nuclear safety or security.

#### 3. General

It is unclear why the draft ISG is entitled "Limited Work Authorizations." The treatment of preconstruction and construction impacts is equally applicable to early site permits (ESPs) and combined licenses (COLs), and the draft ISG uses all these terms. The draft should be revised to indicate the ISG's applicability to ESPs and COLs or to indicate that additional guidance is forthcoming for those applications.

**Attachment A**  
**Suggested Changes to Draft ISG Text**

**C.II.2.2 Additional Guidance Based on Revised Limited Work Authorization Rule**

**C.II.2.2.1 Environmental Impacts of Construction and Preconstruction**

The revised LWA rule (October 9, 2007; 72 FR 57415) included changes to 10 CFR 51.45(c) regarding environmental reports (ERs). Any ER prepared to support an application for new reactor licensing (CP, ESP, LWA<sup>1</sup>, or COL) must include, among other things:

- (1) a description of impacts of the preconstruction activities performed by the applicant at the proposed site (*i.e.*, those activities listed in (2)(i) through (2)(x)<sup>2</sup> in the definition of construction contained in 10 CFR 51.4) necessary to support construction and operation of the facility; and
- (2) an analysis of the cumulative impacts of the activities to be authorized by the LWA, CP, or COL in light of the preconstruction impacts.

The LWA rule and its supplementary information explain that preconstruction activities differ from construction activities by not needing NRC authorization prior to initiation. This is because NRC has Atomic Energy Act (AEA) jurisdiction over only the construction activities; preconstruction activities are non-jurisdictional.

Preconstruction activities that the LWA rule and its supplementary information focus on are listed activities that occur prior to start of construction.<sup>3</sup> Applicants may perform these activities at their own risk in anticipation of receiving NRC authorization to begin construction. However, NRC, in response to a comment on the draft rule, acknowledged the possibility that some listed activities might occur at the same time as construction activities. That acknowledgement is consistent with the basis for the distinction between preconstruction and construction activities, that is, AEA jurisdiction. Consistent with the rulemaking, this ISG limits its use of preconstruction activities to non-jurisdiction activities that take place prior to NRC authorization of construction activities. However, the ISG also addresses non-jurisdiction activities that take place after NRC construction authorization.

Prior to implementation of the revised LWA rule, the environmental impacts of construction activities were evaluated together with what is now referred to as the preconstruction activities in the construction impacts section of an ER or an environmental impact statement (EIS).

Under the revised LWA rule, the impacts of construction activities need to be addressed because they are the activities being authorized. The impacts of preconstruction activities need to be addressed because they are part of the baseline evaluated in the no-action alternative. Therefore, the impacts of preconstruction and construction activities need to be separated so that each activity can be appropriately addressed. Preconstruction impacts may also be relevant if, when added to impacts from construction or operation, they result in a cumulative effect.<sup>46</sup>

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**Deleted:** Preconstruction impacts do not meet the CEQ definitions of direct or indirect impacts because the impacts occur prior to the NRC action, that is, before NRC authorizes construction.

<sup>6</sup>

1 NRC and Council on Environmental Quality (CEQ) regulations and guidance indicate that the  
2 level of analysis of environmental impacts should be commensurate with the level of impact.<sup>5</sup> If  
3 the level of impact of the construction activities in a given area, such as water quality, is small,  
4 detailed analysis of the impact of preconstruction activities in that area is not warranted unless it  
5 will significantly alter the assessment of cumulative effects in that area. The level of information  
6 regarding construction impacts that was presented by applicants under the previous definition of  
7 *construction*<sup>6</sup> should be adequate to address the cumulative impacts of construction activities in  
8 light of the preconstruction impacts under the revised LWA rule.

10 The impacts of non-jurisdiction activities that occur after NRC authorization of construction must  
11 be addressed because they are indirect impacts of the NRC action. This would be true  
12 regardless of whether the activities are listed as excluded from the definition of *construction*.  
13 Because these activities would not be preconstruction, they are not part of the no-action  
14 alternative and their impacts do not need to be separated from impacts from construction or  
15 operation activities.

18 The rule states that it applies to ERs for CPs, ESPs & COLs. NRC plans to issue an administrative  
19 correction to the rule to include LWA in the list. Language throughout the rest of 10 CFR 51.45(c) clearly  
20 demonstrates that the NRC intended to include LWA in the list.

22 <sup>2</sup> The rule uses the term *preconstruction*; 10 CFR 51.4 does not define *preconstruction*, but the  
23 parenthetical note indicates that the activities that are not part of construction are listed in paragraph  
24 (b)(1) through (b)(8) in 10 CFR 51.4. These are the preconstruction activities. NRC plans to issue an  
25 administrative correction to the rule to state that activities which are not part of construction are listed in  
26 paragraph (2)(i) through (2)(x). There is no paragraph (b)(1) through (b)(8) in the final 10 CFR 51.4. The  
27 term *preconstruction* as used in the rule is not limited to activities performed before construction; many  
28 preconstruction activities could and probably will be performed concurrently with construction.

30 <sup>3</sup> Listed in Section A(2).

32 <sup>4</sup> Preconstruction impacts do not meet the CEQ definitions of direct or indirect impacts because  
33 the impacts occur prior to the NRC action, that is, before NRC authorizes construction.

35 <sup>5</sup> NRC regulations at 10 CFR 51.29(a)(3) indicate that issues that are not significant should be identified  
36 and eliminated from detailed study during scoping; the NRC regulation reflects the words of 40 CFR  
37 1501.7(a)(3), "Identify and eliminate from detailed study the issues which are not significant..." In addition,  
38 the CEQ publication, "Considering Cumulative Effects Under the National Environmental Policy Act,"  
39 states, "Cumulative effects analysis should 'count what counts', not produce superficial analyses of a  
40 long laundry list of issues that have little relevance to the effects of the proposed action or the eventual  
41 decisions."

43 <sup>6</sup> See Section A, "Introduction," for a discussion of the revised definition of construction.

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¶ In other impact areas, such as the socioeconomic impacts of the construction work force, it may require somewhat more detailed analysis to separate the impacts of preconstruction and construction activities that will occur concurrently. The work force will be composed of workers involved in both preconstruction and construction. Almost all of the work done before the installation of the foundations of the safety-related structures begins will be preconstruction. After that safety-related foundation work begins, the work force will be doing both preconstruction and construction until the plant is complete. Therefore, the socioeconomic impacts of the work force conducting preconstruction are all of the impacts before the safety-related foundation work begins plus some percentage of the impacts throughout the rest of the project. The socioeconomic impacts of the work force conducting construction are some percentage of the impacts after the safety-grade foundation work begins throughout the rest of the project. The same analyses that applicants use to estimate the total work force should be detailed enough to provide separate estimates of the percentage of the work force engaged in preconstruction and construction throughout the project after the safety-related foundation work begins. Generally, the estimates of the impact breakdown between ... [1]

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In other impact areas, such as the socioeconomic impacts of the construction work force, it may require somewhat more detailed analysis to separate the impacts of preconstruction and construction activities that will occur concurrently. The work force will be composed of workers involved in both preconstruction and construction. Almost all of the work done before the installation of the foundations of the safety-related structures begins will be preconstruction. After that safety-related foundation work begins, the work force will be doing both preconstruction and construction until the plant is complete. Therefore, the socioeconomic impacts of the work force conducting preconstruction are all of the impacts before the safety-related foundation work begins plus some percentage of the impacts throughout the rest of the project. The socioeconomic impacts of the work force conducting construction are some percentage of the impacts after the safety-grade foundation work begins throughout the rest of the project. The same analyses that applicants use to estimate the total work force should be detailed enough to provide separate estimates of the percentage of the work force engaged in preconstruction and construction throughout the project after the safety-related foundation work begins. Generally, the estimates of the impact breakdown between preconstruction and construction do not need to be detailed. For example, estimated breakdowns such as 70-30 percent or 60-40 percent or 50-50 percent should be sufficient to inform the NEPA decision-making process. The socioeconomic impacts of the construction activities can be apportioned simply based on these estimates.

In a few areas, the level of impact may be so small that anything other than a ballpark estimate of the separation would not be warranted to appropriately inform the NEPA decision-making process. Based on experience from other construction projects of similar size, the air quality impact will probably be assessed as small during scoping if the area is in attainment under Environment Protection Agency (EPA) regulations. Under these circumstances, any effort beyond a very simple estimate of the preconstruction-construction impact separation, such as 50-50 percent, would not be necessary to assess the impact of level of the construction activities.

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