

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN  
DISTRICT OF LOUISIANA

IN RE: OIL SPILL BY THE OIL RIG MDL NO. 2179 "DEEPWATER  
HORIZON" IN THE GULF OF MEXICO, ON APRIL 20, 2010

Reply to Rebuttal Report of Kenneth E. Arnold of 12 September 2014

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EXPERT REPORT OF  
GARDNER W. WALKUP, JR.  
ON BEHALF OF  
THE UNITED STATES OF AMERICA

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SEPTEMBER 26, 2014

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*Gardner W. Walkup, Jr.*  
Gardner W. Walkup, Jr.

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DATED: September 26, 2014

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## Appendix A – Considered Materials

# 1 Executive Summary<sup>1</sup>

Mr. Arnold, in his September 12, 2014 rebuttal report (“Round Two report” or “Response”), contends that my initial report misstates the industry best practice of active-participation by non-operating parties (NOPs) at the exploration phase and disputes my conclusion that imposing material CWA penalties on Anadarko will lead to higher degree of safety in deepwater activities.

While I agree that exploration is a different phase from development in deepwater activities, I cannot agree with Mr. Arnold’s conclusions. Firstly, Mr. Arnold is wrong when he states that the industry literature only demonstrates NOP active-participation during development and not exploration. Secondly, Mr. Arnold does not contest the key driving forces that lead to NOP active-participation that I cited in my original report. These driving forces apply to both exploration and development. Mr. Arnold’s contention that the model form joint operating agreement (JOA) used extensively by industry participants only memorializes active-participation by NOPs during development and not during exploration is incorrect as well. Finally, Mr. Arnold’s distinction between exploration and development activities ignores that many more development wells are drilled for any project than exploration wells and that the activities this Court has determined caused the Macondo blow-out were not specific to exploration activities but are shared by development wells (e.g., setting production casing and subsequent activities).

Mr. Arnold disagrees with me on grounds that NOPs have limited control over day-to-day operations. It has never been my contention that NOPs have day-to-day operational control; rather, it is my opinion that through active-participation NOPs can, and do, contribute positively to the performance of deepwater activities. Thus, the examples that Mr. Arnold provides regarding Norway’s “see to it” requirement, the “safety-case” in the U.K., and Sharma’s technical report all strongly support my view of active-participation by NOPs and demonstrate the beneficial impact on offshore safety that a material CWA penalty on Anadarko will provide by incentivizing this active-participation.

Finally, Mr. Arnold overstates the independence of operational decisions “made on the rig” from design decisions and, in fact, disputes the industry norm that operations are primarily focused on executing the design or plan determined *a priori*. He grossly misapprehends the decision-making process related to deepwater activities and thereby arrives at the incorrect conclusion that NOPs are unable to influence offshore safety.

NOPs are not “passive investors” or “non-operating investors.” NOPs can and do actively participate in deepwater activities, including exploration activities, and can make

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<sup>1</sup> The information contained in Section 2 of my initial report (“Information Required by the Federal Rules of Civil Procedure”) has not changed and is incorporated into this report by reference. I reserve the right to revise or supplement the opinions contained in this report if additional relevant information becomes available to me.

positive contributions to HSE priorities. The diversity of capabilities and experiences all parties bring to the extremely challenging deepwater environment of the Gulf of Mexico should be encouraged and utilized. A material CWA penalty imposed on Anadarko will incentivize this beneficial active-participation, while not imposing such a penalty will be viewed as support for the passive role that Mr. Arnold has espoused, which will not be in the best interests of the public.

## 2 Exploration versus development

In my original report, I demonstrate that NOPs are active-participants for deepwater activities. Mr. Arnold goes to great lengths to distinguish between exploration and development activities to argue that, while it is indisputable that NOPs are active-participants during development, they are not during exploration activities. Because he argues that the Macondo incident occurred during exploration, he concludes that imposing material CWA penalties on Anadarko is not in the best interest of the public. Mr. Arnold's analysis regarding NOP participation in exploration versus development activities is flawed and his conclusion regarding CWA penalties is not supported.

### 2.1 NOPs are active-participants during exploration

Mr. Arnold contends that NOPs are not active-participants during exploration but the only support he provides for this contention is to note that the model form JOA does not require such participation during exploration and to claim that some of my cited literature is not specific to exploration (even though Mr. Arnold agrees such literature demonstrates NOPs are active-participants during development). Below, I show that Mr. Arnold's conclusions are not supported.

#### 2.1.1 Industry literature

Mr. Arnold claims that some of the literature I cited only refers to development and this supposed lack of reference means NOPs are not active-participants during exploration. In this he is incorrect. For example, he suggests that my use of the Herman et al. 2006 OTC paper<sup>2</sup> only indicates NOPs participation in development. However, the quote cited by Mr. Arnold from the paper was a very selective choice. Immediately preceding the paragraph Mr. Arnold quoted is this:

*At Chevron, we have utilized many types of commercial and equity arrangements for **our exploration activities**. While these equity arrangements are quite often viewed as a means to reduce costs, there are other key benefits to these types of arrangements. Following are other significant benefits:*

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<sup>2</sup> Herman, A., et al., "Changing Dynamics in Deepwater Ownership." OTC 17783, 2006 Offshore Technology Conference (May 2006) (US\_PP\_WAL001843).

- *Risk management of the overall portfolio;*
- *Access to key resources, such as drilling rigs for ultra-deep water;*
- *Alignment with partners of like-interests and -drivers in a lease area;*
- ***Bringing in of partners with key technical or project experience;***
- *Gaining access to data that may help to evaluate other opportunities.*

(Bolding added). There is no way for Chevron to gain the benefits of bringing in an NOP with “key technical or project experience” during exploration without the NOP acting as an active-participant.

In the paper I cited in my second report, “The Role of a Non-Operating Partner in Contributing to HSE Excellence” by Mr. Lawrie of the oil and gas company OMV, the active-participation of NOPs in exploration is explicitly stated:

*Non-Operating Companies opportunities to influence HSE*

*The relationship between the operator and their non-operating partners (this number can be wide ranging, from just one partner to, in some cases, up to 6 or 7 partners) usually commences at the license application / license award stage. **There will be then a planning process involving the exploration departments of the various partners to determine, for example, if seismic data should be collected and eventually over the selection of suitable candidate wells for exploration drilling.** So one of the first managed processes between partners maybe the award of a contract(s) to acquire seismic data. **This process will hopefully continue through to the well planning and the selection of; a rig / drilling contractor; service companies; etc.**” (bold added)<sup>3</sup>*

It is clear from these examples that, in addition to the active-participation during development that Mr. Arnold acknowledges, that NOPs are active-participants during exploration as well.

## **2.2 There are obvious drivers for NOPs to be active-participants during exploration activities**

In my original report, I itemized a number of key drivers for NOP active-participation during deepwater activities (Section 5.3). These drivers of NOP active-participation are not addressed by Mr. Arnold and include:

- Strategic learning by NOPs from the operator
- Risk-management of the financial exposure

<sup>3</sup> Lawrie, Graeme, “The Role of a Non-Operating Partner in Contributing to HSE Excellence.” SPE 155941, SPE/APPEA International Conf. on Health, Safety and Environment in Oil and Gas Exploration and Production (September 2012) (US\_PP\_WAL002336).

- Investor-relations management
- Managing risks to high production rates through well design
- Reputational risk management

All of these drivers of NOP active-participation apply to deepwater exploration as well as to deepwater development activities. One caveat would be that the financial exposure is less during exploration; however, since it is common for deepwater exploration wells to exceed \$150 million, exploration costs are still high. The other key caveat is that not all exploration wells (even successful ones) are destined to be production wells and so risk to high production rates may not be relevant. However, again because of the extreme cost of deepwater exploration wells, it is common for successful exploration wells to become production wells (as was the plan at Macondo). One could argue that investor-relations management and potentially reputational risk management are in fact greater drivers of NOP active-participation during exploration because of the greater uncertainty on outcome (e.g., dry hole versus “keeper”).

Mr. Arnold has not disputed that NOPs are active-participants during development (via their roles on integrated project teams (IPTs), etc.). It is inconsistent to argue that the same “culture” that results in this active-participation during development would not also support active-participation during exploration. This is particularly true given that the activities undertaken during exploration and development can be very similar. For example, it would be common for an exploration well, if successful, not to be abandoned but for production casing to be set and for the well to be temporarily abandoned and to later be completed and used as a production well.<sup>4</sup> The activities from and including the setting of the production casing are very similar to the activities at a development well.

### **2.3 The JOA anticipates active participation by NOPs during exploration**

Mr. Arnold fails to explain why NOPs would not be active-participants. He simply argues in Section 3 of his rebuttal report that the joint operating agreement (JOA) during exploration does not require active-participation.<sup>5</sup> Mr. Arnold contends that only the development phase is relevant to NOP participation. In this, Mr. Arnold is incorrect because he focuses on the JOA’s provision on NOP participation in integrated project teams (IPTs) that are established during the development phase.

Mr. Arnold concedes, “*To be sure, nothing prohibits operators from inviting NO-WIOs to be active participants in the Exploration Stage,*” but then contends “*this is not the norm.*”

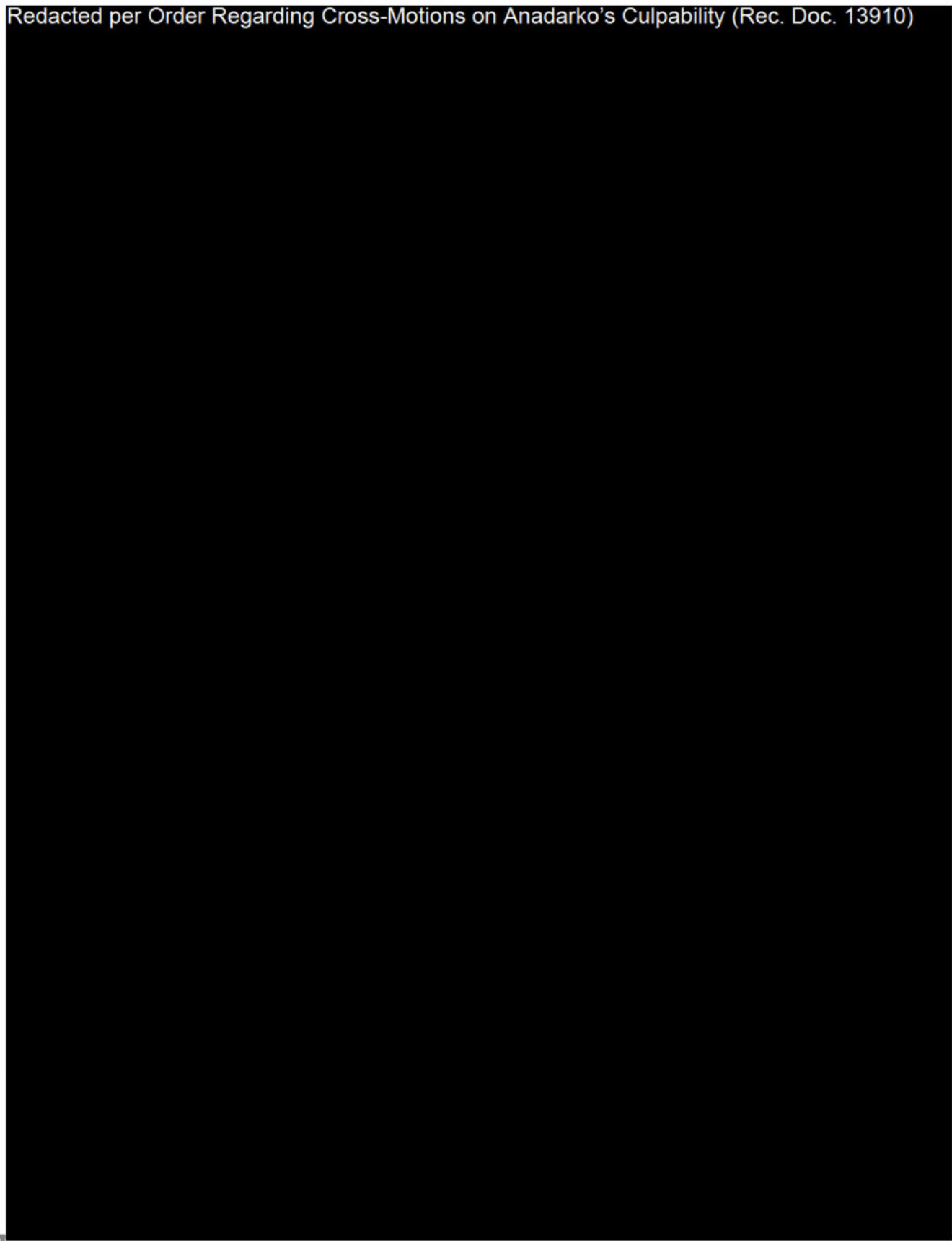
<sup>4</sup> This was the plan for the Macondo well. TREC-1919.

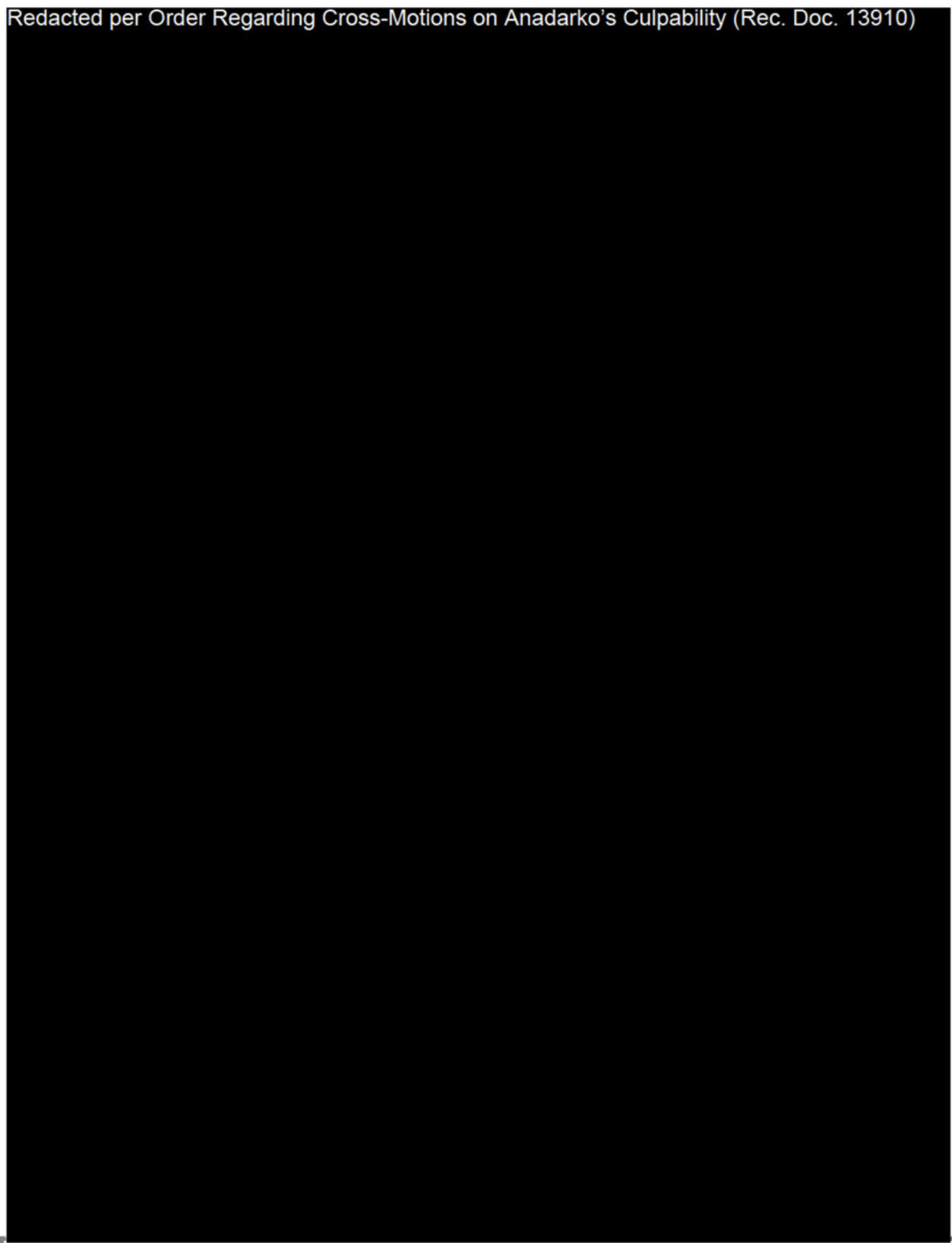
<sup>5</sup> Mr. Arnold also points to regulations and argues that the regulations do not require participation by NOPs. I am not providing an expert opinion on the regulations but note that making the decision to be active-participants or passive investors based only upon compliance with regulations is in direct contradiction to Mr. Arnold’s own opinion in his original report stating, “*Compliance with regulations alone cannot create a safety culture. On the contrary, it fosters a harmful ‘compliance mentality.’*” Arnold Report, dated August 15, 2014, at 3.



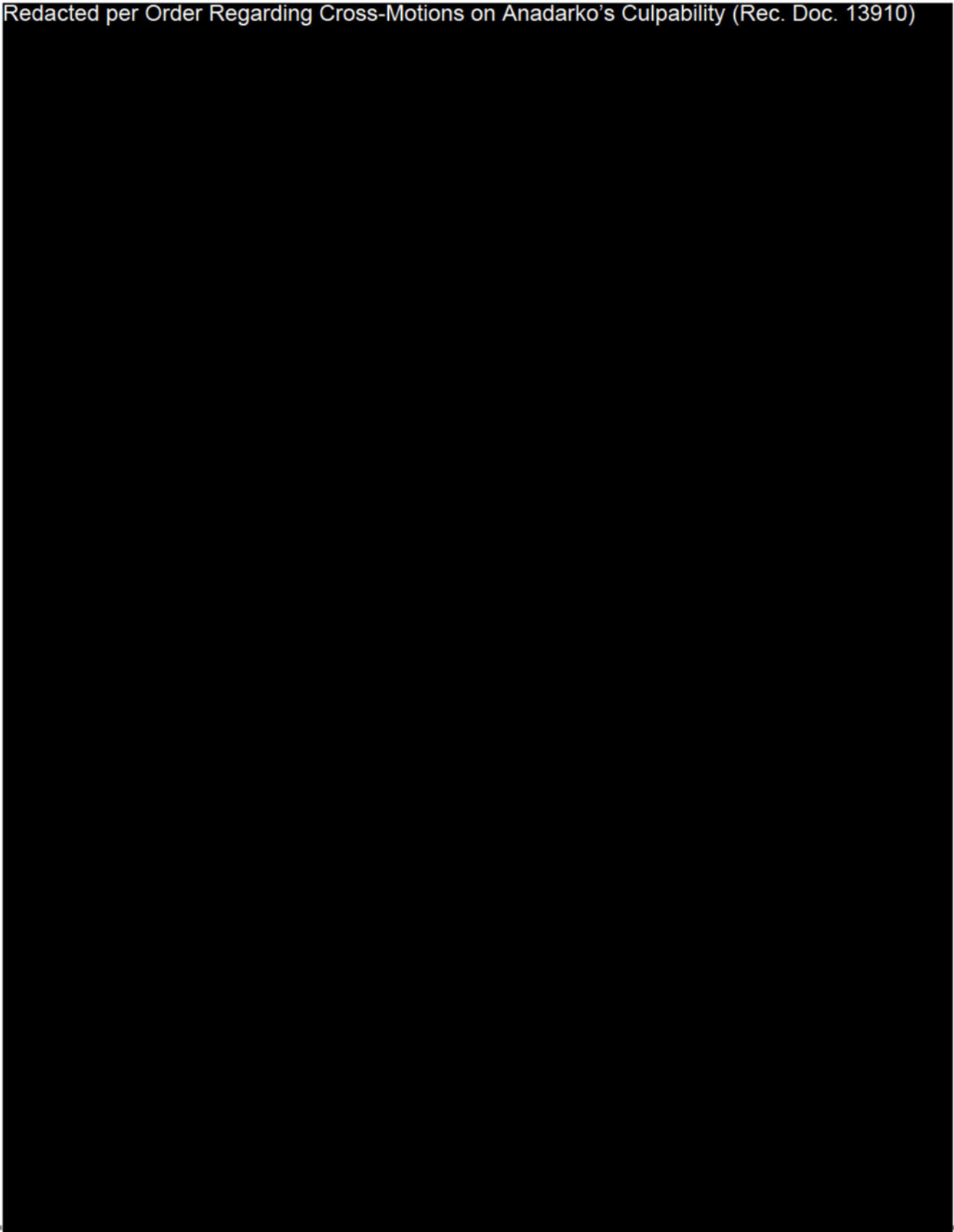




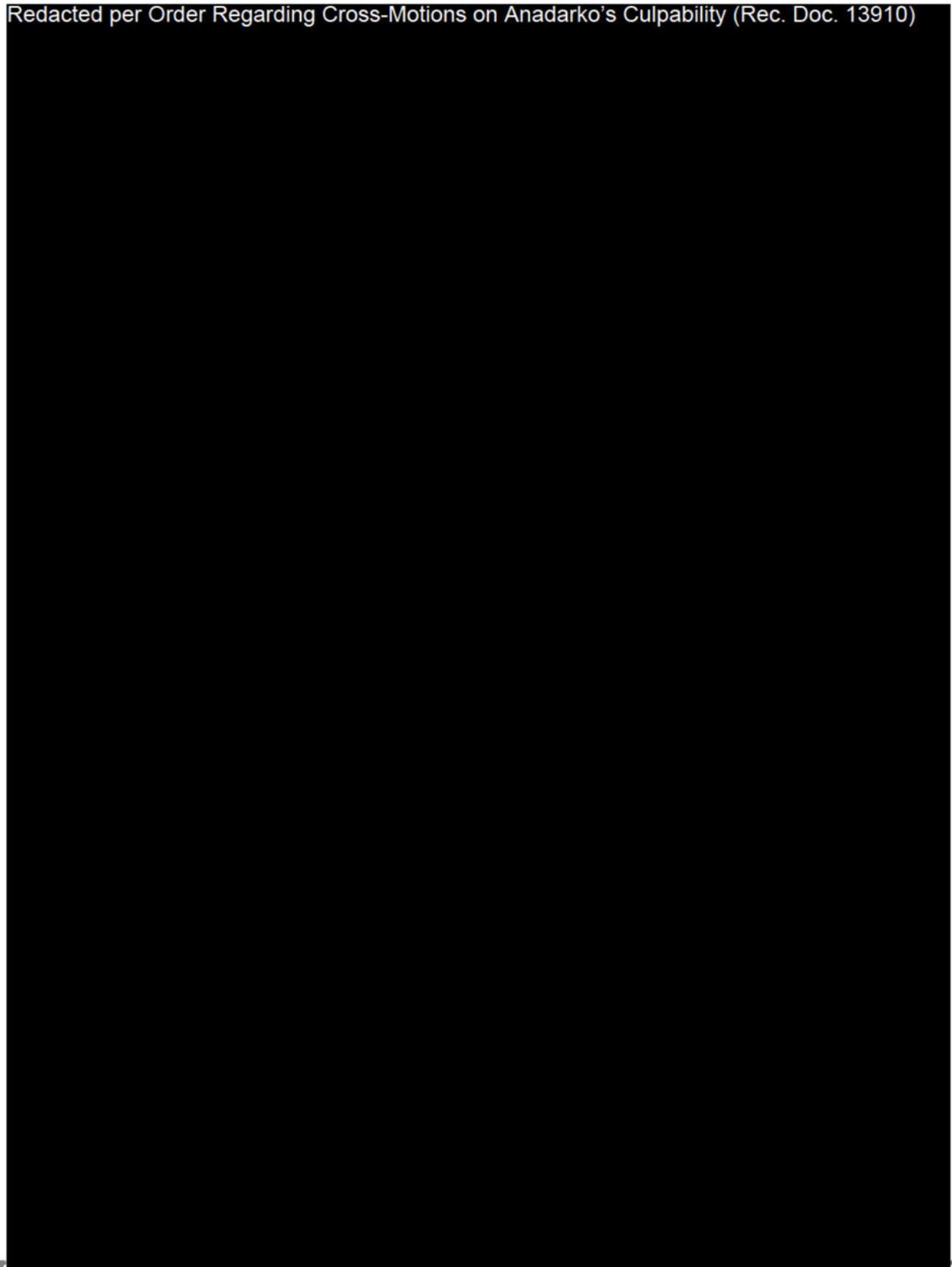


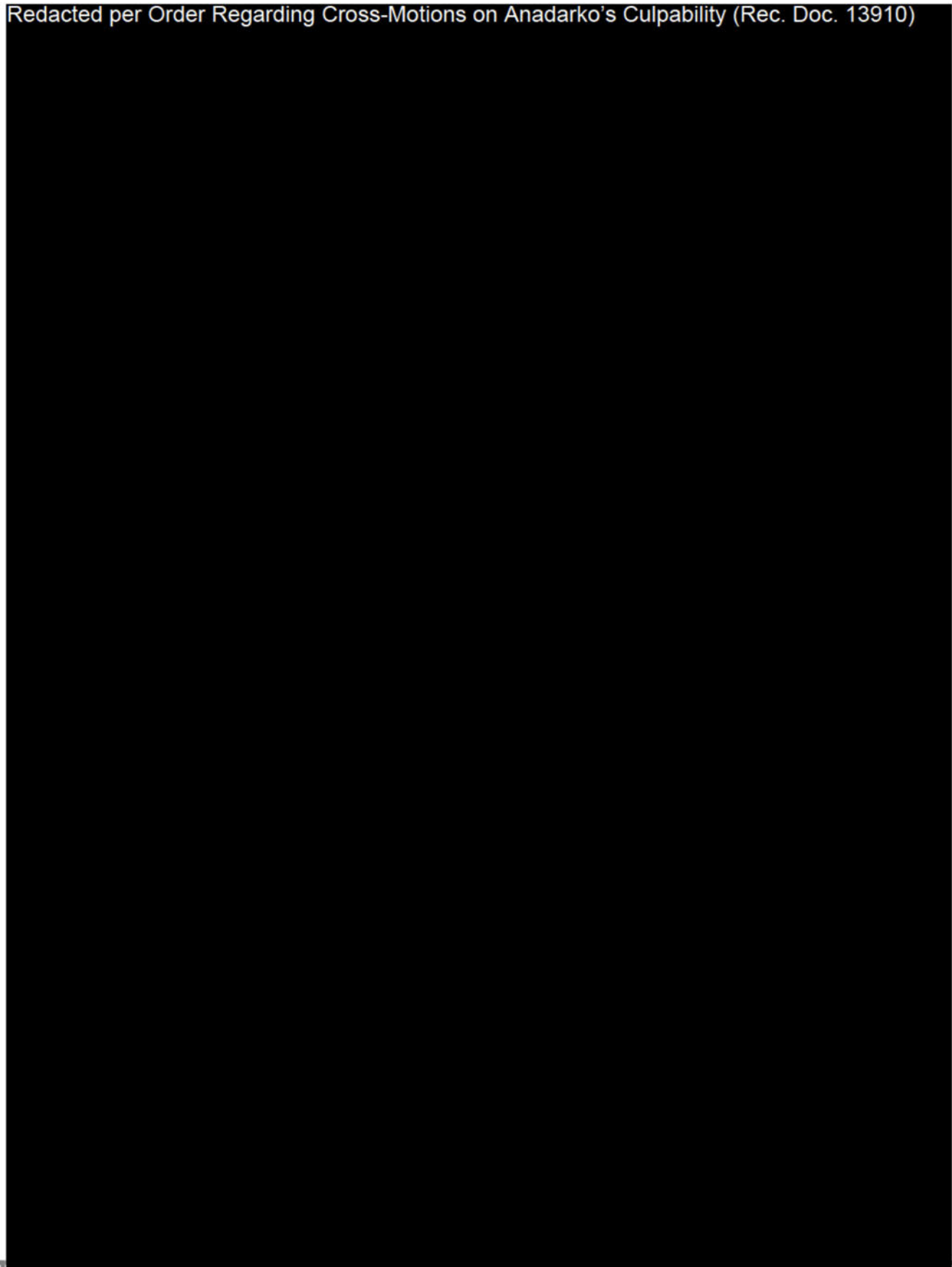


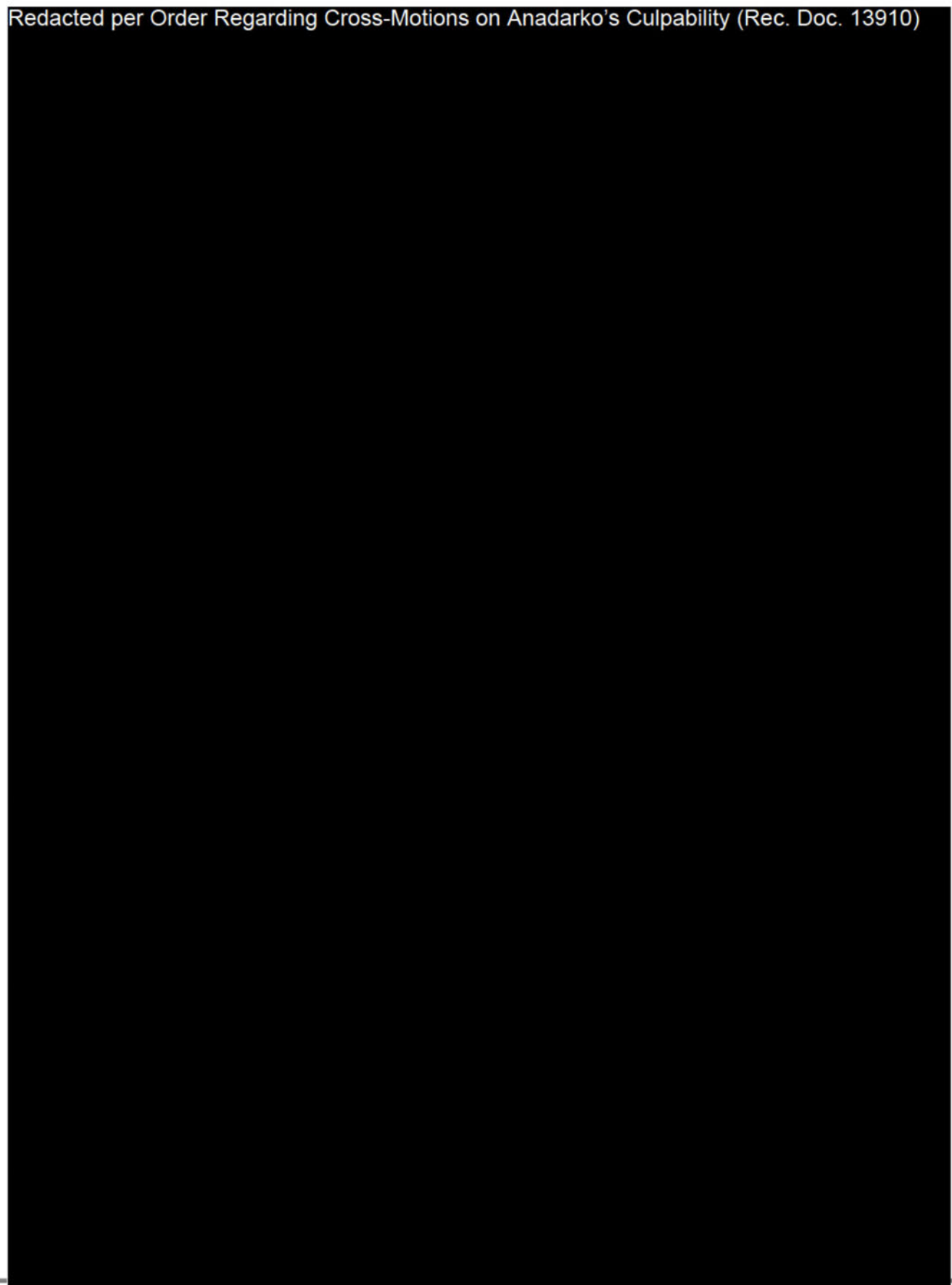




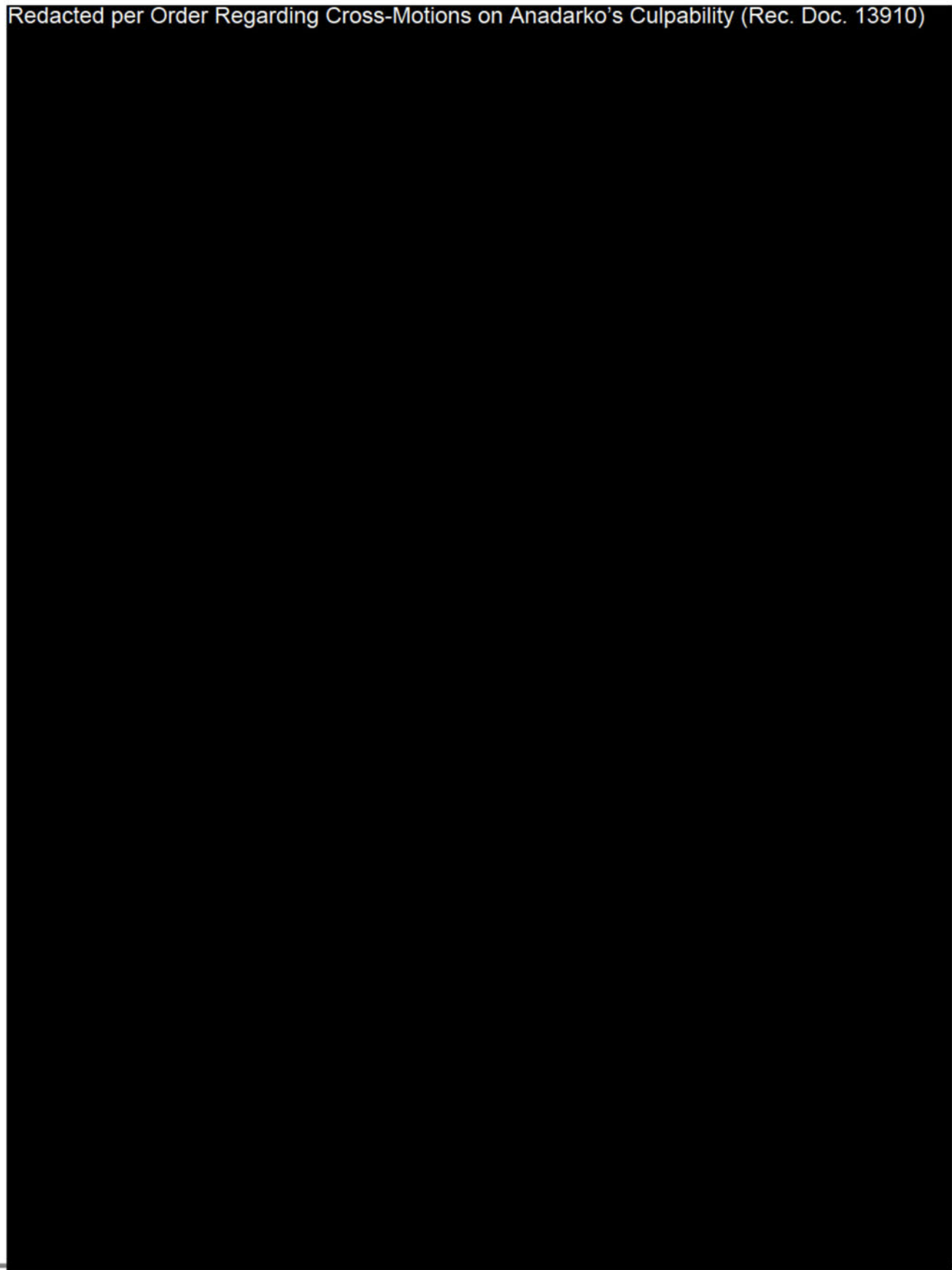


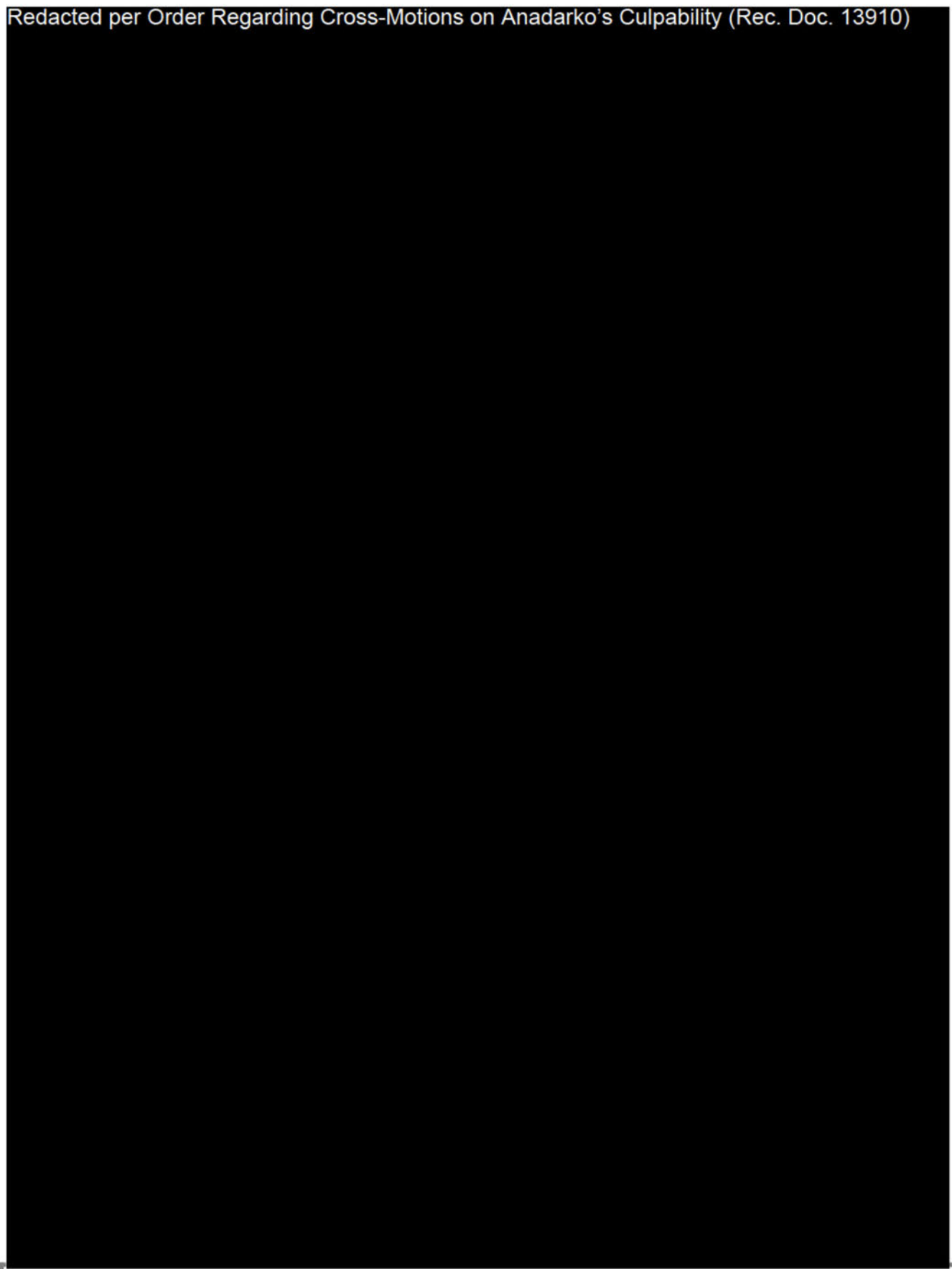














## Appendix A

List of Considered Materials (in addition to the documents cited in my Round 1 and Round 2 and Round 3 reports and my Round 1 and Round 2 lists of documents considered):

US_PP_WAL003862-US_PP_WAL004101
US_PP_WAL004102-US_PP_WAL004360
US_PP_WAL004361-US_PP_WAL004368