

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Via certified First Class Mail
and email

REPLY TO THE ATTENTION OF: LU-9J

December 21, 2011

Mr. John Perkins
Tyco Fire & Security
One Town Center Road
Boca Raton, FL
33486-1010

Re: USEPA Comments on the Design Plan and Specifications Preliminary Basis
of Design, dated October, 2011 – Tyco Safety Products – Ansul Stanton Street
Facility
EPA #WID 006 125 215

Dear Mr. Perkins,

The USEPA Region 5 thanks you for the report entitled “Design Plan and Specifications Preliminary Basis of Design (DPS), dated October, 2011”. USEPA reviewed the DPS to determine its conformance with the Final Decision, Administrative Order on Consent (AOC) and the approved December 2010 Sediment Remediation Work Plan (SRWP). The DPS is **approved with the following conditions.**

- 1) USEPA approves the remediation schedule contained in Appendix E, Remediation Schedule, of the DPS with the exception of items 54 and 55 (chemical isolation layer installation). Appendix E replaces the schedule USEPA previously approved and contained in Appendix D, Project Schedule, of the December 2010 approved Sediment Remediation Work Plan (SRWP). Appendix E is included as Attachment 1 to this letter and is hereby incorporated by reference into the AOC.
- 2) All portions of the DPS document containing references to the use of chemical isolation instead of dredging are inconsistent with the Final Decision, the AOC and the approved SRWP and are disapproved and should be deleted from the Final Design Document
- 3) Provide as part of the Final Design Document an appropriate site restoration plan for the South Channel and expanded dry dredged areas that addresses the condition of the dredged river bottom as required by the June 1, 2011, conditional

approval of the SRWP. Provide for restoration improvements and enhancements to the dredged area appropriate for the local fish and benthic habitat and health.

- 4) Provide a remediation schedule date for confirmatory sampling in the Final Design document. The date has to be sufficiently in advance of demobilization such that any additional dredging can be accomplished. Any additional dredging will be determined by USEPA consistent with its SWAC methodology.
- 5) Provide as part of the Final Design Document a comprehensive map depicting: a) the footprint of the sediment removal area where arsenic concentrations greater than or equal to 50 ppm are located including expanded views of the following locations: 1) areas in proximity of the 8th Street Slip; and 2) areas adjacent to portions of the sheet pile containment wall; provide EPA pertinent cross-sections where appropriate. Separate these map(s) into construction activities specific to 2012 and 2013.
- 6) Provide as part of the Final Design Document a revised Appendix E showing specific dates for submission of permit applications, elimination of items related to chemical isolation and a schedule for site restoration. Provide a copy of the permit applications as they are submitted to the appropriate regulatory authority.
- 7) The proposed performance monitoring outlined in the DPS lacks the level of detail and sophistication needed for this project. The Final Design Document must include an expanded performance monitoring section. As an example, the number of turbidity monitoring stations proposed in the DPS is inadequate and additional monitoring points will need to be added. Details regarding the frequency of sampling and an expanded parameter list should be included. Also incorporate how you intend to show that water quality standards are being met.
- 8) WDNR has not adopted the hazardous waste exclusion identified in Section 6.1.2 of the DPS. To comply with Wisconsin requirements, Tyco will need to characterize the dredged material and then (where appropriate) comply with hazardous waste rules.

Provide USEPA with the Final Design document addressing the conditions listed above and the comments included as Attachment 2. According to Appendix F the Final Design is to be completed by January 23, 2012. It should be submitted to USEPA at that time for our review and approval. The Final Design document should be clearly written and contain only designs and specifications consistent with the Final Decision, AOC, approved SRWP and this letter.

USEPA's review of Tyco's September 2011, Enhanced Sediment Removal Plan Approach (ESRPA) does not toll Tyco's obligation to comply with the AOC and to proceed with construction and work laid out in the approved Remediation Schedule, Attachment 1 to this letter. Ansul should expect to implement the DPS with all applicable and approved timelines and construction completion dates.

If you have any questions in regard to this letter, please contact me at your earliest convenience at 312 886 5902.

Sincerely,



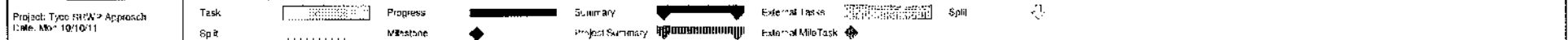
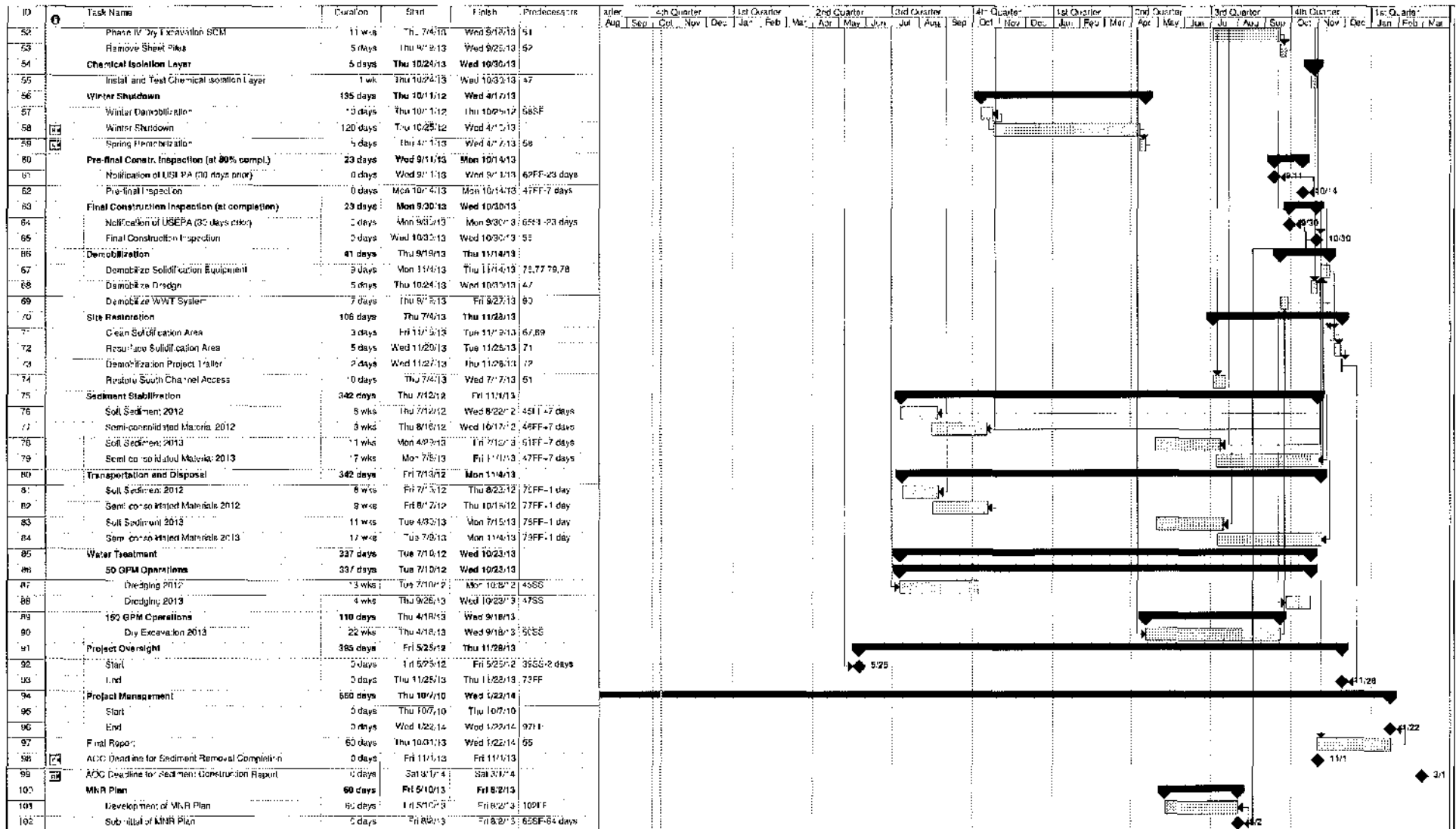
Gary Cygan, Geologist and Project Manager
Corrective Action Section
U.S. EPA, Region 5
Cygan.gary@epa.gov

Attachments

cc: Kristin du Fresne, WDNR
George Hamper, USEPA
Joe Cisneros, USEPA
Rich Clarizio, USEPA

ATTACHMENT 1

Appendix E
Remediation Schedule



ATTACHMENT 2

TECHNICAL REVIEW OF THE PRELIMINARY BASIS OF DESIGN DESIGN PLAN AND SPECIFICATIONS DATED OCTOBER 2011

TYCO FIRE PRODUCTS LP
FORMER ANSUL INCORPORATED FACILITY
MARINETTE, WISCONSIN
EPA ID NO. WID 006125215

GENERAL COMMENTS

1. The Tyco Fire Products LP- Former Ansul Incorporated, Marinette, Wisconsin, Draft Design Plan and Specifications, Preliminary Basis of Design, dated October 2011 (Preliminary Design) does not contain adequate detail, and would most likely represent a 30% design report. The December 1, 2010 letter submitted by CH2M Hill on behalf of Tyco, and other documents submitted by Tyco have referenced the Lower Fox River Site; however, the Lower Fox River Remedial Design, 60 Percent Design Report for 2009 Remedial Actions, dated June 2008, includes significantly more design details and information than the Preliminary Design. The Final Design due on January 23, 2012 must include a level of detail commensurate with a 90 % design report.
2. Due to the significant level of infrastructure that will be constructed to support the various design aspects, the Final Design due on January 23, 2012 should include text that addresses the dismantlement, demobilization and restoration of the site features. Specifically, this plan would address sequencing to ensure all features are appropriately decontaminated and residual media managed as part of the dismantlement and demobilization. The Final Design will specify dismantlement, demobilization, and restoration plans that clearly identify the appropriate sequencing for these activities.
3. Section 3.2.5 [Phase IV Activities (Dry Excavation of SCM)] indicates that between 10,000 and 12,000 cubic yards of SCM potentially contaminated with arsenic exceeding 50 mg/kg will remain in place to provide support to the sheet pile wall at the former 8th Street Slip between the winter demobilization of 2012 and the completion of the work in 2013. In addition, this section indicates that 50 percent of this material is inside the dry excavation area alongside the sheet pile wall, and the remaining 50 percent is outside the dry excavation area alongside the sheet pile wall. However, concerns exist over the potential for this material to cross contaminate those areas dredged during the 2012 work season over the winter dormant period. The Final Design will address the potential for significant reworking of this area due to ice flows and associated snow melt conditions that may occur in the early part of 2013.

4. Section 3.3.2 (Bulkhead/Shoreline Stability) of the Preliminary Design is not consistent with EPA's Conditions of Approval. EPA specifically stated that "Not removing contaminated sediment along the toe of the containment wall due to engineering considerations does not justify as technically impracticable the removal of the contaminated sediment in the Turning Basin and transition area." Remove the statement in the Preliminary Design in Section 3.3.2 which conflicts with EPA's clarification (i.e., remove the following text: "As presented in the SRWP (CH2M HILL 2010) and discussed in the USEPA June 1, 2011, approval document (USEPA 2011), removing impacted SCM adjacent to the sheet pile wall was determined to be technically impractical, because removing the material to the depth required to achieve removal of all material with concentrations greater than or equal to 50 mg/kg would result in failure of the sheet pile wall"), as this statement does not reflect previous agreements.
5. Section 3.3.4 (Extent of Arsenic Requiring Sediment Remediation) of the Preliminary Design states under the Geostatistical Modeling Interpolation Method heading that the Environmental Visualization System (EVS)-Pro Version 9.4 (Environmental Visualization System, produced by C-Tech Development Corporation) was used to interpolate arsenic concentrations from individual sampling points to a dense three-dimensional (3D) mesh. The procedures for the mesh generation and for selecting the interpolation parameters include specifying that arsenic concentrations were represented as point values located at corresponding horizontal coordinates (e.g., northing and easting) for each sample location. It was further specified that the vertical position was represented by the middle of the sampling interval; typically, there were multiple vertical locations for a given sample location on the map. However, the Preliminary Design does not include all the data points used to determine the concentration-based figures presented in the design, and it is unclear how using the middle of the sampling interval results in a conservative portrayal of the expanse of arsenic above 50 mg/kg. In the Final Design discuss how the selected interpolation parameters and any other mesh generation procedures have resulted in a conservative portrayal of the arsenic concentrations in 3D.
6. Section 5 (Preliminary Design Approach, Assumptions, and Parameters) specifies that before starting the work, the dredging contractor will provide a detailed work plan that will describe the specifics of the proposed mechanical dredging activities. However, submission of this plan to stakeholders is not discussed nor is it included as a milestone in the Project Schedule. The Final Design will discuss how you will provide for meaningful review of the stakeholder review of the contractor's dredging work plan and include this as a line item on the Project Schedule.
7. Although the Preliminary Design allows petition for a Wisconsin Department of Natural Resources Water Quality Variance, neither Section 5.1.1 (Execution of Dredging Activities) or Section 7.1.1 (River Water Quality Monitoring) allows for assessment of the relationship between turbidity, total suspended solids (TSS) and dissolved arsenic concentrations. Although a water quality variance is being requested, it is unclear why the best management practices (BMPs) to be employed do not include monitoring of arsenic to mitigate acutely toxic conditions. The Final Design will specify sampling for dissolved arsenic in addition to turbidity and TSS.

8. Section 5.3.1 (Dredging Equipment) indicates that an environmental bucket will be used to dredge soft sediment, and a conventional clamshell bucket will be used to dredge the SCM. However, it appears that a more typical dredging procedure would include maximizing the use of an environmental bucket (i.e., use of the environmental bucket until refusal). Use of the environmental bucket would likely reduce the suspended sediment generated. It is understood that following refusal, a conventional clamshell bucket would be required. The Final Design will include a BMP that maximizes the use of the environmental bucket.
9. Section 5.3.2 (Dredging Sequence) indicates that the sequence of mechanical dredging and other corrective activities are described in Section 3.2 (SRWP Corrective Action Plan) and that the phases also are depicted on Figures 18A (Remediation Sequence 2012) and 18B (Remediation Sequence 2013). Section 3.2 and Figures 18A and 18B do not include sufficient detail to clarify the overlap of the phases of the remedy. The Final Design will provide a more transparent assessment of the sequencing of the proposed actions and the justification for the proposed sequencing.
10. Section 5.3.3 (Dredging, Offloading and Stabilization Processes) lacks sufficient detail to demonstrate that the temporary water treatment facility and stockpiling area are appropriately sized, and of sufficient capacity, to account for rain which could impact the curing times and the overall volume of water which needs to be managed at the water treatment facility given that operations are proposed to run on a 24 hour a day, 7 day a week schedule. The Final Design will include justification for the factor of safety applied and to demonstrate that the additional capacities available are appropriate.
11. The Preliminary Design discusses the use of a six-inch allowance as the overdredge depth, but given that Section 5.3.8 (Dredging Positioning System) allows for a vertical tolerance of plus or minus six inches, it is unclear if the overdredge allowance is meaningful. The Final Design will address the apparent lack of allowance following further consideration of the vertical tolerance.
12. Statements made in Section 5.4 (Dry Excavation – South Channel and Transition) regarding further EPA assessment of the dry excavation area are unclear. The Final Design will indicate the document title which requires further assessment and when it was submitted.
13. The Preliminary Design does not provide a basis for the 80 milligrams per liter (mg/L) TSS discharge criteria. The Final Design will cite the source of this criterion.
14. Section 5.10 (Decontamination and Site Restoration) specifies that equipment to be removed from the river will be power washed in place or over the river with water, before transport, to remove sediment and invasive species such as mussels. It is unclear why this procedure is appropriate and will not result in cross-contamination. The Final Design will address this concern as part of the proposed sequencing for dismantling and demobilization.
15. Figure 23 (Preliminary Water Quality Sampling Locations During Dredging) of the Preliminary Design show the Preliminary Water Quality Sample locations. The Preliminary

Design does not substantiate the appropriateness of the three proposed sample locations positioned on the Menominee River and the Bay of Green Bay located along the northwestern portion of Lake Michigan. Given the variability of the proposed dredging rates, and the various points of dredging/excavation that make up the various phases of the remedy, it is unclear why these three proposed sampling points best assess the impacts of the dredging on the Menominee River, or if the affects will impact the Bay of Green Bay. The Preliminary Design and the yet to be submitted sampling plans must demonstrate that the “point of compliance” for establishing a baseline and assessing impacts of turbidity, TSS and dissolved arsenic within the mixing zone of the Turning Basin and the Menominee River are appropriately reflected by the single sampling location proposed in the Menominee River. The Final Design will include supporting rationale for these sampling locations which addresses the river dynamics of both the Menominee River and the South Channel.

16. Item 14 of Appendix E (Project Schedule) of the Preliminary Design lists, “RCRA Onsite Treatment Variance.” This line item was not discussed in the SRWP and is not specifically addressed in the Preliminary Design. The Final Design will include text that supports the need for a “RCRA Onsite Treatment Variance.”