

INTERIM DREDGE DISPOSAL WORKING GROUP

Date: June 9, 2010

ISSUE DATE: June 18, 2010

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ACTION BY	ITEM	DESCRIPTION
INFO	1.	Will Friedman (President/CEO) thanked everyone for attending and being a part of the meeting and he is looking forward to advancing this project as expeditiously as possible.
INFO	2.	The USACE spent the morning with Jim White touring much of the upper Cuyahoga River and talking about the options and site alternatives. This gave ERDC reps a first hand look at several alternative sites.
INFO	3.	Jim White, Cuyahoga River RAP, briefly reported on RAP's effort to develop the sustainable sediment management system. The concept intercepts sediment in the natural section of the river and develops a beneficial reuse.

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<p>RAP TEAM</p>		<p>Jim mentioned a meeting he had with Joe Dirt, his colleagues and a group from Streamside System who developed the sediment trapping devices that are deployed in natural rivers settings. The meeting centered on the conceptual elements. The first goal is to try and capture sediment from the river (i.e. grab sample) to determine whether or not it's technically worth pursuing the concept. The preliminary determination indicated that the sediment was susceptible to capture with Streamside System technology.</p> <p>The team is working on is the technical outline for a sampling project that would deploy a 4'x4' in-river sampling device to capture more sediment over a specific timeframe to get a measure of quantity and properties of the sediment. The team is also working on the details of the deployment outline to give to the USACE, which will provide input as to quantity and chemical and physical analysis data to be collected in the initial study.</p>
<p>INFO</p>	<p>4.</p>	<p>Frank O'Connor stated that the recycling or rehandling facility concept is one of the top five alternatives.</p>
<p>INFO</p>	<p>5.</p>	<p>Jim White stated the remedial action plan is to always have sediment stressor in the river for a variety of reasons, one of which, it's a major transport mechanism for nutrients in the ship channel. It has always been a goal of making new brownfields out of dredging sediment, which gets us nowhere. He said RAP is not making any progress, just making new disposal sites. The idea was to try to develop techniques to harvest sediment in the natural river and redeploy it for beneficial uses. RAP shared technology with Joe Dirt and with the sediment guys and want to continue to pursue a portion of the sediment which may be consumable by HarborRock to produce light weight aggregate (this could generate an income stream), which could be an industrial development site as part of the Pershing Road property. The goal is to minimize the amount of sediment that gets into the ship channel.</p>
<p>INFO</p>	<p>6.</p>	<p>The high shale content of the sediment that has been captured seems susceptible to the HarborRock process and seems to be fairly collectible using the Streamside System technology and everyone agrees the next step is to do a bigger sample. About 5 gallons of dredging materials have been captured.</p>
<p>CRR</p>	<p>7.</p>	<p>Frank said the way this all fits together is that Jim and his people are working on some of the details of feasibility that would then feed into the ERDC evaluation. It would then be decided what the concept looks like by identifying the problems, what are the advantages, and the pros and cons.</p>
<p>INFO</p>	<p>8.</p>	<p>Mr. Friedman asked Mr. White to explain the RAP organization. Mr. White explained that their was a fire in 1969 in the river which</p>

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		led to the creation of the Clean Water Act which led to the formation of the US and the Canadian government so the International Joint Commission and Water Quality Standards for the Great Lakes. They determined that there are areas in the Great Lakes that are the most polluting sources which are called "areas of concern", which the Cuyahoga River is one of forty-two. He said the solution was to have a locally driven Remedial Action Plan (Jim is the director for the local RAP). The stakeholders' model includes OEPA, ArcelorMittal, and USACE. RAP developed over the last several years a fairly complicated Action Plan that includes the ship channel as the specific sweep of action that needs to be taken, which includes dam removal as a sweep of action that has to be taken to open up the river.
INFO	9.	There is a wetland restoration and habitat inventory of over 3,000 wetland sites that has been targeted to develop restoration plans. The tributary stream storage has in the last eight years RAP incubated a total of nine tributary watershed groups with eight watershed action plans in place. Restoration and preservation of economic commerce is one of our acknowledgements that whatever RAP does in the ship channel is to be done for river restoration. It also should be acknowledged of the importance the ship channel is economically to Cleveland. It is also an economic benefit as well as environmental restoration.
INFO	10.	RAP has no direct ongoing operating funding in the last several years. RAP has received a variety of grants from ArcelorMittal, OEPA, the Wetland Research Project, money from the Gund Foundation, and Tributary Project. He said the sediment project is underfunded.
INFO	11.	Regarding the concept – questioning whether or not we are creating sediment path with upper limited dredging in the federal channel and unless we overdredge, there is quite a drop off at the head of navigation. Effectively a natural trap isn't seeing most of the sediment that is being dredged from an effective natural sediment trap. Mr. White explained that this would be the natural flow that requires the flow rate of the river be reharvest if you want to carry the sediment deposit as it passes over the sediment collection devise. It is not invasive and does not require the shape of the river but does require the energy that does exist in the natural river.
INFO	13.	HarborRock may be 80% consumable and some of the material may need a plan for the whole consumption of the material. Mike LeWall inquired whether this would be one of several viable solutions that would still have disposal capability. Mr. White said in all conversations it has been stipulated that there has to be a disposal plan.

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ERDC	14.	The question was asked, is there a way to accelerate the dewatering process. Mr. White said the site characteristics that they have been looking at pushing the technology further with much smaller footprint and rapid decanting of water needed for disposal.
INFO	15.	<p>The Harshaw site would be a principle place where surplus material could also be harvested, but this is something that should be studied further. Two other sites will be studied. There is enough information to start the process.</p> <p>A question was asked about how much is known about the profile of the sediment. 80% of the sediments come from 20% of the channel. Is the sediment more contaminated at the beginning or half way down the channel? There is less contamination upstream than downstream.</p>
INFO	16.	The CDF as planned for 2015 most likely be available in 2018. Existing CDF's run out of capacity by the end of 2014. The Task Force is focusing on the interim capacity. ERDC was selected to join in on the final evaluation and take the lead. ERDC (Engineering Research Development Center) is part of the USACE with an expertise in dredging and management of sediment. ERDC wrote the book on beneficial re-use of dredged material.
INFO	17.	Joe Kreitinger was introduced as the lead Investigator for ERDC; his support team is in Vicksburg. Joe is based in New York and will attend monthly progress meetings in Cleveland. Richard Price, Senior Technical Advisor, also from Vicksburg and Karen Keil from the Buffalo District, Toxicologist (risk assessment).
INFO	18.	Mr. Price explained that sediment is a byproduct of soil that ends up in the harbor during the erosion process. He said the USACE is not the regulatory authority on soil erosion and discharges of contaminates in the waterways. It's not the USACE's responsibility but it impacts their ability to do dredging. The USACE's mission is to remove materials from navigable water systems to maintain navigation depth by the most cost effective means possible. He said three hundred million cubic yards of dredged materials are removed from navigation channels every year with 5-10% of that is considered contaminated. On a national basis about 40% is beneficial some of that is for Wetland nourishment, beaches and other beneficial uses. At least 68% was placed in open water.
INFO	19.	Mr. Price explained that ERDC is developing testing manuals to determine what is acceptable; the USEPA and USAEC also have a joint testing manual for in-water placement. ITM (Inland Testing Manual) and the regulatory requirement is Section 404, the Clean

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		Water Act. Run the test and if it fails, it's not suitable for open water placement. The other testing manual looks at disposal in CDF facilities. The purpose is if it's unsuitable for open water then has to put in a CDF facility or use it in an upland environment for some other purpose. The manuals were designed for worst case scenarios. Great Lakes dredging consist of 3.3 million cubic yards dredged each year, which is 1% of the national volume, half of which is placed in CDF facilities.
INFO	20.	Mr. Price explained that they looked at dredged material for use in agriculture. Had old CDF's and dredged the river and they wanted to create more CDF's, but the problem was the CDF's were sited on some prime farm land and the farmers saw no use for this. ERDC suggested that instead of building a CDF for containment, just place the material in a thin layer and a three foot lift on marginal farm land and use the material for more productive purposes. This demonstration was performed on an existing CDF and produced a higher average yield than the local area. Made sure to provide for de-watering and applied normal fertilization to the crop. Tree farms are a viable option. Mr. Price continued to explain various dredging projects that ERDC was involved with.
INFO	21.	Mr. Price explained that ERDC addresses the risks and determines what is acceptable and assumes there is going to be risks in virtually everything they do. There is guidance from the USEPA and USACE in evaluating the effects, management alternatives, and technical framework. Regional guidance from Great Lakes Testing Evaluation Manual is based on the national manual.
INFO	22.	Recently the USACE put together a summary available guidance for suitability of dredged material for beneficial use. They are in the process of determining a comprehensive beneficial use testing manual.
INFO	23.	Coming up with site specific data would allow getting a better handle on whether the risk becomes an issue. This is where it would be necessary to work with state and federal regulatory agencies to determine whether they accept a more detailed analysis of the risk and not using the screening guide that are based on a lot of general assumption about exposure.
INFO	24.	The bottom line is to have successful beneficial uses, technically feasible, meet regulatory concerns, and have public support. It has to be economical solution to maintain dredging ability and is imperative that we do all we can to promote this.
ERDC	25.	A brief overview of the technical assessment evaluation that they will be performing for the Cleveland Harbor dredged material was given. Key issues in the assessment are what the study is actually

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		going to consist of. The USACE is going to develop alternatives to CDF using the federal standard for the base plan which is an economic driver for the project. The USACE is committed to doing the work and has to establish beneficial use of alternatives and see how their costs measure up. The beneficial use has not been tried before and this not really the standard of practice.
ERDC	26.	The first thing that has to be done in developing this is assessment of beneficial use alternatives is get all the data, in particular the chemistry of the sediment, and have a firm grasp on the issues that may be related to beneficial use options. We are dealing with large volumes of materials so we need to know something about the sites the dredge is going to. There are transportation costs and material handling costs that needs to be identified and defined. There maybe real estate management issues and ownership issues that needs to be resolved. There may be stakeholder requirements that are not yet known and the actual end use may have very specific requirements in turn of the chemistry in the sediment.
ERDC	27.	Will do a review when this is completed to see what data is missing. There will be a data gap analysis of the existing data and discussion with the local government agencies as to what are the permit requirements. The Human Health and Ecological Risk Evaluation as a government regulatory agency has to be absolutely certain what is being proposed is being protective of human health environment.
ERDC	28.	In order to evaluate whether the federal standard is being met in terms of the lowest cost option, there has to be a cost analysis, not including the cost for material handling, and transportation costs, constraints in terms of the geotechnical suitability of the material and both the human health and engineering cost analysis. Will provide an economic cost analysis so the standard can be evaluated to determine whether it's feasible or a smart project to pursue. Clearly take a hard look at permitting and legal constraints, limitations to real estate, right of ways, access, and risk.
ERDC	29.	Summary of goals met finding a place for the sediment by 2014 and will pick the best option. Have an adaptable management plan develop a long term sustainable strategy for dredge material.
ERDC	30.	Draft to the Buffalo District by the beginning of 2011.
INFO	31.	Looking at dredged material as a resource, not a hazardous material.

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ERDC	32.	Key issues - the study will consist of human health/ecological risk evaluation, an engineering cost analysis, economic benefit analysis, permitting and legal constraints, multi-criteria assessment of interim beneficial use alternatives
INFO	33.	The next Working Group meeting will be July 7, 2010 at 10 AM. The Task Force will meet immediately after the Working Group at 11:30AM.

Distribution: Attendees