

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Docket No. AD16-3-000

**COMMENTS OF NATURAL GAS SUPPLY ASSOCIATION AND
CENTER FOR LIQUEFIED NATURAL GAS ON
DRAFT GUIDANCE MANUAL FOR ENVIRONMENTAL REPORT PREPARATION**

In response to the Federal Energy Regulatory Commission’s (“FERC” or the “Commission”) Notice of Availability of the Draft Guidance Manual for Environmental Report Preparation and Request for Comments, the Natural Gas Supply Association (“NGSA”) and the Center for Liquefied Natural Gas (“CLNG”) offer the following comments on FERC’s Draft Guidance Manual for Environmental Report Preparation (“Draft Guidance”).

I. BACKGROUND

NGSA is a national trade association that represents natural gas market participants that produce and market natural gas. Founded in 1965, NGSA and its members support the development of natural gas pipeline infrastructure to ensure that consumers around the United States have reliable access to natural gas. Each year NGSA’s member companies supply trillions of cubic feet of natural gas to electrical power plants, local gas utilities, and industrial gas users. NGSA and its members have a strong interest in ensuring that FERC continues to process applications for interstate natural gas pipeline and LNG projects efficiently and in full compliance with federal law.

CLNG represents LNG producers, shippers, terminal operators, and project developers. CLNG educates the public regarding the benefits of LNG and supports policies that allow LNG to contribute to U.S. economic growth. On January 19, 2016, NGSA and CLNG announced the

completion of the merger of the two organizations. FERC issued the Draft Guidance for public comment on December 18, 2015, and requested comments by January 29, 2016.¹

II. COMMENTS

NGSA and CLNG support the production and completion of thorough environmental reviews of natural gas infrastructure projects and understand the importance of complying with the National Environmental Policy Act (“NEPA”) and the Council on Environmental Quality’s (“CEQ”) regulations implementing NEPA. NGSA and CLNG appreciate the opportunity to provide the following comments in an effort to further clarify and refine the Draft Guidance.

A. **The Draft Guidance should not be used as a mechanism to impose requirements beyond FERC’s current regulations.**

In its statement associated with the release of the Draft Guidance, FERC explained that the Draft Guidance “is not the appropriate vehicle for changes to federal regulations.”² NGSA and CLNG agree with this statement. However, the Draft Guidance specifically notes that project developers should include “information beyond the minimum filing requirements”³ and explains that the Draft Guidance includes “lists identifying additional information that should be included in each resource report.”⁴ For the reasons set forth below, NGSA and CLNG request that FERC clarify that its intent in specifying additional information to be included in natural gas infrastructure project developers’ resource reports is not to supplement or modify its regulations.

Part 380 of FERC’s regulations⁵ implement Congress’s mandates under NEPA and CEQ’s NEPA regulations. NGSA and CLNG agree with commenters, including the Interstate

¹ Notice of Extension of Comment Period, FERC Docket No. AD16-3-000 (Jan. 14, 2016).

² The Commission issued notice of the Draft Guidance in docket number AD16-3-000 on December 18, 2015. Formal notice of the Draft Guidance was published in the Federal Register on December 24, 2015. *See* Notice of Availability of the Draft Guidance Manual for Environmental Report Preparation and Request for Comments, 80 Fed. Reg. 80,353 (Dec. 24, 2015).

³ Draft Guidance at 4-5.

⁴ *Id.* at 4-5.

⁵ 18 C.F.R. Part 380.

Natural Gas Association of America's comments filed in this proceeding on behalf of the regulated interstate natural gas pipeline industry, that discourage FERC from attempting to use the Draft Guidance to impose requirements beyond those found in FERC's current regulations. These regulations were promulgated through notice and comment rulemaking procedures, as mandated by federal law, and reflect input from industry and interested stakeholders. Accordingly, it would be impermissible for the Commission to indirectly amend these regulations through the instant proceeding.

In addition, the Draft Guidance recognizes that "each project is unique"⁶ and emphasizes that "applicants should ensure that the information in their applications addresses issues relevant to their specific projects."⁷ In recognition of this fact and in an attempt to prepare a properly scoped NEPA review, for proposed infrastructure projects FERC staff takes a flexible approach where the regulations are more general and where they permit a review that is appropriately tailored to the scope of the proposed action. In certain instances, requiring inclusion of information through the Draft Guidance that goes beyond FERC's regulations imposes a uniform burden on every project to provide an extensive checklist of information, whether it is relevant to a specific project or not. Such an approach does not support NEPA's goal of providing decision-makers and the public with truly meaningful information that will be "of the greatest relevance to the agency's decision."⁸ As courts have pointed out, "NEPA is not a paper tiger, but neither is it a straightjacket."⁹

Moreover, mandating information through the Draft Guidance that exceeds FERC's regulations presents a serious risk of delaying the development of the natural gas infrastructure

⁶ Draft Guidance at 1-1.

⁷ *Id.* at 1-2.

⁸ 50 Fed. Reg. 32,237 (1985).

⁹ *Scientists' Inst. for Pub. Info. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1091-92 (D.C. Cir. 1973) (citing *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971) and *Natural Res. Def. Council v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972)).

that will support states' additional deployment of natural gas to comply with the Administration's Clean Power Plan. The Clean Power Plan allows a state to increase its reliance on natural gas power generation as a means to achieve the state's carbon dioxide emissions reductions goal.¹⁰ Many states that expect to meet their obligations under the Clean Power Plan by increasing their use of natural gas will need additional natural gas infrastructure to meet their energy needs and to maintain reliability. Slowing down permitting of this critical infrastructure undermines the Administration's environmental policies and hinders the United States' ability to meet emissions targets established at the 2015 United Nations Climate Change Conference.

Furthermore, applying the additional requirements specified in the Draft Guidance could further postpone project permitting for FERC-regulated natural gas infrastructure projects that are progressed in the application process. NGSA and CLNG encourage FERC to use the Draft Guidance only as prospective tool for projects that have not filed any resource reports yet, either as part of the Commission's pre-filing process or as part of a formal project application. Retroactive application has the potential to inject confusion, uncertainty, and substantial delays into FERC's review of these infrastructure projects that are critical to the United States' energy security and promotion of more diverse sources of energy for our strategic allies abroad.

Therefore, NGSA and CLNG urge FERC not to use the Draft Guidance as a means to impose additional requirements beyond those in FERC's regulations.

B. NGSA and CLNG support the Commission's determination that alleged upstream environmental impacts are not properly included in the scope of a NEPA review of FERC-regulated natural gas infrastructure.

NGSA and CLNG support FERC's reasonable and legally sound approach to analyzing upstream production activities in the context of natural gas or LNG infrastructure projects.

¹⁰ Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014, 80 Fed. Reg. 64,966 at 64,991 (Oct. 23, 2015).

While the Draft Guidance appropriately does not propose to alter the Commission’s approach, as noted below, NGSA and CLNG ask the Commission to clarify one section of the Draft Guidance to avoid the potential for misinterpretation.

NEPA requires that an agency consider the effects of a major federal action that significantly affects the quality of the human environment.¹¹ In its implementing regulations, CEQ requires federal agencies to consider the effects of the agency’s actions, if the effects may be major and potentially subject to federal responsibility.¹² CEQ defines “direct effects” as effects that are “caused by the action and occur at the same time and place”¹³ and “indirect effects” as effects “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”¹⁴ The environmental reports that project developers prepare for natural gas infrastructure projects are part of the Commission’s NEPA compliance program and consider these potential direct and indirect effects.¹⁵

In applying these statutory requirements and regulatory standards, FERC repeatedly has held in each case it has considered that it is not consistent with the legal precedent interpreting the CEQ regulations and NEPA requirements to determine that the alleged impacts of natural gas production automatically are direct or indirect effects of the permitting of FERC-regulated natural gas infrastructure projects. As the Commission recently explained, proposed pipelines do not cause the environmental effects of natural gas production and the environmental effects are not reasonably foreseeable.¹⁶ Further to the point on the issue of causation, FERC has appropriately described the market reality that economic conditions dictate that it is most likely

¹¹ 42 U.S.C. § 4332(2)(C).

¹² 40 C.F.R. § 1508.18.

¹³ *Id.* at § 1508.8(a).

¹⁴ *Id.* at § 1508.8(b).

¹⁵ 18 C.F.R. § 380.12.

¹⁶ *Empire Pipeline, Inc.*, 153 FERC ¶ 61,379 at P 64 (2015).

that natural gas pipelines will follow natural gas production, rather than pipelines inducing production.¹⁷

FERC further explained that it does not have sufficient information to determine the origin of natural gas that a pipeline might transport due to the robust and highly integrated nature of the U.S. interstate pipeline system and the fungibility of natural gas, rendering any environmental impacts from producing such gas not reasonably foreseeable¹⁸ and FERC has held similarly in recent LNG proceedings.¹⁹ As a result, it is not possible for FERC to provide a meaningful analysis of alleged upstream impacts that would “generate information and discussion on those consequences [that would be] of the greatest relevance to the agency’s decision.”²⁰ Moreover, attempting to determine the environmental impacts from development of entire natural gas producing areas “would render [the Commission’s] review both imprecise, because we can do no better than speculate on the path that development may take, and impractical, because data is unavailable to determine with any clarity the locations and possible resources that may be impacted.”²¹ For these reasons, NGSA and CLNG support FERC’s reasonable and legally sound approach to analyzing upstream production activities in the context of natural gas or LNG infrastructure projects.

FERC Staff has not proposed changes in the Draft Guidance that would expand the scope of FERC’s established indirect effects analysis to include upstream production. NGSA and CLNG understand the Draft Guidance’s reference to “gas wells” in its Cumulative Impacts section²² to refer only to natural gas production activities that are within the scope of a properly tailored cumulative impacts analysis on air resources for the proposed natural gas infrastructure.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *See, e.g., Trunkline Gas Co., LLC*, 153 FERC ¶ 61,300 at PP 135-137 (2015).

²⁰ 50 Fed. Reg. 32,237 (1985).

²¹ *Texas Gas Transmission, LLC*, 153 FERC ¶ 61,323 at P 72 (2015).

²² Draft Guidance at 4-11.

Interpreting this language to expand FERC’s review to encompass potential effects of hypothetical upstream activities as indirect effects under CEQ’s regulations would contradict existing FERC precedent and the intended definition of “indirect effects” under CEQ’s regulations implementing NEPA. Therefore, NGSAs and CLNGs ask the Commission to provide clarity by confirming that this language was not intended in any way to expand FERC’s review to include alleged upstream impacts in its indirect effects analysis under NEPA.

C. The Draft Guidance should not create prescriptive requirements that will delay projects and will not add value to the Commission’s analysis.

As noted above, FERC has a long history of working collaboratively with project developers to develop clear administrative records with appropriate environmental and safety conditions and mitigation measures that support the permitting of natural gas infrastructure projects. Throughout this history, FERC has largely avoided creating prescriptive requirements that mandate a “one-size-fits-all” approach for project applications. Instead, FERC has maintained a more flexible approach, in accord with the agency’s own regulations²³ and with CEQ’s regulations.²⁴

The Draft Guidance confirms this flexible approach, noting that “the information required to develop a complete application for one project may not be the same as that needed for another project.”²⁵ The Draft Guidance also acknowledges that all requested information may not be available in line with the Commission’s preferred review timeline,²⁶ and NGSAs and CLNGs appreciate FERC’s acknowledgement. NGSAs and CLNGs encourage FERC to maintain this flexible approach and to allow project applicants the opportunity to assist FERC to develop a full

²³ FERC’s collaborative approach is embodied in its regulations governing the pre-filing process. 18 C.F.R. § 157.21(a)(2)(ii).

²⁴ 40 C.F.R. § 1507.1 (“It is the intent of these regulations to allow each agency flexibility in adapting its implementing procedures” for compliance with NEPA).

²⁵ Draft Guidance at 4-1.

²⁶ *Id.* at 3-5.

record while avoiding unnecessary permitting delays.²⁷ NGSAs and CLNGs also encourage the Commission to avoid using the Draft Guidance to memorialize Commission Staff's preferences in a way that creates burdensome, prescriptive, uniform requirements that may not be appropriately applied to all projects under NEPA requirements. Such use of the Draft Guidance ultimately would limit project developers' ability to comply with FERC's regulatory requirements in an efficient and cost effective manner and to potentially offer better, safer, or more environmentally sound solutions.

In light of this, NGSAs and CLNGs oppose a number of specific prescriptive requirements in the Draft Guidance including the items listed below and the sections detailed in Attachment A. Where FERC's intent in including specific items in the Draft Guidance that are discussed below and in Attachment A was to provide an example, NGSAs and CLNGs request that the Commission revise the Draft Guidance by adding language in each instance to clarify that point. In addition, NGSAs and CLNGs generally support the comments submitted by CH-IV in the instant proceeding on January 22, 2016.

Volume I.

- **Section 4.0 (Air Quality, Page 4-11).** The requirement to evaluate sources within 50 kilometers would take the U.S. Environmental Protection Agency's ("EPA") most stringent modeling requirement and apply it to any source and every pollutant. Such a requirement would exceed the scope of the NEPA regulations that require applicants to "identify significant environmental effects expected to occur as a result of the project."²⁸

This section instead appears to impose a default "one-size-fits-all" modeling requirement

²⁷ Requiring projects at an early phase to provide the level of detail that typically is not developed until the Front End Engineering Design ("FEED") phase or even the post-FEED phase risks substantial delay in project timelines and without adding significant benefit to the analysis because plans at such an early phase are susceptible to change as the review progresses.

²⁸ 18 CFR § 380.12(b)(2).

for modeling all sources within 50 kilometers of the project source, regardless of the project size. Such a blanket requirement would be burdensome and overreaching. NGSa and CLNG request that FERC eliminate the default 50 kilometer sources requirement and instead require an air quality analysis that is “commensurate with the complexity of the proposal and its potential for environmental impact,”²⁹ including the potential to rely on a permit application’s air quality analysis. In deciding the level of modeling to impose on applicants and particular sources, NGSa and CLNG recommend that FERC consider EPA’s modeling requirements and guidance, which have evolved as air standards have become more stringent and air modeling techniques have improved.³⁰ In addition, as permitted by FERC regulations, NGSa and CLNG submit that the air emission review captured in the Draft Guidance should allow for incorporation by reference of the air quality review conducted by EPA or the appropriate EPA-delegated or SIP-approved permitting authority.³¹

- **Section 4.0 (Air Quality, Page 4-11).** NGSa and CLNG submit that the Commission’s direction in the Draft Guidance to consider other construction emissions should be removed for two main reasons.
 - First, there are significant challenges to quantifying construction emissions for other projects. These challenges include the fact that (i) there is no valid method by which to quantify potentially “significant environmental effects”³² from these unpredictable and fleeting emissions; (ii) information related to the construction equipment to be used and the number of hours and time of day that the equipment will be used cannot

²⁹ *Id.* at § 380.12(a)(2).

³⁰ EPA has established guidance that allows a permittee to determine whether the air impacts exceed a significant impact level threshold, and if so, requires evaluation of cumulative sources within a distance of 10 to 50 kilometers, depending on the averaging period and the demonstrated modeling impacts.

³¹ 18 CFR § 380.12(a)(2).

³² *Id.* at § 380.12(b)(2).

- be estimated in way that is not speculative; and (iii) external intervening elements, like weather, third parties' business plans, and changing emissions standards, factor into the cumulative analysis but cannot be predicted. As a result, an estimate derived from the available information would be no more than speculative guess that fails to provide for a meaningful discussion.
- Second, FERC currently evaluates construction emissions under the EPA's General Conformity regulatory requirements. Construction emission review requirements in excess of EPA's General Conformity requirements increase regulatory burdens on applicants without proceeding through the required notice and comment rulemaking process.³³
 - **Section 4.0 (Air Quality, Page 4-11).** NGSa and CLNG understand FERC's reference to "gas wells" in this section to apply only to wells that fall within a properly scoped cumulative impacts review for air resources. Further to that point, consistent with its decision to include other types of emissions sources in a cumulative impacts review and with NEPA itself, FERC should not include gas wells in its NEPA review where development plans for any such wells are proprietary, not known, or where there is insufficient public information available for meaningful analysis. Accordingly, to ensure that project developers and other stakeholders do not misinterpret FERC's meaning, NGSa and CLNG request that FERC clarify the language in this section to confirm that it only will consider natural gas wells that both fall within the properly tailored scope of

³³ See, e.g., *Appalachian Power Co. EPA*, 208 F.3d 1015, 1024 (D.C. Cir. 2000) (stating an agency may not escape the notice and comment requirements by labeling a binding addition to a rule as a mere interpretation). In addition, established programs to mitigate construction emissions already exist. For example, nonattainment and maintenance areas, the General Conformity requirements prioritize review of construction emissions consistent with NEPA's regulatory requirement, which is captured in FERC's implementing regulations, to evaluate projects "commensurate with... its potential for environmental impact." 18 CFR § 380.12(a)(2).

the cumulative impacts analysis on air resources for a project and for which there is sufficient public information to result in a meaningful analysis.

- **Section 4.0 (Noise, Page 4-11).** NGSA and CLNG recommend that the Commission explain that the “other projects” discussed in this section is intended only to include “other projects” for which there is sufficient public information available at the time of the NEPA review to meaningfully contribute to the cumulative impacts analysis. In addition, because noise attenuation is influenced by site-specific conditions, NGSA and CLNG recommend that the Commission include a performance-based approach in the Draft Guidance that allows applicants to demonstrate geographic range for the cumulative impacts analysis that would be appropriately applied to their specific project to ensure a properly tailored NEPA review.
- **Section 4.1.3.2 (Aboveground Facilities, Page 4-30).** NGSA and CLNG request that the Commission revise the phrase “briefly describe the cleanup and disposal techniques that would be used” to read “briefly describe the contaminated site management that would be used.” This revision would eliminate the limiting language of cleanup/disposal to include *in situ* management and allow applicants to better inform FERC, other agencies, and the public about the management of pre-existing conditions.
- **Section 4.1.8 (Non-jurisdictional Facilities, Pages 4-33 through 4-35).** NGSA and CLNG recommend that FERC expand the examples of non-jurisdictional facilities to include federal highways.
- **Section 4.2.3.2 (Construction and Operation Impacts, Pages 4-48 through 4-50).** The Draft Guidance requires compensatory mitigation plans for wetlands that would be filled or permanently lost or altered. NGSA and CLNG request that the Commission remove

this requirement in light of the fact that mitigation plans are developed over time, and delivering fully developed compensatory mitigation plans at the pre-Front End Engineering Design (FEED) stage of a project would therefore be premature and present significant challenges.

- **Section 4.6.4 (Geologic and Other Natural Hazards, Pages 4-78 through 4-80).** NGSAs and CLNG request that the Commission provide consistency in the requirements for natural hazard analysis. Section 13.3 in Volume II requires analysis of natural hazards that are not listed in Section 4.6.4 (e.g., wildfires, tornados, and seiche). In addition, NGSAs and CLNG suggest that the Commission separate out all “other natural hazards” from geotechnical hazards to enable best-fit analyses and reporting by applicants and to assist in review by FERC, other agencies, and the public.
- **Section 4.9 (Resource Report 9, Information Recommended or Often Missing, Page 4-112).** NGSAs and CLNG recommend that the Commission remove references to “meter and regulation facilities” in the first bullet under “Noise and Vibration.” The reference to meter stations contradicts text on page 4-121 of the Draft Guidance that appears to limit applicability of noise surveys to only compressor and LNG stations.
- **Section 4.9.2.1 (Existing Noise Levels, Pages 4-120 and 4-121).** NGSAs and CLNG request that FERC provide a demonstrated technical basis for showing Noise Sensitive Areas within 1 mile of proposed new facilities. Given the fact that noise attenuation is influenced by site-specific conditions, NGSAs and CLNG suggest a performance-based approach that allows applicants to demonstrate the appropriate distance at which Noise Sensitive Areas should be represented. In some instances, the distance of appropriate analysis could be less than 1 mile.

Volume II.

- **General.** NGSAs and CLNGs encourage the Commission to avoid imposing risk-based conditions on top of proposed project designs. While these conditions can be construed as a means of providing project compliance flexibility, they are most effective when proposed by proponents as alternatives to prescriptive requirements.
- **Introduction (Page xii).** Given the inherent variability across the industry in defining FEED elements, the indication that Resource Report 13 will require FEED of the complete facility prescribes industry approaches and is overly limiting. Accordingly, NGSAs and CLNGs request striking the sentences, “The level of detail to be submitted in Resource Report 13 will require FEED of the complete facility. The FEED should include....” and recommend that the Commission replace that language with “The level of detail to be submitted in Resource Report 13 should include all features necessary to evaluate the design, construction, commissioning....”
- **Section 13.2.4 (Geotechnical Information, Page 26).** NGSAs and CLNGs recommend that the Commission reduce instances of redundancy and consolidate key elements in the Draft Guidance. For example, “frost” is addressed in multiple sections. Consolidating technical requirements will enable applicants to effectively address required elements and enable efficient reviews by FERC and the public. In addition, the Draft Guidance takes an overly robust approach that lists myriad tests without making it clear whether these tests are required. Many tests listed may not be relevant or even feasible for some sites, while others listed arguably provide the same information. NGSAs and CLNGs therefore recommend that the Commission give strong consideration to rewriting the Draft

Guidance in a less prescriptive manner to specify the engineering parameters that are required to be characterized rather than listing specific test types/methods.

- **Section 13.2.4.2 (Geotechnical Information, Page 26).** There is a comma missing between the words “content” and “dry.” NGSAs and CLNG request that the Commission revise this section accordingly to ensure applicants understand that two separate parameters are required.
- **Section 13.2.4.6 (Geotechnical Information, Page 26).** NGSAs and CLNG note that “Soil Improvement” is not geotechnical condition information; rather it is an engineering solution. NGSAs and CLNG therefore recommend that Section 13.2.4 be renamed “geohazards” or a similar title and that this section focus on the risks to be characterized rather than solutions for those risks. Such revisions would allow applicants to focus analysis on risks comprehensively and separate from solutions, improving applicants’ analysis and review by FERC, other agencies, and the public.
- **Section 13.11.1.13 (LNG Storage Tanks, Page 58).** NGSAs and CLNG request that the Commission clarify what “percent volume” [*sic*] is intended to mean and whether the request is for the percentage of the working volume of the tank to be filled with water. In addition, NGSAs and CLNG request that the Commission clarify how this volume could be reported in parts per million (ppm) or if an alternate volumetric measurement is acceptable.
- **Section 13.B.2 (Design Philosophies, Page 104).** In recognition of the fact that design philosophies are internally focused to guide project teams to alignment, NGSAs and CLNG request that the Commission provide a basis for requiring operations philosophies and confirm that FERC review of design philosophy is required for engineering review of

a liquefaction facility with a clear indication on how design philosophy review is protective of public health and the environment.

- **Section 13.F.1.3 (Piling Specifications, Page 111).** It is not clear why “Piling Specifications” are listed separately from “Foundation Specifications” since piling specifications are one type of foundation. NGSA and CLNG request that the Commission clarify whether it requires different information for pilings and, if so, that the Commission provide a definition of those requirements for public review and comment.
- **Section 13.I.5 (Floods, Page 135).** NGSA and CLNG recommend that the Commission develop screening criteria for all hazards addressed in the Draft Guidance. For example, floods and tornados are two natural hazard examples that may not apply to many liquefaction facility sites.
- **Section 13.J.3 (Climatic data, Pages 138).** It is unclear why the term “Climatic” is used in reference to geotechnical investigation and foundation recommendations. NGSA and CLNG request that FERC define the requirement to provide climatic data associated with geotechnical investigation and foundation report.
- **Section 13.J.4 (Geotechnical Investigation, Pages 138 through 140).** NGSA and CLNG request that the Commission clarify whether the separation distance for process area borings is “minimum” or “maximum” of 200 to 300 feet. In addition, NGSA and CLNG request that FERC include consideration of site-specific conditions and allow applicants to determine appropriate spacing according to site-specific conditions. Such modifications would permit a less prescriptive and more appropriately performance-based approach to providing design information necessary for FERC to review an

application. Also in Section 13.J.4, NGSAs and CLNG note that ground improvement is an engineering solution and request that FERC align engineering solutions with design recommendations rather than with geotechnical investigation guidance.

- **Section 13.J.4.1 (Geotechnical Investigation, Page 139).** Specifying a prescriptive list of test methods is a limiting approach. Cone penetration tests collect similar data to that gained in geotechnical borings and are not typically successful in dense sand and gravel. Rock coring is only useful and necessary if rock is near the proposed foundation depth, which is not applicable at all sites. Accordingly, NGSAs and CLNG request that FERC utilize a performance-based approach, listing the parameters required rather than specific test methods, to ensure a properly scoped NEPA review.
- **Section 13.J.4.5.6 (Geotechnical Investigation, Page 140).** NGSAs and CLNG request that the Commission revise this section, which provides an engineering solution rather than investigation/characterization. “Special types of cement” are a possible mitigation measure, not something that requires mitigation. NGSAs and CLNG consequently request that FERC separate the engineering solutions from investigation/characterization to allow appropriately focused investigations and agency reviews.
- **Section 13.J.5 (Foundation Recommendations, Pages 140 and 141).** NGSAs and CLNG request that the Commission provide additional information explaining why “vaporizers” are listed specifically and separately from the other equipment to inform applicant analyses accordingly during investigations.
- **Section 13.J.5.2.8 (Pile Driving Analyzer®, Page 141).** NGSAs and CLNG recommend that the Commission replace the reference to a Pile Driving Analyzer® to enable applicants to propose the appropriate method for testing. The Pile Driving Analyzer® is a

registered trademark and specific manufacturer's product and it may not be appropriate for all pile types with "Quality Assurance," "Production Pile Testing," or similar measures.

- **Section 13.J.5.3 (Ground Improvement, Page 141).** Many of the listed ground improvement options may not be applicable for a particular site. Therefore, NGSA and CLNG request that FERC provide screening criteria and/or language that allows applicants to propose the applicability of these options for agency review to ensure that the NEPA review is appropriately tailored to the specific project.
- **Section 13.J.6 (Foundation and Support Drawings and Calculations, Pages 141 and 142).** The meaning of the word "floor" is not clear as used in this section. The wording of the requirements implies that a steel shell and concrete base slab are required when the bottom of the tank is steel, which does not follow from NFPA 59A requirements. If this is an intentional limitation on tank design configurations, NGSA and CLNG request that FERC include a specific statement to that effect in the Draft Guidance and additional guidance regarding related requirements.

III. CONCLUSION

NGSA and CLNG believe that FERC should not use the Draft Guidance as a means to impose additional requirements on project developers beyond those already contained in FERC's regulations; that FERC should maintain its appropriately scoped approach to considering direct, indirect, and cumulative impacts under NEPA; and that FERC should not create additional prescriptive requirements that limit project developers' ability to comply with FERC's regulatory requirements efficiently and cost effectively. NGSA and CLNG look forward to continuing to advance the goals of delivering natural gas supplies across the country safely and efficiently.

Respectfully submitted,

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Attachment A

Comments of NGS&A and CLNG on FERC Draft Guidance Manual for Environmental Report Preparation
Attachment A
FERC Docket No. AD16-3-000

Cmt #	Vol.	Sec.	Pg #	Item in Draft Guidance Document	Comment	Recommendation
1	I	1.1	1-1	Document states "Nevertheless, project sponsors and other participants who prepare, use, or review these types of documents are not required to use this manual."	This statement may result in uncertainty on behalf of the applicant regarding the content, format, and level of detail expected in the submitted application.	Recommend inserting additional wording in this section to more effectively clarify the expectations and to better align with the wording in 18 CFR 380.12, which states: - "The detail of each resource report must be commensurate with the complexity of the proposal and its potential for environmental impact." - "If any resource report topic is required for a particular project but is not provided at the time the application is filed, the environmental report shall explain why it is missing and when the applicant anticipates it will be filed."
2	I	4.1	4-12	Document states "If Resource Report 5, Socioeconomics is not provided, provide the start and end dates of construction, <u>the number of pipeline spreads that would be used, and the workforce per spread</u> ".	Underlined text is not practical to provide at the time of submittal. It implies that formal construction bids have been issued, evaluated, and awarded with plans complete.	Recommend re-wording item to reflect that preliminary or typical workforce details be provided.
3	I	4.1.1.3	4-18	States that alignment sheets should also show the location and widths of the temporary and permanent rights-of-way, locations and dimensions of additional temporary workspaces (ATWS), property boundaries and tract numbers, temporary and permanent access roads, horizontal directional drill (HDD) entry and exit locations, and sensitive environmental resources such as streams and wetlands.	It is not clear if it is generally accepted that these would be the "planned" or "proposed" alignment sheet details as formal purchase of the land and ROWs typically would not occur at this stage. As such, these items are subject to change due to possible issues with obtaining certain easements.	Recommend including wording such as "planned" or "proposed" to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.
4	I	4.1.3.2	4-30	Section requires that the number of construction workers for each facility be identified.	Construction execution details at this level are conceptual at this point in time and subject to change depending on the installation contractor that is selected.	Recommend including wording such as "estimated number" or "anticipated number" of workers.

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Cmt #	Vol.	Sec.	Pg #	Item in Draft Guidance Document	Comment	Recommendation
5	I	4.2	4-35 and 4-42	Document states "Provide a <u>site-specific construction plan for each proposed HDD crossing</u> in accordance with section V.B.6.d of the Federal Energy Regulatory Commission's Wetland and Waterbody Construction and Mitigation Procedures".	Site specific HDD construction plans, meeting the detailed requirements on Page 4-42, are developed in Detailed Design and are not available at the time of submittal. Only typical, not specific, drawings / plans may be available at time of submittal to be finalized later during Detailed Design.	Recommend rewording this section to allow flexibility on the part of the applicant to be able to provide data/information that is consistent with the current state of the design.
6	I	4.9	4-112 and 4-121	Document states "Describe the existing noise environment and ambient noise surveys for compressor stations, liquefied natural gas facilities, <u>meter and regulation facilities</u> , and drilling locations".	Underlined text references ambient noise surveys for meter and regulation stations. This seems to indicate that noise surveys are required for meter stations, however the text at the top of page 4-121 seems to limit applicability of noise surveys to only compressor and LNG stations.	Recommend re-wording text in the table on page 4-112 to exclude noise surveys for M&R stations.
7	I	4.9.1.3	4-119	Document states "For projects involving the construction of new compressor stations that would include gas-fired turbines, discuss the feasibility of using electric-motor-driven compressors. As part of this discussion, identify the power required and the number of electric motors that would be required. <u>Compare the size of the electric transmission line necessary under the current proposal with what would be required for the electric motors.</u> "	Underlined text regarding comparing the size of electric transmission lines is not practical given that electric transmission lines are provided by 3rd party utilities who may not appreciate the urgency of the needed information in providing the necessary information to meet this requirement.	Recommend deleting the requirement.

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8	I	4.9.2.3	4-123	Document calls for noise survey data for proposed equipment to be presented in 1/3 octave bands.	Requiring data to be provided in 1/3 octave bands is not practical given the current industry practice of using octaves to capture and process noise survey data. Requiring 1/3 octaves will require noise survey data to include three times the spectral information, which is outside the scope of available information from equipment manufacturers and widely used modelling software for processing the data. In addition, it is recognized across the industry that requiring noise survey data to be in 1/3 octaves will provide additional granularity that is not considered to add additional value over 1/1 octave format given the nature of the equipment and overall sound levels used to evaluate compliance with environmental/sound criteria.	Recommend deleting the requirement.
9	I	380.12 (o)	Attachment 1 1-33	Item (5) requires manufacturer's specifications, drawings, and literature on the fail-safe shut-off valve for each loading area at a marine terminal.	Selection of vendor may or may not have occurred at this point in time (prior to detailed design).	References to "manufacturer's" be deleted from the paragraph and the requirement should simply state that specifications, data sheets, and drawings be provided.
10	I	380.12 (o)	Attachment 1 p. 1-33	Item (8) requires that the manufacturer be specified for major process components.	Selection of vendor may or may not have occurred at this point in time (prior to detailed design).	Recommend that "(if known)" be inserted after "manufacturer" to allow flexibility on the part of the applicant to be able to provide data/information that is consistent with the current state of the design.

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11	I	380.12 (o)	Attach 1 p. 1-33	Item (9) requires that manuals and construction drawings be provided for LNG storage tanks.	Manuals typically would be provided as a final deliverable from the tank contractor (i.e., after or near the timing of completion of tank construction). Construction drawings that would be provided at this point in time would be conceptual in nature and used for constructability workshops and planning. Final construction drawings would not be available until after contract award.	Recommend that "available" be inserted after "Provide" to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.
12	II	Various	Various	Many references to "all information". This is general in nature and all is to prohibitive at the end of FEED (e.g. all hazardous chemical to be described and MSDS provided).	Some of the detail is not available until Detailed design.	Recommend rewording to state know or anticipated materials. Potentially to state generic class of information that is available at the end of FEED. (e.g. in the case of service chemicals, class of water treating or corrosion chemical to be used).
13	II	Various	Various	Many references to analysis such as dispersion and explosion without reference to approved tools and required assumptions.	There are many available tools that can be used for consequence analysis and many industry practices on how to bound assumption for credible case as opposed to all cases.	Recommend better definition of which methodologies are acceptable to FERC and how to treat assumptions that go into these analysis.
14	II	Various	Various	Several references are made to items being reasonable or reasonably (e.g., reasonable degree of accuracy, provide a reasonable understanding, that can be reasonably associated with, which may reasonably have a potential, cannot be reasonably correlated, whenever reasonable).	What is or is not reasonable cannot be quantified and, as such, is very much based on the opinion of an individual.	Recommend deleting the use of "reasonable" and "reasonably" from this document.

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15	II	Various	Various	There are numerous requirements listed in Section 13 to provide the minimum, normal, and maximum operating and design conditions for equipment (e.g., flow rates, temperatures, pressures, capacities, etc.).	Until items are actually procured, the final determination of minimum and maximum conditions cannot be made. As long as it is understood that any values provided in the Resource Report are made on the basis of the <u>anticipated</u> or <u>planned</u> system operation rather than on the actual equipment data, then it may be acceptable to provide this information. However, if a higher degree of accuracy is required, then these requirements need to be revised to clearly state that they are the anticipated conditions that will be used to start Detailed Design. Actual values will not be determined until Detailed Design progresses.	Recommend that "anticipated" or "planned" be inserted in sections requesting operating and/or design conditions for equipment.

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16	II	Various	Various	General Comment on Level of Available Detail to Develop Resource Report 9 & 13: The GUIDANCE MANUAL states that the level of detail to be submitted in Resource Report 13 will require front end engineering design (FEED) of the complete facility.	Some of the items specified in the Guidance Manual typically are not available at this stage of design. For example, final decisions on manufacturers for many components are not made during FEED and, as such, manufacturer-specific data is not available. Further, even for items where manufacturers have been selected, unless a purchase order has been placed well in advance of the completion of FEED manufacturer-specific data of the nature listed in the Guidance Manual may not be available. Accordingly, manufacturer-specific data such as make, model, and component details typically are not available. Also, some final piping or component sizes and alarm set points may be undefined due to the need for manufacturer feedback, which is part of the normal Detailed Design process. Lastly, details such as elevation views of structures or buildings and location plans for instruments and hazard detection / protection devices typically are not done during FEED.	General recommendation for consideration across the entire document (Volume II) to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.

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17	II	Intro	xiii	Document states: "The <u>level of detail</u> to be submitted in Resource Report 13 <u>will require front end engineering design (FEED) of the complete facility</u> . The FEED should include all features necessary to evaluate the design, construction, commissioning, start-up, operation, and maintenance of the facility to the extent that detailed design will not result in changes to the siting considerations, basis of design, major equipment, safety and security systems, or operating conditions.	The underlined text applies excessive burden on the applicant to meet the criteria relative to the normal course of a project timeline and available level of detail at the time of application. The underlined text also does not appear to align with the cited regulations that serve as the basis for the document, which do not explicitly call for FEED to be "required". In addition, requiring FEED to be complete seems to contradict the intent of the NEPA process in that the applicant would now have to bring forward a predetermined outcome which may inadvertently preempt the EIS process.	Recommend re-wording the section to remove specific mention of FEED and instead read "The level of detail to be submitted in Resource Report 13 should include all features necessary to evaluate the design, construction, commissioning, start-up, operation, and maintenance of the facility to the extent that detailed design will not result in changes to the siting considerations, basis of design, major equipment, safety and security systems, or operating conditions."
18	II	Intro	xiii	Section states that "resource reports should contain site-specific design information produced in the normal course of developing the design of a facility".	Numerous examples are detailed within this comment sheet of items that typically are not developed or available during FEED. As such, the expectation that these items should be able to be provided in the Resource Report as part of the "normal course" of design is not correct given the reports are provided prior to Detailed Design.	Recommend rewording this section to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.
19	II	13.A.3	100	Section requires an organizational chart for the construction workforce.	Construction execution details are not established at this level during FEED. A Work Breakdown Structure (WBS) could be provided, but until actual construction contract bids are received the organizational structure of the construction workforce is not available.	Recommend deleting requirement or re-wording to read "Provide preliminary Work Breakdown Structure (WBS) for the construction of the facility".
20	II	13.E.4.2	108	Section requires LNG tank pipe penetration size or nozzle schedule on the P&IDs.	Nozzle schedules and sizes are not finalized until Detailed Design.	Recommend deleting the requirement.

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21	II	13.E.4.3	108	Section requires piping with line number, piping class spec, size and insulation.	Not all lines are sized during FEED. This is particularly so with respect to minor process lines and many utility services. Furthermore, lines that are sized during FEED are subject to change once final stress, hydraulic, and AIV calculations are performed. This work is done in Detailed Design.	Recommend deleting the requirement.
22	II	13.E.4.7	108	Section requires all valve types, valve operator types, and valve fail position.	Final valve selection typically is not performed until Detailed Design. Valve type as well as actuator type are subject to change based on manufacturer feedback and/or space or operational constraints that are identified during Detailed Design.	Recommend deleting the requirement.
23	II	13.E.4.8	108	Section requires that all valves are numbered, including control, isolation, check, vent, drain, and car-sealed valves.	Typical practice is that only engineered valves (e.g., control, blowdown, shutdown) are numbered during FEED. Manual valves are not numbered until Detailed Design.	Recommend deleting the requirement.
24	II	13.E.4.10	108	Section requires drawings of all control loops including software connections.	Software connections for equipment-related control loops are not finalized until receipt of manufacturer's details, which is not until Detailed Design.	Recommend deleting the requirement.
25	II	13.E.4.11	108	Section requires alarm and shutdown set points.	Alarm set points are not finalized until Detailed Design. Further, alarm settings typically are not shown on P&IDs.	Recommend deleting the requirement.

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26	II	13.E.4.14	108	Section requires relief valve inlet and outlet piping size.	Size of relief valves, including inlet / outlet lines and orifice, are not finalized until final system and equipment details and final piping / layout configurations are available. This information is not available until Detailed Design.	Recommend deleting the requirement.
27	II	13.E.5.3	110	Section requires that section and elevation drawings of major equipment, pipe racks, and typical piping support system be provided.	Section and elevation drawings developed during FEED typically are done only to a sufficient level to support layout, operational, and constructability studies. As such, if done, they will be very limited in the information that they contain. Section and elevation drawings typically are not produced until detailed information is provided from manufacturers and additional modelling is done during Detailed Design.	Recommend deleting the requirement.
28	II	13.G.1	116	Section states that the PHA should include lists of the recommendations and status of implementation. It also states that recommendations resulting from the HAZID and HAZOP reviews performed during the FEED phase of the project should be included in the design submitted with the application.	While the observations / findings are available, there is a high probability that recommendations will not be developed for all of these items during FEED. Typical practice is to provide a list of the outstanding items to the Detailed Design contractors bidding on the project to ensure that they are aware of the status of design and know that further activities are required to resolve these items.	Recommend that "available" be inserted before "recommendations" for PHA, HAZID, and HAZOP comments.

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29	II	13.G.7	118	Section requires a number of security system related drawings (e.g., security fencing, site and onsite access control, barriers, lighting layout, intrusion monitoring (camera) and intrusion detection layout).	Typical practice during FEED is that security system related items are addressed primarily via philosophy documents and specifications, which are required in other sections of the guidance document. Development of drawings for these items is not done until Detailed Design. Furthermore, any lighting drawings that are produced during FEED are subject to the results of any illumination studies that may be conducted during Detailed Design as well as final selection of lighting type. As such, they are subject to change.	Recommend deleting the requirement.
30	II	13.H.2	120	Section requires the following information: pipe diameter or pipe size, volume of container, or size of equipment [13.H.2.9]; length of piping (feet and meters) or number of components (each) [13.H.2.10]; and maximum connection diameter in the piping segment [13.H.2.11].	Pipe size, length, and connections are not finalized until Detailed Design.	Recommend deleting the requirement.
31	II	13.I.2	131	Section requires that 100- and 500-, 1,000-, 2,500- and 10,000-year return period elevations be considered.	Inclusion of 2,500-year return period is inconsistent with remainder of the requirements of this section as well as the remainder of the document (i.e., this is the only paragraph where 2,500-year return period is mentioned).	Recommend deleting the 2,500-year return period requirement.
32	II	13.J.5	140	Section requires a summary of foundation sizes, preliminary loading, and type of foundations proposed shall be provided for buildings, major liquefaction and power plant equipment, walls, pipe supports, berms, and other significant foundations.	Loadings for items other than major equipment and major buildings typically are not defined during FEED.	Recommend re-wording requirement to read "Provide summary of available foundation sizes for major equipment/buildings".

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33	II	13.L.2.6	144	Section requires LNG tank pipe penetration size and schedule of openings.	Nozzle schedules and sizes are not finalized until Detailed Design.	Recommend deleting the requirement.
34	II	13.M.1	145	Section requires a list of piping and valves with design conditions.	Design conditions per piping service class and valve type (catalog code) typically are available in the project specifications; however, providing a list of all valves is not a typical FEED activity. As such, it is not understood if the information contained within the piping service class tables and valve catalog is what this section's requirement is truly after as opposed to wanting a comprehensive listing of the valves on the project.	Recommend re-wording or deleting this requirement to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.
35	II	13.M.5	145	Section requires manufacturer's information for major process equipment items.	Selection of equipment vendors during FEED typically is limited to long delivery items and items associated with some licensed processes. As such, manufacturer's information will not be available for a substantial portion of the facility.	Recommend re-wording or deleting this requirement to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.
36	II	13.M.8.1	146	Section requires preliminary building plan and elevation drawings.	Development of building drawings during FEED typically is limited to overall plan drawings only. As such, elevation drawings and any detailed plan drawings likely will not be available until Detailed Design.	Recommend re-wording or deleting this requirement to allow flexibility on the part of the applicant to be able to provide data / information that is consistent with the current state of the design.
37	II	13.N.1	147	Section requires a list of anticipated power requirements for equipment for each operating mode.	Manufacturer specific details will not be available until Detailed Design.	Recommend that this section be re-worded to read "Provide a list of up to date, preliminary power requirements based upon key information developed to date".

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38	II	13.N.3	147	Section requires single line drawings for power distribution be provided.	Manufacturer specific details will not be available until Detailed Design.	Recommend that this section be re-worded to read "Provide up to date, preliminary single line drawings for power distribution based upon key information developed to date".
39	II	13.N.6.1	147	Section requires electrical pass-through seal drawings for services such as pumps / expanders and instrumentation.	General specifications and/or standard details drawings typically are available; however, equipment or instrument specific details are not finalized until Detailed Design.	Recommend that this section be re-worded to read "Provide preliminary electrical pass-through seal drawings and/or standard details".
40	II	13.P.1	149	Section requires the following information for instruments: instrument range [13.P.1.3]; calibration [13.P.1.4]; and alarm set points [13.P.1.5].	Manufacturer specific details are not available during FEED. Furthermore, items such as range and alarm set points typically are not set until Detailed Design.	Recommend deleting the requirement.
41	II	13.Q.1	150	Section requires cause and effect matrices be provided.	Manufacturer specific details will not be available until Detailed Design.	Recommend that this section be re-worded to read "up to date, preliminary cause and effect matrices based upon key information developed to date" be provided.
42	II	13.Q.3	150	Section requires the following information: shutoff valve type [13.Q.3.4]; shutoff valve actuator type [13.Q.3.5]; and shutoff valve actuation / closure time [13.Q.3.8].	Manufacturer specific details will not be available yet. Design basis for valve type and response time of shutdown valves typically is identified in a project philosophy and/or on individual shutdown valve data sheets. However, actual valve type and valve actuator type typically are not finalized until Detailed Design. Additionally, actual valve closure response time will not be known until the valves are procured and valve closure tests are conducted, which does not occur until Detailed Design.	Recommend deleting the requirement.

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43	II	13.Q.4	150	Section requires that manufacturer's specification, drawing, and literature on fail-safe shutoff valves and actuators be provided.	Manufacturer specific details will not be available yet. Minimum functional requirements likely are set, but valve specific final values are not known during FEED. Information that would be available is representative catalog data from some vendors under consideration, but this could be meaningless depending on the outcome of the final selected vendor, which typically does not happen until Detailed Design.	Recommend deleting the requirement.
44	II	13.R.1	151	Section requires the following information: relief valve type [13.R.1.4]; relief valve size [13.R.1.5]; and relief valve capacity [13.R.1.6].	Relief, flare, and vent design is considered preliminary during FEED. Final sizing of system and components is not made until Detailed Design once process system details are finalized, manufacturer details are known, and facility layout is frozen. As such, these items are highly subject to change.	Recommend deleting the requirement.
45	II	13.S.3.2	153	Section requires that cross sections and details be provided for spill containment.	Cross sections and details typically are not developed during FEED.	Recommend deleting the requirement.
46	II	13.S.4.2	153	Section requires that passive fire structural protection drawings be provided.	General fire protection area requirement drawings likely can be provided; however, detailed drawings are not yet available.	Recommend deleting the requirement.

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47	II	13.S.5	153	Section requires that a matrix showing the location and elevation of all hazard detection equipment be provided.	Location plans for hazard detection equipment typically are not provided during FEED. As such, any description provided for a particular device location likely would be a listing of the particular equipment or area served and not a specific physical location. Additionally, elevation of these devices typically is not addressed until Detailed Design.	Recommend deleting the requirement.
48	II	13.S.6	154	Section requires that drawings showing the location of all hazard detection equipment be provided.	Location plans for hazard detection equipment typically are not provided during FEED.	Recommend deleting the requirement.
49	II	13.S.7	154	Section requires that a matrix showing the location and manufacturer / model for all dry chemical equipment (and similar types of hazard control systems used at the site) be provided.	Location plans for hazard control equipment typically are not provided during FEED. As such, any description provided for a particular device location likely would be a listing of the particular equipment or area served and not a specific physical location. Additionally, manufacturer specific details will not be available yet. Acceptable manufacturer and minimum functional requirements likely are set, but specific final types are not known.	Recommend deleting the requirement.
50	II	13.S.8	154	Section requires that drawings showing the location of all hazard control equipment be provided.	Location plans for hazard control equipment typically are not provided during FEED.	Recommend deleting the requirement.

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51	II	13.S.9	154	Section requires that manufacturer / model be provided for all fire water equipment including deluge systems, sprinklers, high expansion foam systems, monitors, hydrants, and hose stations.	Manufacturer specific details will not be available yet. Acceptable manufacturer and minimum functional requirements may be set for some of the items, but specific final types are not known.	Recommend deleting the requirement.
52	II	13.T.1	156	Section requires that copies of company, engineering firm, or consultant studies that support design decisions such as selecting a specific type of equipment where other alternatives were available be provided.	Information contained in these studies could be of a proprietary nature. As such, disclosure of this information could impact our competitive advantage in certain areas. Recommend deleting this section entirely.	Recommend deleting the section entirely.