UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENVIRONMENTAL
CLEANUP

August 25, 2015

MEMORANDUM

SUBJECT: Recommendation for the Assessment of Stipulated Penalties against Earle M. Jorgensen Company for Violations of the Administrative Settlement Agreement and Order on Consent for Removal Action Implementation in CERCLA Docket No. 10-2013-0032

FROM: Rebecca Chu, Remedial Project Manager

THRU: Richard Mednick, Associate Regional Counsel
Shawn Blocker, Unit Manager

TO: Cami Grandinetti, Remedial Program Manager

Earle M. Jorgensen Company (EMJ) performed non-time critical removal action (NTCRA) construction activities from July through September 2014 within the Jorgensen Forge Early Action Area (EAA) of the Lower Duwamish Waterway (LDW) Superfund Site. EMJ committed to undertake the NTCRA in accordance with the Administrative Settlement Agreement and Order on Consent for Removal Action Implementation in CERCLA Docket No. 10-2013-0032 (Settlement Agreement). Throughout the construction activities, the EPA and its representative, the Army Corps of Engineers (ACE), observed and documented multiple violations of the EPA-approved Removal Action Work Plan (RAWP). Furthermore, many of the violations were discovered by the EPA and its representatives, despite EMJ representatives being on-site at that time and tasked to ensure that the NTCRA was being performed consistent with the RAWP. These violations are further described in detail within this Memorandum.

Most egregiously, EMJ omitted collecting surface sediment samples within the Removal Action Boundary (RAB) at the close of construction activities in September 2014, a requirement of both the Construction Quality Assurance Plan (CQAP) and Operation, Maintenance and Monitoring Plan (OMMP). The purpose of this sampling was twofold: to verify the as-built quality of the surface sediments within the RAB; and to establish baseline conditions for the long-term monitoring effort. On more than one occasion, the EPA reminded EMJ of this missed obligation, but the failure to sample continued to persist for several months. On February 23, 2015, after almost five months of non-compliance with the Settlement Agreement, EMJ requested an extension of time to perform the sampling.

During the NTCRA construction activities, EMJ collected samples at the surface of the dredged sediments, known as the "z-layer". EMJ placed backfill material on top of the excavated sediments across the RAB before obtaining the analytical data from the z-layer samples. The analytical data of the z-layer samples identified PCBs in sediments throughout the RAB at concentrations above the removal action level (RvAL).

In addition, sampling performed by The Boeing Company (Boeing) in late November 2014 identified PCB concentrations above the RvAL within the surface sediments of the backfill material within EMJ's RAB. Therefore, both the z-layer sediments below the backfill material, and the surface sediments at the top of the backfill material contain PCBs above the RvAL identified in EPA's Action Memorandum.

Taking into consideration this data, along with the lengthy failure of EMJ to sample, EPA required EMJ to provide a new sediment sampling plan that addresses both areas of PCB contamination in a letter dated March 23, 2015. The EPA is currently reviewing July 17, 2015 revised version of the EMJ's sampling plan.

EMJ has also submitted late deliverables, despite receiving reminders from the EPA of the timeframe for submitting deliverables that is prescribed in the Settlement Agreement. In this regard, Paragraph 18 of the Settlement Agreement requires that EMJ submit revisions of deliverables within 30 days of receiving notice to do so from the EPA. However, contrary to this requirement, EMJ submitted the revised "Pre-Final Certification Inspection Report" 59 days after receiving notice from the EPA to provide this deliverable.

Most recently, EMJ has submitted deliverables that deviate from the EPA required revisions for these deliverables. EMJ did not properly include an EPA required revision to the CQAP and OMMP, and on its own volition EMJ also inserted a substantive change to these deliverables after the EPA had instructed EMJ to make no such changes. By taking and failing to take these actions, EMJ has committed additional violations of paragraph 18 of the Settlement Agreement.

The activities EMJ is obligated to perform as part of the NTCRA are referred to as "Work" in Paragraph 7.q of the Settlement Agreement. Part of this Work, as mandated by Paragraph 18 of the Settlement Agreement, involves the implementation of EPA-approved deliverables, including the RAWP, CQAP, OMMP and Removal Design (RvD). The failure of EMJ to timely and adequately complete any of the Work prescribed in these deliverables results in the accrual of stipulated penalties under Paragraph 48 of the Settlement Agreement. Further, as mentioned above, Paragraph 18 of the Settlement Agreement also requires the timely submission of revised final and draft deliverables to the EPA, and the failure of EMJ to abide by this obligation results in the accrual of more stipulated penalties under Paragraph 48 of the Settlement Agreement.

According to Paragraph 48 of the Settlement Agreement, the stipulated penalty amounts are: $500 per day for day 1 through day 7 of non-compliance; $1,000 per day for day 8 through day 14 of non-compliance; $2,500 per day for day 15 through day 30 of non-compliance; and $5,000 per day for day 31 through day 90 of non-compliance.

In light of the number of observed and documented violations, the failure of EMJ to note or self-correct these violations, the continued non-compliance following notices from the EPA, and the importance of the NTCRA in the context of the broader cleanup of the LDW, the assessment of stipulated penalties in the aggregate amount of $ **367,500** is recommended as appropriate in this matter.

The basis and calculation of the stipulated penalty for each documented violation is detailed in the following provisions:

1) Failure to Follow RAWP Piling Removal BMPs

The first observed violation of the RAWP occurred at the very onset of the NTCRA, which began with demolishing the existing bank. The bank contained numerous timber pilings, and before the bank excavation work could begin, these pilings and other materials needed to be removed.

Pilings often contain creosote, which comprises more than 300 chemicals, including polynuclear aromatic hydrocarbons (PAHs). Studies have shown that PAHs affect the health of various aquatic species[1]. It is for this reason that Washington Department of Natural Resources partnered with Washington Department of Fish and Wildlife and Washington State Department of Ecology to develop best management practices (BMPs) for removing pilings and beach debris. BMPs for piling removal include: using vibratory extraction method to slowly remove the piling, minimizing the turbidity in the water column as well as sediment disturbance; pilings must not be broken off intentionally by twisting, bending or other deformation as this practice has potential for releasing creosote to the water column; and work surface on a barge deck or pier should include a containment basin for pile and any sediment removed during pulling. BMPs also include using every attempt possible to remove the piling in its entirety before cutting.

Given the environmental concerns regarding piling removal, the EPA specifically required BMPs be identified for piling removal, as noted in the EPA's January 22, 2013 comments on the RvD:

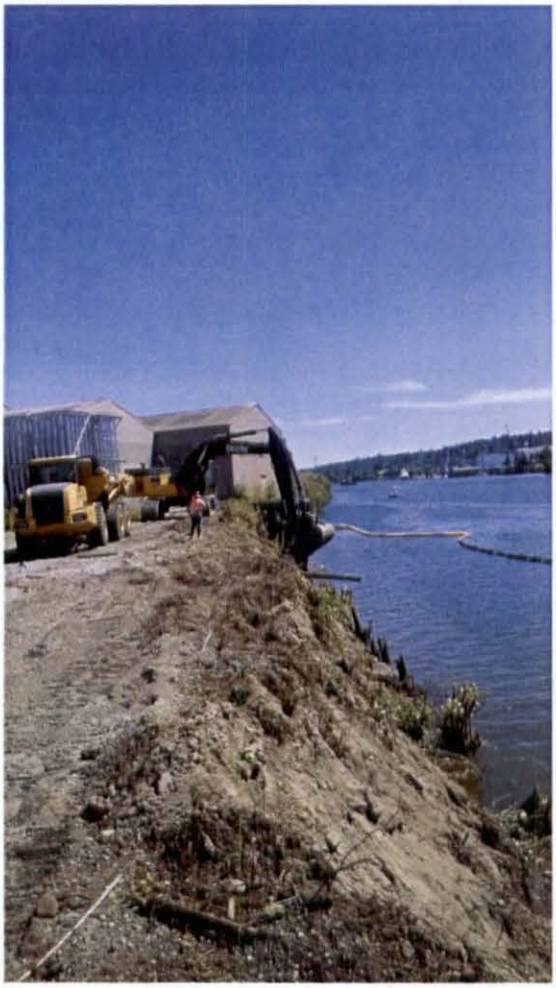
> *There are several places where the draft Basis of Design Report should include greater detail about BMPs. First, BMPs for piling removal should be expanded on. The Boeing Plant 2 CQAPP provides an example of what type of BMPs should be included:*
>
> *The work should be performed in a manner to minimize release of sediment. Pilings that break off near the mudline will need to be documented for subsequent debris removal or cutting. If not in the dredge prism, piling which may not be fully removed should be cut minimum three feet below final grade. If vibratory hammer is used, care shall be taken not to destabilize slopes and/or banks.*

As required by the EPA, EMJ's final documents included BMPs in the RAWP for managing the pilings within the existing bank, including mechanisms for removing the pilings; managing any contaminated water that might come off of the removed pilings; and managing any attached contaminated sediments from the pilings. As stated in RAWP Section 5.1.2.7 *Pile Removal*

> *Timber piles will be pulled from the water with a barge-mounted Hitachi 1200 excavator. The removed piles will placed on a sediment barge. Water generated from the pile removal will be treated by the water treatment system as described in Section 5.11. The piles will be sized, in maximum 10-foot lengths, with the Hitachi 1200 excavator and off-loaded by the PC1000 excavator directly into truck-and-trailer combinations for disposal. Any piles broken during removal will be cut off at the excavation surface or 3 feet below finished grade, whichever is deeper.*

[1] Washington DNR. 2014. Fact Sheet: Removing creosote-treated materials from Puget Sound and its Beaches.

However, despite the identified BMPs in the RAWP, ACE observed EMJ using upland equipment to tear the pilings with an excavator bucket from the top of the bank (not from a barge on the water) on July 8th, 2014.



In electronic mail correspondence to EMJ date July 9, 2014, I alerted Amy Essig Desai, the EMJ Project Coordinator, of my concerns that the characterization of piling removal described in the demolition schedule was inconsistent with the RAWP.

> *Under the demo schedule- all of the piling work was identified as occurring today. . .However, as I understood it- the pilings were going to be pulled, then dewatered on the sediment barge. If they could not be pulled, then they would be cut. What I gathered in discussing this at the construction meeting is that we were not all in agreement that this is what the plan was. To clarify- I went back to the approved documents to review what we have said and approved about the timber piling removal. . . So- as I read it- the actual "removal" of the pilings is really going to happen from the water side. Attempts will be made to remove the pilings from the bank. And, after first attempting to remove the pilings, if either the pile breaks during pulling or cannot be reached,* ***then*** *it will be cutoff as describe above. And those pilings will be placed on the sediment barge to dewater before being disposed of, and any water that comes off of the pilings*

will be treated by the on-water treatment system. This can't occur until the sediment barge and water quality barge are in place.

In another email correspondence dated 7/10/14, I alerted Ms. Essig Desai of my concern that the EMJ contractor, Pacific Pile and Marine (PPM), had proceeded to remove the pilings in a manner inconsistent with the RAWP:

"...PPM is planning on removing the pilings from the land side, because they are not able to reach the pilings from the water side because of the low tides. They will try and remove them using various methods- and, if they are not able to remove them, they will then cut them 3 feet below the final elevation grade of the bank.

Originally, the pilings were going to be placed on the sediment barge for any dewatering, cut and then transported to the PPM facility to be disposed of. Now- however- they would be moved to the upland, cut, and then hauled off site for disposal. The one thing that I am not clear on, however, is- in the event they needed to dewater them- how that would occur. I am also not clear where they would be cutting the pilings.

I understand that this work is likely occurring right now. I am concerned that I am still not entirely sure how the water is being handled, and also how the pilings will be cut and placed in the stockpile area, as this deviates from what we had reviewed and approved in the RAWP."

In yet another email from me to Ms. Essig Desai later that same day:

"Following standard protocol, I would expect that a deviation from any of the approved plans would require an addendum to EPA for our review and approval prior to the work actually occurring."

Despite these various communications alerting EMJ that it was deviating from the RAWP while the pilings were being removed, EMJ did not submit a written proposal until July 29, 2014 to the EPA, requesting an amendment to the RAWP for the purpose of altering the approach for removal of the pilings. This request came two weeks after the violation, and although the improper piling removal had been halted following the notice from the EPA, EMJ had nonetheless been out of compliance with the RAWP for at least one day, and possibly more.

Proposed stipulated penalty amount: $500 for the one documented day of violation (7/8/14) from the RAWP. This penalty amount includes $500 for 1 day of non-compliance with paragraph 48 of the Settlement Agreement.

2) Failure to Employ Silt Curtain BMP to Prevent Contaminated Material from entering LDW per RAWP

The NTCRA included removal of the contaminated bank material and debris in addition to the in-water sediments. The EPA provided multiple comments about the need to have adequate BMPs in place to minimize bank material from entering the LDW during the bank removal activities. In the January 22, 2013 comments on the draft RvD, the EPA identified the following requirement:

". . .BMPs for addressing potential erosion of the intertidal zone for the shoreline work being conducted "in the dry" should be included. This includes BMPs that will be utilized if excavated material is stockpiled on site to ensure that contaminants are not transported in to the LDW, as well as contingencies that will be utilized if transport does occur. It also includes contingent BMPs to be utilized while bank sample results are pending laboratory analysis."

The EPA reiterated these requirements in its May 8, 2014 comments on the draft RAWP:

"The RAWP does not discuss how the bank (post excavation, pre-armoring) will be addressed to ensure sediments do not end up in the LDW. The only steps taken to prevent sediment from the open bank face from entering the LDW is a boom at the shoreline. Groundwater seeping through the bank face resulted in turbidity at the adjacent Boeing Plant 2 site during recent restoration work. Therefore, the final RAWP must describe steps taken to prevent/manage any turbidity resulting from the bank in the LDW."

"Identify what BMPs will be in place during the demolition work to minimize any materials from entering the LDW in final RAWP."

"There is a time lag between when the bank will be excavated and backfill will be replaced. BMPs need to be in place in the event there is a storm event. Ecology guidance documents notes that, if bank is bare for 7 days, should have BMPs in place. Final RAWP will identify what those BMPs will be."

"No mention of sediment controls for the excavated bank face. Final RAWP will include what BMPs will be used here to prevent excavated bank face sediment from entering LDW. While it is mentioned elsewhere, there is no discussion of any booms or barriers in the water to prevent materials entering the LDW. Final RAWP must provide BMPs for controlling sediments from the bank face while it is exposed."

"The final RAWP must identify what BMPs will be used to manage any groundwater permeating through the excavated bank face. While the SWPPP focuses on erosion due to rain, here we need to consider erosion due to the groundwater flow." (EPA Comment Letter to EMJ on RAWP, dated 5/8/14)

EMJ revised the RAWP to include BMPs addressing the EPA's concerns, such as: conducting intertidal sediment and shoreline bank soil excavation "in the dry" to the degree reasonably possible using land-based equipment; and installing temporary erosion and sedimentation control curtain prior to shoreline excavation, and maintaining the silt curtain during all ongoing excavation activities. The EPA-approved RAWP specified that the following BMPs be employed during the demolition work:

A Site Stormwater Pollution Prevention Plan (SWPPP; Appendix C Attachment A) will be implemented and stormwater BMPs will be installed, including the installation of a silt fence and a floating containment boom along the base of the shoreline bank.

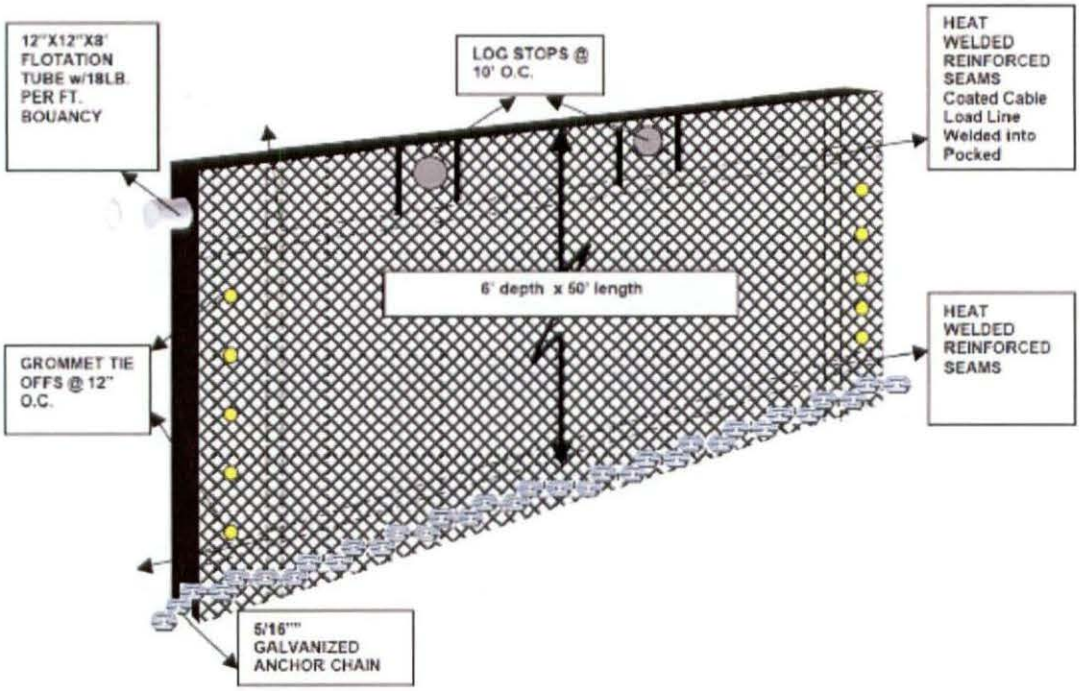
Additional measures to minimize potential erosion in the intertidal zone will include removing large pieces of debris remaining on the surface and using the excavator bucket or similar equipment to

compact the newly excavated surface during periods when shoreline excavation is not being conducted. A temporary erosion and sedimentation control curtain will also be installed prior to shoreline excavation and maintained during all ongoing excavation activities.

Appendix D of the RAWP provided even greater specificity with respect to BMPs for the silt curtain:

PPM will install a containment boom along the shoreline, encompassing the project demolition removal area. The containment boom will be constructed using a 50-foot by 6-foot silt curtain sections. The containment boom is constructed as shown in Figure 2. Each section will overlap and be secured together using rope. Once the containment boom is assembled, it will be floated into the river and spread out to along the entire shoreline of the removal action area where demolition activities will occur. The containment boom will be placed far enough out to still float during low tide events and not get damaged by any demolition debris should it fall into the water. The containment boom will be secured in place using ecology blocks with buoys at locations along the containment boom.

Figure 2 from Appendix D of the RAWP Diagraming the Containment Boom



However, on July 9, 2014, ACE observed that EMJ had put in place a debris boom which did not include the "curtain" component that extends through the entire water column like that specified in the RAWP.

7/9/14 Photo of turbidity plume from bank in to the LDW and the debris boom in place.

7/8/2014 Photo of debris from bank within the debris boom.

In addition to not using a silt curtain for the purpose of restricting bank material from entering the LDW; the EPA frequently observed that the debris boom was not attached or anchored, resulting in further compromise of the required containment BMPs.

Photo Date: 7/14/14; 7:00 PM

Photo of the debris boom facing SE from the NW corner of the site. The debris boom is no longer attached or anchored. Can see debris on either side of the boom- not contained on one side.

On July 14th, the EPA issued a halt work order for the bank excavation work on-site (in addition to halting work of stockpiling clean fill material within the Exclusion Zone, as described in Section 3 of this Memorandum). The EPA halted all further work on the bank until the debris boom was anchored and the silt curtain, described in the RAWP, was installed at the EAA. The debris boom and silt curtain were in-place on July 22, 2014. Despite the halt work order by the EPA, non-compliance by EMJ with the containment BMPs allowed bank material to potentially enter the LDW from July 8 to 22, 2014.

Proposed stipulated penalty amount: $13,000 for the 15 documented days of violation (7/8/14 to 7/22/14) of the RAWP. This penalty amount includes the following per day penalties for non-compliance with paragraph 48 of the Settlement Agreement: $350 for days 1 to 7 at $500 per day; $7,000 for days 8 to 14 at $1,000 per day; and $2,500 for day 15.

3) Failure to Follow RAWP BMPs for Preventing Contamination of Clean Backfill

During the development of the RAWP, the EPA provided multiple comments about BMPs to be used to ensure that no contamination occurred in storing clean backfill material within the upland portion of the

EAA. The EPA provided these specific requirements in its May 8, 2014 comment letter to EMJ on the RAWP:

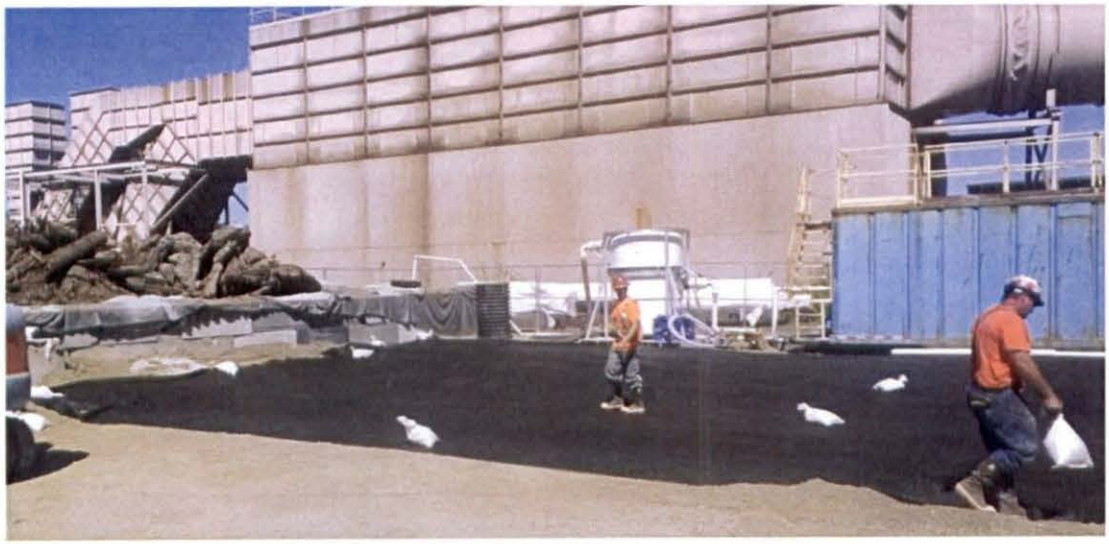
> *"EPA understands from conversations with EMJ and its consultants that the clean backfill will be segregated from the contaminated stockpile through sequencing of work. However, there is no description of how the clean materials being used as backfill and for the bank work will be segregated and kept clean from the contaminated materials being stockpiled on site. The final RAWP must describe how the clean backfill and contaminated materials on site will be isolated/segregated."*
>
> *"Given that there is limited space to stockpile, need to ensure that the clean materials are segregated from, and no cross contamination occurs with, the contaminated materials in the final RAWP. The final RAWP must include definitions of 'stockpile containment area' and 'stockpile staging area.'"*
>
> *"The final RAWP will include Figures of the final stockpile areas and the stockpile staging areas. It will also identify where the clean backfill material will be stored in isolation/segregation from the contaminated materials. Finally, BMPs will be included for the concrete pad where debris will be place to prevent contamination."*
>
> *"The final RAWP figure must include the BMPs that will be in place to prevent the release of contaminants by the trucks as they move through the site, as well as decontamination measures and final inspection site prior to leaving Jorgensen Forge. The final RAWP figure must also identify where materials will be stockpiled for the excavation and demolition, which will be segregated/isolated from the clean backfill material stockpiled on site. BMPs preventing cross contamination will also be included."*
>
> *"If going to stockpile clean backfill with excavated material, need to figure out how to segregate/prevent cross contamination of the materials."*

EMJ addressed the EPA's comments by committing to demolish and decontaminate the entire upland area prior to storing clean backfill material in this area. The RAWP specified that, during the bank demolition and removal phase, EMJ would stockpile contaminated material in the Exclusion Zone in what it termed the "USSA". Contaminated material placed in the USSA was then to be loaded into trucks and taken off-site for disposal. Once the bank removal and off-site transport work was complete, the RAWP defined a decontamination process for the entire Exclusion Zone, prior to bringing in clean backfill to be used in reconstructing the bank. These BMPs are outlined in Appendix C of the RAWP (P. 7):

> *Once final excavation activities are completed and approved by the Owner's Project Engineer, the shoreline equipment, dewatering and water treatment equipment, and stockpile and debris sizing areas will be decontaminated before import and placement of clean shoreline containment material. A summary of the decontamination procedures is provided in Section 8. Once the USSA has been removed, a new stockpile area will be constructed called the Clean Backfill Stockpile Area (CBSA). The CBSA will consist of 50'x90' area lined with geotextile fabric and weighted*

down with sand bags. The pad will be lined with straw wattles to minimize the potential for migration of clean solids from the CBSA.

However, despite these requirements, EMJ began constructing the Clean Backfill Stockpile Area (CBSA) on July 9, 2014, prior to completion of the bank removal and disposal work and decontamination of the uplands area at the EAA, as documented by ACE.



Clean backfill stockpile zone, established immediately south of USSA.

On July 14th, I observed clean backfill material being brought on-site and dumped on to the geotextile fabric. I also observed that the trucks delivering the backfill tracked material from the Exclusion Zone on to the geotextile fabric and the clean backfill on the fabric. I further observed EMJ use contaminated on-site equipment, used and stored within the Exclusion Zone, to drive up on to the backfill and redistribute the material. All of these activities occurred prior to completion of the bank removal and disposal work and subsequent decontamination of the upland area at the EAA. These activities created the potential for contamination of the clean backfill material.

Photo Date: 7/14/14; 11:30 AM

Photo is facing east. Photo is of backfill material placed on a liner. Tire trucks run from the EEZ in the foreground, across the liner, and up on to the clean backfill. Can see tire tracks in the backfill material.

Photo Date: 7/14/14; 11:30 AM

Photo is facing NE from the SW side of the site. The photo shows the stockpiled material on the barrier fabric, and water pooling at the edge of the fabric. Tire tracks go from the EEZ to the barrier fabric. Backfill material has been placed next to the USSA, which is full of debris from the demolition work.

The next two photos document a truck bringing in the clean backfill material through the Exclusion Zone to be stockpiled on the geotextile fabric.

Photo Date: 7/14/14; 12:01 PM

Photo Date: 7/14/14; 12:01 PM

Upon returning to the office on July 14th, I issued a written notice to EMJ for the purpose of halting any further stockpiling or use of backfill material until there had been completion of the bank removal activities and decontamination of the upland area. Reiterating my July 10, 2014 email[2] about requesting deviations from approved plans prior to work occurring, I sent the following email to Ms. Essig Desai, the Project Coordinator for EMJ, of the proper mechanisms by which EMJ is required to obtain EPA approval to deviate from the NTCRA prior to performing Work.

July 14th Email to Amy Essig Desai from me:

> *"The purpose of this email is to. . . describe the appropriate procedures for obtaining EPA approval <u>prior</u> to any deviations from the approved Removal Action Work Plan. . .*
>
> *"Section XXVII. Modifications of the Settlement Agreement, documents the process by which changes are made to approved Removal Action Work Plan (RAWP). Specifically (77):*

[2] July 10, 2014 Email from Becky Chu to Amy Essig Desai Re: Pilings Removal Work. 11:45 AM.

If Respondents seek permission to deviate from any approved work plan or schedule or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving oral or written approval from the EPA Project Coordinator pursuant to Paragraph 76.

Furthermore (78):

No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

EMJ proceeded to remove the compromised backfill material and geotextile fabric from the upland area of the EAA. EMJ then decontaminated the area after the bank removal work was complete, followed by construction of the "CBSA".

The timeframe during which the CBSA was inappropriately constructed and clean backfill material was improperly brought in place was from 7/9/14 to 7/14/14.

Proposed stipulated penalty amount: $3,000 for 6 documented days (7/9/14 to 7/14/14) of failure to comply with the RAWP. This penalty amount includes $500 per day during 6 days of non-compliance with paragraph 48 of the Settlement Agreement.

4) Improper Storage of PCBs

The EPA-approved process for removal of PCB-contaminated sediments from the EAA included the following steps: dredge sediments with PCBs at 50 ppm or greater; place dredged sediments into containers on a barge; dewater sediment containers from the barge; haul the barge to a trans-loading facility; move the containers from the barge to a truck and trailer chassis; load the containers onto railcars; transport the containers by railway to an authorized PCB-disposal facility; and dispose of the PCB-contaminated sediments at the authorized disposal facility. This process is captured in the RAWP:

The JFOS-Impacted Material Area materials with total PCB concentrations greater than 50 ppm will be excavated from the uplands and placed directly into lined, water-tight containers staged on a haul barge. As necessary, dewatering amendment (diatomaceous earth) will be mixed into the materials to pass the paint filter test. . . . The containers will be rehandled directly onto truck and trailer chassis at the PPM Yard for transportation to the Waste Management ASRF where the containers will be loaded onto railcars for subsequent transport to the RCRA-permitted Subtitle C Chemical Waste Management of the Northwest facility.

In summary, dredge materials will include the following transportation and disposal steps:

- *Sediment haul barge transported downstream from the RAB to PPM Yard using tugs.*

- *Sediments with total PCB concentrations greater than 50 ppm in containers will be offloaded onto 30-ton trucks-and-trailer chassis and transported to the Waste Management ASRF. Dewatering amendments may be added to facilitate passing the paint filter test.*
- *Rail cars with materials containing total PCB concentrations greater than 50 ppm will be transported from ASRF to Chemical Waste Management of the Northwest facility.*

(Pp 50-51 of RAWP)

EMJ initiated the dredging of sediments with PCBs at 50 ppm or greater on July 12, 2014. The RAWP did not allow for storage of these PCB-contaminated sediments in containers on a barge, yet during a Site visit on July 14, 2014, I learned that EMJ was storing the dredged PCB-contaminated sediments in stacked containers on a barge. In addition to failing to follow the RAWP, EMJ was not in compliance with the storage requirements for PCBs set forth at 40 C.F.R. § 761.65. This regulation has been promulgated under the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq.

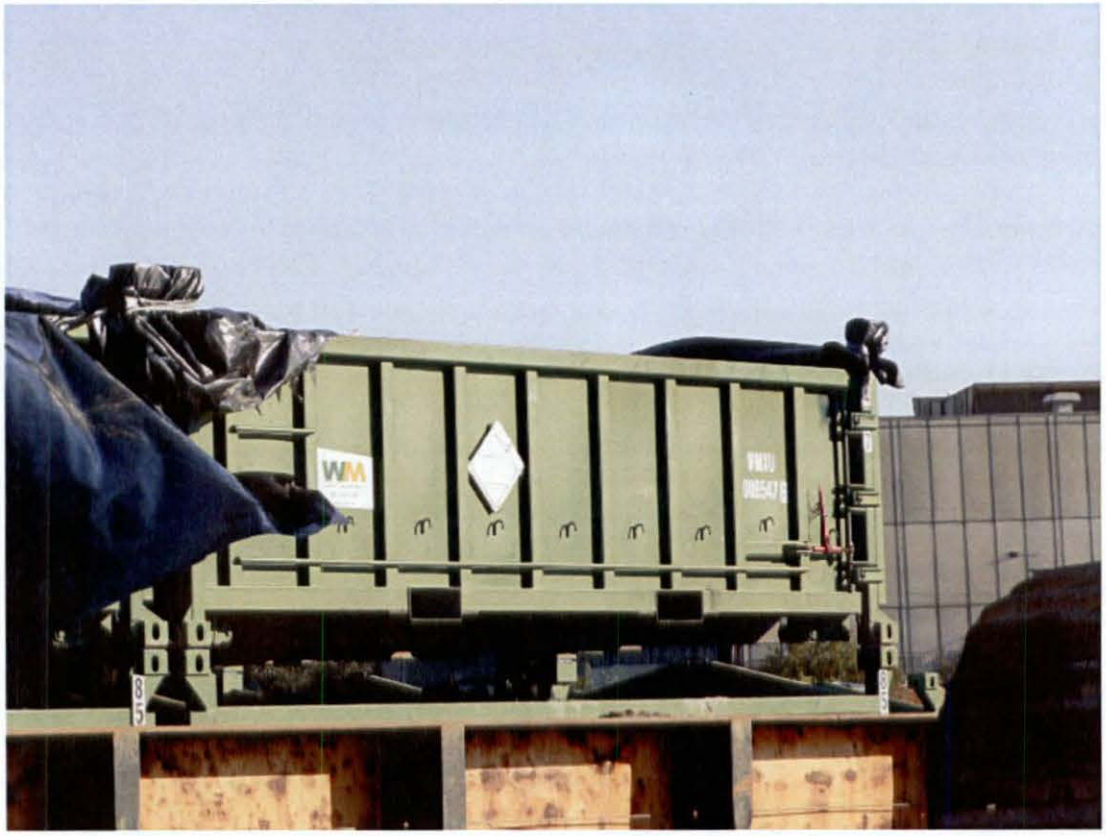


Photo Date: 7/14/14; 7:45 PM

Photo is facing SW/W from the bank. Containers are stacked on the container barge. The bottom containers appear to contain mounded sediments that are not covered.

Based on the configuration of the containers, and concern over moving the containers, the barge with the containers was secured and stored within the EMJ EAA the evening of July 14th, 2014. On July 15th, the EPA issued a halt work order for the in-water Work. The EPA informed EMJ that the use of the barge to store the containers was not appropriate, and required that the container be de-stacked and appropriately labelled as containing PCBs before the NTCRA could proceed. In electronic mail sent on July 16, 2014, I specifically requested from EMJ's representatives information about how the barge, which was now being used to store the containers, was substantively complying with the TSCA storage requirements. On July 18, 2014, the EPA notified EMJ via electronic mail that it must employ additional measures to comply with TSCA as the barge was being used to store the sediments with PCB concentrations over 50 ppm. This included labeling the barge as holding PCB waste with signage being available to anyone in or around the barge, including emergency responders. EMJ needed to take these additional measures because the original RAWP did not include using the barge to store sediments with PCB concentrations above 50 ppm.

EMJ had been using the barge to improperly store the stacked containers with sediments with PCB concentrations greater than 50 ppm from July 12- July 15th, when I halted all Work at the EAA. In addition to failing to follow the RAWP, EMJ was not in compliance with TSCA, and EMJ is obligated by paragraph 32 of the Settlement Agreement to perform the NTCRA in accordance with this federal law.

Proposed stipulated penalty amount: $2,000 for 4 documented days (7/12/14 to 7/15/14) of failure to comply with the RAWP, and TSCA. EPA halted any additional dredging work be performed on 7/15/14. This penalty amount includes $500 per day during 4 days of non-compliance with paragraph 48 of the Settlement Agreement.

5) Sediment Surface Sampling Requirements

The RvD, OMMP, and CQAP require that EMJ take sediment surface samples at the close of the in-water Work. The purpose of this sampling is twofold: to demonstrate the as-built quality of the backfill material, and to establish baseline conditions for the long-term monitoring of changes in surface sediment concentrations over time. Surface samples are to be collected at designated locations within the RAB, and for the purpose of comparison surface samples are also to be collected at several locations immediately adjacent to the RAB. An example of this explicit requirement is outlined in the body of the RvD, which states:

> *An initial Year 0 sediment sampling event will be conducted as part of the CQAP activities to verify the final "as built" quality of the sediment surface at the close of construction (in addition to the "Z-Layer" sampling described in the CQAP). This will serve as the baseline condition to compare with subsequent sediment sampling events conducted under the OMMP. (p. 80, August 2013 RvD)*

Although the initial Year 0 sampling event is required Work that is clearly delineated in three work plans, inexplicably EMJ did not perform this sampling. This failure to sample was not a mere oversight either, but rather a silent refusal to perform the Work as over the course of the next several months the obligation continued to persist despite numerous written notices from the EPA reminding EMJ of this outstanding unfulfilled requirement. During this entire time period, EMJ did not provide a written

request to the EPA for altering any of the work plans which, with formal approval from the EPA, could have alleviated some aspect of the sampling requirements. Such a written request and formal approval process in accordance with paragraph 77 of the Settlement Agreement is the only means for EMJ to have deviated from this sampling obligation without committing a relatively significant violation of paragraph 18 of the Settlement Agreement.

On November 21, 2014, EMJ submitted its Pre-Final Certification Inspection Report to the EPA. In reviewing and commenting on this document, the EPA informed EMJ that EMJ did not include the required post in-water construction baseline surface sediment sample data from within the RAB as required by the RvD, CQAP, and OMMP.

On December 11, 2014, I sent an electronic mail message to EMJ's Project Coordinator asking when the sediment surface samples from within the RAB would be available. On December 12, 2014 I submitted a letter to EMJ disapproving its Pre-Final Certification Inspection Report, in which I noted that EMJ had not provided the required sampling data for the surface sediments from within the RAB. I did not receive a response from EMJ to either of these correspondence about the missed sampling.

On December 17, 2014, the EPA and EMJ received perimeter surface sampling data from The Boeing Company (Boeing) obtained in association with work being conducted at a nearby facility. The data shows PCB concentrations within the EMJ RAB above the RvAL in the surface of the backfill material. The EPA informed EMJ that these data are concerning because the EPA has no baseline data from EMJ surface samples that can verify the "as built" quality of the sediments and can be compared with the Boeing data. Furthermore, Section 6 of the OMMP details "Contingency Response Actions", and includes "additional round of sediment testing will be conducted immediately to confirm the results." However, EMJ never contacted the EPA to discuss the Boeing data or invoke this OMMP clause to further evaluate and compare data.

During a meeting with the EPA on January 8, 2015, EMJ acknowledged having not collected the post in-water construction surface sediment samples as required under the CQAP. On January 16, 2015, the EPA and EMJ had another meeting and discussed the need for EMJ to perform the surface sediment sampling. During that meeting, the EPA discussed the need to sample for the purposes of addressing the missing "baseline conditions," and providing a comparison with the Boeing data.

After almost five months of non-compliance with the surface sampling requirement, on February 9, 2015, EMJ provided the following explanation in the revised Pre-Final Certification Inspection Letter Report for not having performed this sampling:

Post-construction In-water Backfill Surface Sampling

> *Section 4.1 of the OMMP states that six surface samples will be collected from the post-construction backfill surface and submitted for chemical analysis following completion of the removal action construction activities. The objective of this sampling was to provide the baseline chemical concentrations of the backfill surface to support evaluation of increases in these concentrations over time due to deposition of sediments originating outside the RAB. This sampling was not performed due to the following issues:*

- *Discussions with the analytical laboratory indicated that the coarse grain size of the backfill material would contain insufficient fines to allow chemical analysis*
- *The surface backfill chemical concentrations are equivalent to the chemical concentrations identified during the pre-construction chemical analysis (see Attachment B) because the backfill was transported directly from the quarry to a barge, barged directly to the RAB for placement, and the final backfill was placed in the RAB following completion of all dredging and shoreline excavation activities*
- *Both the Boeing and Terminal 117 Early Action cleanups used the pre-construction backfill material chemical concentrations as the Time 0 concentrations of the backfill surface*

On November 24, 2014, Boeing collected six surface (0 to 10 centimeters) samples within the RAB to document the baseline surface sediment concentrations within the RAB prior to completion of their dredging activities in the immediately downstream Duwamish Sediment Other Area (DSOA). This sampling documented the concentrations of the newly deposited (approximately 2.5 months following construction completion) surface sediment overlying the clean backfill. The sampling locations and analytical data are presented on Figures 1 and 2 of Attachment D. The sample collection information is summarized on Figure 2. The deposited material was described as "wet silt" and varied from a trace thickness to approximately 2-inches thick. The total PCB dry weight concentrations ranged from 13.1 to 800 mg/kg, and the OC-normalized total PCB concentrations ranged from 10.8 to 28.1 mg/kg-OC. Three of the six samples exceeded the total PCB RvAL. As discussed above, the elevated total PCB concentrations are attributed to the deposited material, given that the underlying coarse backfill material contained insufficient fines to allow chemical analysis.

During a meeting between EPA and EMJ representatives on January 16, 2015, EPA requested that EMJ perform backfill surface sampling in accordance with the EPA-approved OMMP, and the EMJ representatives agreed. However, it is important to note that this sampling will not achieve the Time 0 backfill surface sampling objectives described above and in the OMMP. Rather, the identified concentrations will reflect the concentrations of sediments deposited in the RAB from waterway-wide sources since construction completion, including any potential releases of significantly elevated total PCB concentrations (some of which exceed the Toxic Substances Control Act 50 mg/kg threshold) during dredging performed by Boeing in the DSOA immediately downstream from the RAB. EPA has recently requested that the sampling depth be revised from the depth identified in the EPA-approved OMMP. The OMMP must be modified as necessary to reflect any changes to the EPA-approved sampling methods prior to completion of the sampling.

EPA did not agree with this explanation and did not provide approval of any deviation from the requirement for performing surface sediment sampling as per the RvD, CQAP and OMMP.

On February 18, 2015, the EPA sent an email to EMJ representatives inquiring about the RAB surface sediments sampling. On February 20, 2015, the EPA sent another email to EMJ representatives regarding the RAB surface sediment samples, emphasizing its concern over the missing data especially in light of the December 17, 2014 Boeing data showing PCBs above the RvALs in the surface sediments of the RAB. In this email, the EPA stated it needed information about EMJ's backfill material because Boeing was finalizing work which involved removing and replacing some of the backfill material within the RAB.

On February 23, 2015, after more than five months of blatant non-compliance with the Settlement Agreement, EMJ requested an extension of the time to perform the surface sediment sampling. EPA did not approve of this request in light of the willful and continuous disregard for the requirements of the Settlement Agreement.

Although EMJ has been out-of-compliance with the surface sampling requirement for more than 180 days, for the purpose of assessing stipulated penalties, a maximum of 90 days of accrued penalties is allowed under paragraph 48 of the Settlement Agreement. As a result, the EPA should demand payment of the maximum amount of stipulated penalties for this egregious violation.

Proposed Stipulated Penalty Amount: $300,000 for the 90 documented days of violation (9/14/14 to 12/14/14) of the RvD, CQAP and OMMP. The penalty amount includes the following per day penalties for non-compliance with paragraph 48 of the Settlement Agreement: $350 for days 1 to 7 days at $500 per day; $7,000 for days 8 to 14 at $1,000 per day; $40,000 for days 15 to 30 at $2,500 per day; and $300,000 for days 31 to 90 at $5,000 per day.

6) Response to the EPA Disapproval of the Pre-Final Certification Inspection Letter Report

On December 12, 2014, the EPA provided notice to EMJ of the disapproval of EMJ's Pre-Final Certification Inspection Letter Report. Such a disapproval triggered the requirement under the Settlement Agreement for EMJ to provide a revised report to the EPA within 30 days of the notice. On December 15, 2014, I sent Amy Essig Desai an email reminding her that the Settlement Agreement requires that the revised Pre-Final Certification Inspection Letter Report be submitted by EMJ within 30 days of the notice letter from the EPA:

> *Amy*
>
> *In my email last week, I noted that the disapproval letter did not explicitly identify a timeframe for re-submitting a revised Inspection Report. I also proposed that we wrap the Inspection Report in to the other ongoing discussions between EPA and EMJ regarding the removal action. In reviewing the Settlement Agreement, it requires a resubmittal of deliverables within 30 days of a notice from EPA requiring revisions. Therefore, EMJ will be required to submit a revised deliverable within the timeframe identified in the Settlement Agreement.*

The Settlement Agreement details the requirements for revising deliverables and the timeframe for doing so.

Under Paragraph 18 of the Settlement Agreement:

> *For all Work, EPA may approve, disapprove, require revision to, or modify a deliverable in whole or in part. If EPA requires revisions, Respondents shall submit a revised deliverable within 30 days, or the duration identified in the Schedule of Deliverables in the attached Statement of Work, following receipt of EPA's notification of the required revisions, unless otherwise noted in the SOW.*

Under Paragraph 48 of the Settlement Agreement:

> *stipulated penalties shall accrue per violation per day for failure to submit timely or adequate final and all submitted draft reports or other written documents pursuant to this Settlement Agreement that are not listed in Paragraph 47(b).*

Despite this requirement and the reminder message from the EPA, EMJ did not submit the revised Pre-Final Certification Inspection Report until February 9, 2015, 29 days after the 30-day time limit provided by the Settlement Agreement.

Proposed Stipulated Penalty Amount: $48,000 for the 29 documented days of violation (1/13/15 to 2/8/15) of paragraph 18 of the Settlement Agreement. The penalty amount includes the following per day penalties for non-compliance with paragraph 48 of the Settlement Agreement: $350 for days 1 to 7 days at $500 per day; $7,000 for days 8 to 14 at $1,000 per day; and $37,500 for days 15 to 29 at $2,500 per day.

7) Unauthorized Deviations from the EPA Required Revisions for Deliverables

Due to the presence of PCBs which exceed the removal action cleanup levels established in the Action Memorandum, the EPA is requiring EMJ to conduct sampling of the top portion of the backfill material placed by EMJ into the RAB, as well as of the sediment beneath this backfill material. In order to accomplish this Work, at the direction of the EPA, in April 2015 EMJ submitted draft deliverables in the form of Modification No. 1 to the CQAP and Addendum No. 2 to the OMMP. In a letter dated June 16, 2015, the EPA provided EMJ with required revisions for these draft deliverables. On July 16, 2015, EMJ submitted revised drafts of Modification No. 1 to the CQAP and Addendum No. 2 to the OMMP, but failed to include and follow some of the revisions required by the EPA.

The EPA June 16, 2015 letter is entitled *EPA Required Revisions to Addendum No. 2 to the Operations, Monitoring and Maintenance Plan Jorgensen Forge Early Action Removal Action dated April 2015, and Construction Quality Assurance Plan Modification No. 1 Jorgensen Forge Early Action Removal Action dated April 2015*. In that letter, the EPA provided the following directive to EMJ:

> *In accordance with Section VIII (18) of the Settlement Agreement, EMJ is required to make all of the revisions identified in this letter. No other revisions except those identified above are approved.*

The above directive is in keeping with the authority to require revisions to deliverables that is provided to the EPA by virtue of paragraph 18 of the Settlement Agreement. Nevertheless, in at least two instances EMJ did not abide by this directive. The unauthorized deviations by EMJ pertain to not having a health and safety plan (HSP) for all personnel associated with the Work of EMJ at the Site, and incorrectly re-characterizing some of the past Work performed by EMJ.

EMJ was to have provided a HSP which covered all personnel and entities performing sampling Work on behalf of EMJ at the Site. The EPA June 16, 2015 letter stated this requirement:

> *HSP Section 1 Introduction. This section states that the HSP is mandatory for all Anchor QEA personnel and Anchor QEA subcontractors. However, it is unclear if the HSP is applicable to anyone outside of Anchor QEA who may be involved in performing the Addendum work or handling the contaminated materials associated with the Addendum. EPA requires that HSP be provided for all entities associated with the work described in the Addendum and Modification, consistent with the Settlement Agreement. EPA will not permit work to occur without HSP for all entities involved in performing the work.*

EMJ's July 16, 2015 letter to the EPA provided the following response:

> *The HSP will be provided to all entities associated with the work described in the CQAP Modification No. 1 and OMMP Addendum No. 2.*

Contrary to that acceptable response by EMJ; however, the HSPs provided by EMJ to the EPA in July 2015 make the following statement:

> *The provisions of this HSP are mandatory for all Anchor QEA personnel assigned to the project. Anchor QEA subcontractors are also expected to follow the provisions of this HSP unless they have their own HSP that covers specific activities related to this project . . . Construction contractors and their subcontractors will be required to develop separate HSP.*

Consequently, EMJ failed to revise CQAP Modification No. 1 and OMMP Addendum No. 2 as directed by the EPA, because EMJ did not provide a HSP for all entities anticipated to be associated with the sampling Work.

EMJ also inappropriately and incorrectly re-characterized Work previously performed at the Site. The April 2015 draft versions of OMMP Addendum No. 2 and CQAP Modification No. 1 provided by EMJ characterized the Work performed during the summer of 2014 as follows:

> *EMJ performed a Non-Time Critical Removal Action (NTCRA) from July to September 2014 to cleanup up sediments and the shoreline bank within the defined Removal Action boundary (RAB) adjacent to a portion of the Jorgensen Forge Corporation (Jorgensen Forge) property located at 8531 East Marginal Way South in Seattle, WA.*

In the July 2015 revised draft versions of CQAP Modification No. 1 and OMMP Addendum No. 2, EMJ included the following re-characterization of the Work performed in the summer of 2014:

> *The Earle M. Jorgensen Company (EMJ) completed a non-time-critical removal action in September 2014 at the Jorgensen Forge Early Action Area of the Lower Duwamish Waterway Superfund Site in Seattle, Washington as detailed in the Basis of Design Report (BODR; Anchor QEA 2013) and subsequent addenda (Anchor QEA 2014a, 2014b).*

This re-characterization of the NTCRA as having been "completed" by EMJ is incorrect and is an unauthorized substantive change to the prior drafts of CQAP Modification No. 1 and OMMP Addendum No. 2. In addition to not following the direction of the EPA, this alteration by EMJ is inappropriate

because the Settlement Agreement outlines the specific process by which completion of the work is determined in this matter. Section XXVIII, Notice of Completion of Work, Paragraph 79 of the Settlement Agreement states:

> *When EPA determines, after EPA's review of the Final Removal Action Completion Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including post-removal controls and monitoring, if any, payment of Future Response Costs, or record retention, EPA will provide written notice to Respondent.*

That process has yet to occur. Therefore, this re-characterization by EMJ of the status of the NTCRA is a substantive change that is an unacceptable failure to follow the directions of the EPA.

Proposed Stipulated Penalty Amount: $1,000 for the two documented violations of paragraph 18 of the Settlement Agreement. The penalty amount for each violation includes the following per day penalties for non-compliance with paragraph 48 of the Settlement Agreement: $500 for day 1 at $500 per day.

APPROVED

X Cami Grandinetti

Cami Grandinetti
Remedial Program Manager

DISAPPROVED

X

Cami Grandinetti
Remedial Program Manager

APPROVED WITH MODIFICATIONS, SPECIFIED AS FOLLOWS

X

Cami Grandinetti
Remedial Program Manager

MODIFICATIONS