

5610000 COATING EXISTING STRUCTURAL STEEL
COMMENTS FROM INDUSTRY REVIEW

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Comment: (Internal Review comment 10-7-09)

Will section 560 be revised now that existing surfaces will not have to be addressed in section 560? Removing all relevance to existing surfaces in section 560 will help alleviate confusion in the field concerning what sections are applicable. Also it would be beneficial to everyone if shop and field painting can be addressed separately for new steel in section 560.

Thank you for asking.

Response:

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Comments: (Internal Review comment 10-7-09)

1. 561-2.1: Spell out MSDS and ACGIH the first time it is used.
2. 561-2.1: The second paragraph is not clear enough about what tests are to be run for what elements.
3. 562-10.2.1: Add SSPC to the second sentence.
“The written plan must be in accordance with *SSPC* Project Design - Industrial Lead Paint Removal Handbook, Volume II, Phase 6, Environmental Monitoring, and specifically include, but not be limited to, providing a scaled map of the work site layout showing the proposed number and location of soil sampling, TSP monitoring sites, waste storage areas, staging areas, temporary waste storage areas, and ambient air and personnel sampling frequency.
4. 562-10.2.1 Second paragraph.
Comply with all applicable Federal, State, and Local rules and regulations. Immediately cease all operations in the event a violation of any environmental regulation occurs or *for* failure to properly execute any pollution control provision. Operations *may* ~~will~~ only resume after written proposed corrective procedures have been submitted to, and approved by, the Engineer and implemented.
5. 561-10.2.2 Second sentence.
Seek permit determination from these regulatory agencies to avoid any potential *permit* non-compliance ~~permit~~-issues during work activities.
6. 561-10.2.3.

561-10.2.3.1 Visible Emissions: Assess the visible emissions using EPA Method 22, Timing of Emissions as defined by 40 CFR 60, Appendix A, Standards of Performance for New Stationary Sources. During abrasive blasting, do not allow visible emissions from *a* containment to exceed a random cumulative duration of more than one percent of the workday (SSPC Guide 6, Level 1 Emissions). During pressurized water cleaning, do not allow visible emissions from *a* containment to exceed a random cumulative duration of more than ten percent of the workday (SSPC Guide 6, Level 3 Emissions).

7. 561-10.2.3.2.

561-10.2.3.2 Total Suspended Particulate Matter: Control emissions from the containment area to prevent exceeding the Total Suspended Particulate Lead [~~move this spelled out TSP to the first use of TSP in 561-10.2.1~~] (TSP Lead) of $1.5 \mu\text{g}/\text{m}^3$ over a 90 day period, or the daily and adjusted daily allowances of SSPC-TU 7. Conduct TSP Lead monitoring in accordance with 40 CFR 50, Appendix B, Reference Method for Determination of Total Suspended Particulate Matter in the Atmosphere (high volume sampler required), and 40 CFR 50, Appendix G, Reference Method for Determination of Total Suspended Particulate Matter Collected from Ambient Air. Position the TSP Lead monitoring equipment in general accordance with 40 CFR 58, Ambient Air Quality Surveillance.

When lead is present in the coating, perform TSP Lead background monitoring for a period of three days prior to the beginning of abrasive blast cleaning operations. Submit the results from background monitoring and the first week of monitoring during abrasive blast cleaning to the Engineer for review within five calendar days after the first week of work. Continue monitoring *unless* ~~until~~ otherwise directed by the Engineer.

8. 561-10.2.3.3.

Spell out NIOSH.

9. 561-10.2.4 First paragraph.

561-10.3 Containment System: Submit a written containment system design plan in accordance with this section and the contract documents at the pre-construction *conference meeting* or as directed by the Engineer which clearly describes the proposed containment system applicable to the intended removal method and in accordance with the requirements outlined herein and SSPC Guide 6, Guide for Containing Debris Generated During Paint Removal Activities. Ensure the plan includes, but *is* not be limited to, removal method; methods for collecting debris; and containment enclosure components. Use fire retardant materials. Provide containment drawings, calculations, and assumptions, including ventilation criteria if applicable, signed and sealed by a Specialty Engineer. Provide a complete structural impact analysis prepared by a Specialty Engineer to verify the existing structure can withstand the dead, live and wind loads imposed upon the structure due to the containment system. Ensure the lighting inside the containment is in accordance with SSPC Guide 12, Guide for Illumination of Industrial Painting Projects. Provide lighting to a minimum of 10 foot-candles for general, 20 foot-candles for work, and 50 foot-candles for inspection. All drawings and calculations must be submitted and accepted before any work begins. Include a clear description of the ventilation system components and information including the fan curve and design point on the proposed dust collector. Design to provide ventilation according to the notes provided in SSPC Guide 6: 100 feet per minute cross draft *and* 50-60 feet per minute downdraft.

Isolate the immediate area of the structure to ensure compliance with current and permit requirements for air, water, soil, and pollution prevention. Protect the containment system from vehicular and pedestrian traffic. Ensure that under no circumstances, *will* any paint, paint chips, or other debris fall outside of the containment area. Repair any damage created by fastening, bracing, or handling the scaffolding and staging, *on* ~~of~~ any surrounding property. If a suspended platform is constructed, use rigid and/or flexible materials as needed to create an air and dust impenetrable enclosure. Verify that the platform and its components are designed and constructed to support at least four times its maximum intended load without failure, with wire cables capable of supporting at least six times their maximum

intended load without failure. Strictly comply with all applicable OSHA regulations regarding scaffolding. The category and class of containment shall be as required in the Contract Documents.

10. 561-11.2 Last sentence.

Keep solid and liquid waste separate and individual waste streams *and* separate *them* prior to identification and storage.

11. 561-11.3.

Spell out AIHA.

Response:

Will Watts

Comments: (1-5-10)

Please consider the following comments.

1. 561-4.1: First sentence, between QP 1 and QP2 changing wording to “and/or”.

Response: “or” will be changed to “and”. Since the text “as appropriate” is included, either one or both could be used. (1-6-10)

2. 561-4.1: Second paragraph consider deleting since Section 102 of the spec book addresses MOT. If not deleted second sentence add “plan” after traffic control.

Response: Agree. Second sentence has been changed as follows: “Do not begin work until the traffic control *plan* is approved by the Engineer”.

3. 561-8.8: Thickness of coats. For primer coat when blasting steel in accordance with PA2 consider requiring the contractor to meet 100 – 120% of the primer thickness eliminating the 80% which could cause pin point corrosion.

Response: Thickness is measured above base metal and should not result in pin point rusting. No change made.

4. 561-10.2.1: Since SSPC Project Design Industrial Lead Paint Removal Handbook, Volume II is no longer available provide a copy to all of the districts for their use.

Response: The districts can purchase this text from several sources. Please call me if you have any problems (352-955-6649).

5. 561-10.3: Fourth sentence add “within the State of Florida” after Specialty Engineer.

Response: Article 1-3 Definitions of the Specifications defines Specialty Engineer as a Professional Engineer registered in the State of Florida. No changes made.

6. 561-10.3: Add requirements for the contractor to provide a plan for review and approval addressing tropical events specifically addressing tropical depressions, tropical storms and hurricanes. The plan should address how he will monitor these events, his actions removing tarps/containment, length of time for removal and etc.

Response: Agree. The following sentence has been added to the first paragraph of Subarticle 561-10.3: “Provide a contingency plan addressing natural weather events such as tropical storms and hurricanes.”

7. 561-10.4: Add machinery after deck grating.

Response: Agree. The first sentence has been modified as follows: “Protect all areas adjacent to abrasive blast cleaning, including *machinery and* deck grating.

8. 561-11.4: Fourth sentence add water after dust.

Response: Agree. Sentence has been modified as follows: “These waste streams include, but are not limited to, *water*, paint chips, dust, and paint chips mixed with disposable abrasives and debris.”

9. 561-11.4: Second paragraph, third sentence, should “Hexavalent Chromium” be added for testing.

Response: Agree. Sentence has been modified as follows: “Submit samples to an approved laboratory to be tested for arsenic, barium, cadmium, *hexavalent* chromium, lead, mercury, selenium, and silver in accordance with EPA Method 3050 and Method 6010 (content) and EPA Method 1311, Toxicity Characteristics Leaching Procedures (TCLP).”

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Comments: (1-19-10)

Section 561 Coating Existing Structural Steel – Specification

1. 561-2.1, second paragraph – Clarify that the MSDS, test reports etc are required only for the overcoat system. • 561-4.1, first paragraph – If the painting subcontract has a Quality Control Plan already approved by SSPC, what is the purpose of a site specific Q.C. Plan. This increases cost for no reason that will then be passed onto the owner with no benefit.

Response:

2. 561-4.1, second paragraph – If lane closures and traffic shifts are in accordance with Index 600, a separate traffic control plan should not be necessary. If the contractor is using the

Maintenance of Traffic plans provided in the contract plans, there is no reason for the additional expense of signing and sealing a plan. That cost will be passed onto the owner with no benefit.

Response:

3. 561-4.1, third paragraph - Only one work plan for the project should require Coast Guard approval. If there are channel restriction required of other work on the project, a second work plan that only specifically addresses painting is not required. Covered in Section 7 of the Standard Specifications.

Response:

4. 561-6.1, first paragraph – Please define “feather back”. This could be interpreted to mean many things to the inspectors in the field without consistency.

Response:

5. 561-6.1, second paragraph – Delete last two sentences in their entirety. Substitute “Surfaces shall meet the required degree of preparation prior to application of paint.”

Response:

6. 561-6.2 – Delete “remove all pack rust prior to solvent cleaning.” This is an extra cost that does not benefit the Department.

Response:

7. 561-6.5 – When is requirement supposed to be met? Before or after blasting?

Response:

8. 561-8.1, third paragraph – Is a stripe coat required? This is very expensive.

Response:

9. 561-8.3 – The requirement of 560-9.3 needs to be further defined to not require caulking around nuts and washers. Some inspectors have considered them faying surfaces and have required caulking which is not the intent.

Response:

10. 561-8.9 – Delete second sentence in its entirety. There is no handling since this specification is coating existing structural steel.

Response:

11. 561-9 – Clean and coating should also reference SP-11 as an option.

Response:

12. 561-10 – FDOT should have a standard plan that can be used for all projects. The plans referenced in this section cost between \$5,000 and \$20,000 per project. It is not necessary to have individual plans.

Response:

13. 561-10.2.1 – FDOT should designate in the plans the waste storage areas, staging areas and temporary waste storage areas.

Response:

14. 561-10.2.2 – The Department should provide a list of any permits required in the bidding documents. The Department should be aware of the permits required, since they have been work on the project document far longer than the contractor. The contractor only has limited time (one month) to review all the plans and specifications and accurately estimate the project cost.

Response:

15. 561-10.2.3.2 – The action level in the table of section 561-10.2.3.3 conflict with the TSP Lead level of section 561-10.2.3.2. Please make consistent.

Response:

16. 561-10.2.3.2, last sentence – This requirement is too vague, why continue to monitor if ok. Very expensive to monitor for no reason.

Response:

17. 561-10.2.3.3 – The regulated are has to be within the enclosure (tarps). However, EPA specifications do not allow a “regulated area”. Please make consistent.

Response:

18. 561-10.2.4, second and third paragraphs – The sample requirements are excessive.

Response:

19. 561-10.3, fourth sentence – Ventilation criteria is already covered in second paragraph.

Response:

20. 561-10.3, fourth sentence – Signed and sealed drawings and calculations should only be required if spent abrasive loads are placed on the structure.

Response:

21. 561-10.3, second paragraph – Light requirement should only pertain to the inspection. The Department should not dictate the lighting necessary to perform the work.

Response:

22. 561-10.3, second paragraph – The ventilation section (fifth sentence) should be a new paragraph.

Response:

23. 561-10.3 – Design is not required for the ventilation, just measure the airflow at site.

Response:

24. 561-10.4 – Please address the cleaning on top of flanges with grating.

Response:

25. 561-11.3 – Change last sentence to read “Provide a copy of all sampling and test reports no later than 72 hours after receipt of test results”.

Response:

26. 561-11.5, third paragraph – What field logbook is referenced in this sentence?

Response:

27. 561-11.5, second paragraph – Change last sentence to read “Do not store hazardous waste in the temporary ...”

Response:

28. 561-11.5, first paragraph – waste should be allowed to be stored in bulk containers (roll offs) as well and not limited to drums.

Response:

29. 561-11.6, first sentence – Delete the word “treat”. The contractor doesn’t treat hazardous waste and non-hazardous waste does not get treated.

Response:

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Comments: (1-20-10)

1. In general – based on an inspection by FDEP, FDOT as owner of the structure being painted, is responsible under 40 CFR 260-279 and FAC 62-710-740. This includes operations associated with paint removal and paint application.

Response:

2. 561-2.5 – FDOT should require the use of steel grit and only allow other abrasives approved by the project manager/engineer when conditions prevent the use of steel grit. Steel grit reduces the amount of waste which is recyclable. It can be sent to Missouri and melted down for reuse. This discontinues the liability of FDOT, much better than waste sitting in landfills.

Response:

3. 561-4 Quality Control. SSPC QP 1 *and/or* QP 2 to cover paint application and removal.

Response:

4. 561-2.1 When the contractor determines the paint and solvents and thinners to be used, is there any testing done to make sure it tests non-hazardous as waste as per 975-1.2? Isn't the allowable lead content of paint 600 ppm under the US Toxic Substance Act; 5 ppm is the hazardous level for TCLP tests?

Response:

5. 561-10 Protection of the Environment, Public, and Workers.

a. 561-10.1 Provide a contingency plan for the remediation of water and land in the event of contamination by solid or liquid paint and contaminated water. *This should include the need for a site health and safety plan and a work plan with the need for a contingency plan. The contingency plan should also include emergency response by applicable agencies fire rescue and FDEP.*

Response:

b. 561-10.2.1 Pollution Control *Include the painting operations, storage and handling of solvents, paints, thinners and equipment maintenance and operation. Require the contractor to apply for an EPA ID number for disposal of hazardous wastes associated with painting. (This makes them subject to FDEP inspections)*

Response:

c. [561-10.2.2 Permits – There may be a NPDES permit needed in the future for a stationary industrial operation. A proposal in 1997 for this is in limbo]

Response:

d. 561-10.2.3 Ambient Air - This should include emissions from solvents, paints and thinners. SSPC Guide 6 only covers removal of paints, not their application. There are training and management plans the contractor is required to use under 40CFR 262 so that the workers properly use and store these materials to reduce emissions.

Response:

e. 561-10.5 Worker Protection: Need to include solvents, paints and thinners? EPA has a bunch of regulations for protection of workers. Require the contractor to furnish training rosters indicating the required training for employees is up to date.

Response:

6. 561-11.2 Collection and Handling of Waste: Need to include solvent, paint and thinner, equipment operation and maintenance wastes (used oils and hydraulic fluids too). Need to require the contractor to provide dated signed inspection logs for weekly inspections of all containers and the work and staging areas.

Response:

7. 561-11.5 Waste Storage: Require the contractor to not mix blast media wastes. Aluminum and steel mixtures can cause explosions.

Response:

8. 561-11.6 Waste Disposal: District 2 disposes of the hazardous paint removal wastes under the district-wide CAR contract. The contractor disposes of the other wastes. In the 1990's a contractor stored hazardous waste over the time limit and caused a problem with FDEP. Contractors don't usually use the most cost effective or long term reliable waste disposal facilities. A recent case, the contractor provided a higher estimate for disposal costs of hazardous large volume (black beauty abrasive generated the quantity). The facility the contractor provided was Sub Title D (non-hazardous). The wastes are going to a hazardous site for disposal.

The SSPC training indicates that the owner is the generator and should sign the hazardous waste manifests. EPA rules indicate training is required for anyone signing these manifests. Those in control of the contract would be the person signing. This is not in the training manual 8.9.1. This includes disposal of the solvent and paint and other wastes.

The best option for FDOT is to use steel grit and send the old paint (wastes) to Missouri for recycling.

Response:

9. 561-11.7 Permits – The contractor is supposed to indemnify FDOT under 7-1.1, but this is contractually. EPA does not consider our contractual obligations applicable to their enforcement.

Response:
