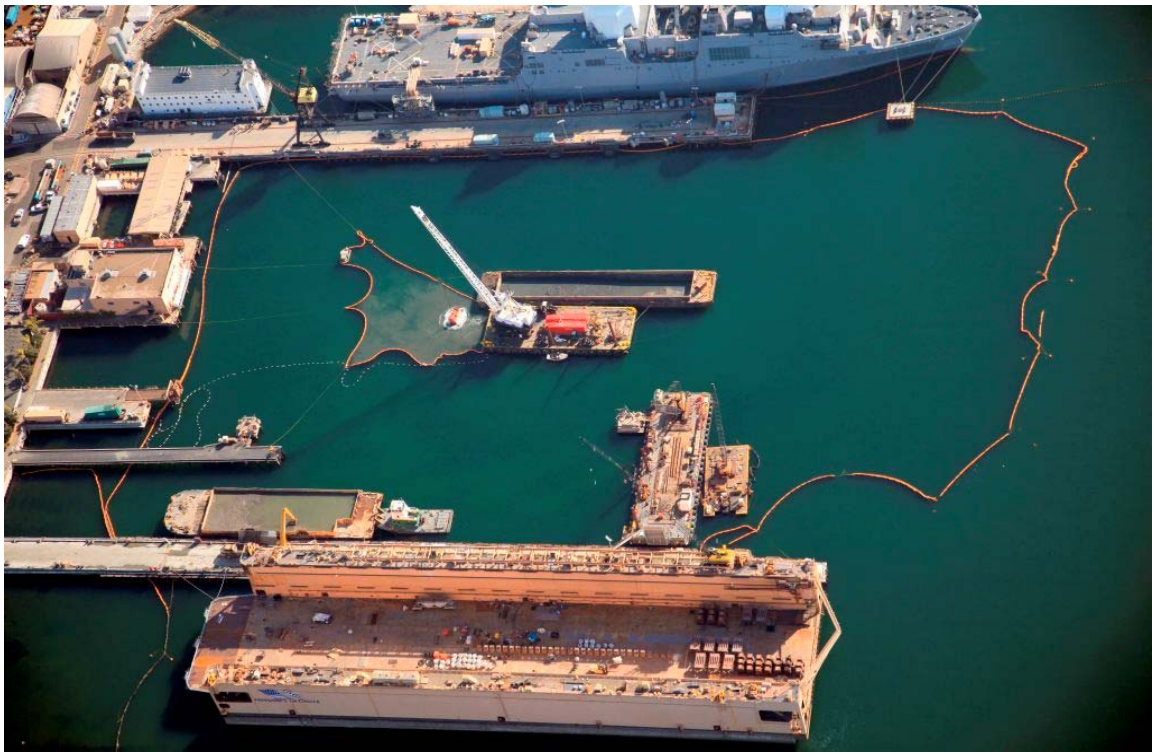
R.E. Staite Engineering, Inc.



San Diego Shipyard Sediment Site - South Shipyard Comprehensive Environmental Management Plan Including:

Water Handling, Sediment Management, and Air Quality, Traffic and Noise Control Plans

September 3, 2013

R.E. Staite Engineering
San Diego Shipyard Sediment Site - South Shipyard Comprehensive Environmental Management Plan Including: Water Handling, Sediment Management, and Air Quality, Traffic and Noise Control Plans

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I. INTRODUCTION

R.E. Staite Engineering has been selected to perform the remediation of the South Trust and will begin the project with mobilization beginning in the first week of Sept. 2013 and dredging beginning on Sept. 17, 2013.

R.E. Staite Engineering, Inc. (RES) is a 75 year-old, small-business, marine construction company that operates a waterfront facility at 2145 E. Belt Street in San Diego, California. This facility will be used to stage marine construction and dredging operations for the shipyard remediation. We employ our own tug fleet which provides us the ability to meet the operational demands of the Shipyard without incurring excessive costs when floating equipment is required. RES has successfully completed 10 remediation projects in the San Diego Bay region, including the recent first phase remediation of the BAE Shipyard, America's Cup Harbor, and Convair Lagoon.

This document is intended to comply with the requirements of the Cleanup and Abatement Order for pre-construction submittals for the:
1. Environmental Protection Plan;
2. Water Management and Treatment Plan;
3. Cover Material Placement.

Each of these sections are discussed in this Comprehensive Environmental Management Plan as a means to show the relationship between all four planning documents. The following procedures, control measures, and reporting requirements will govern how this project will be performed.

These plans are intended to demonstrate how RES will prevent discharges to San Diego Bay while conducting dredging operations, barge-transporting sediments, decanting water from the barges, and offloading sediments for transportation to the Otay disposal facility. As an experienced Bay Remediation contractor, RES has proven the following approaches with actual application in the marine environment. Each construction activity has been planned to ensure that we meet the goal of zero discharge. This plan outlines the procedures and methods in meeting those goals.

Given the time constraints of this project, several of the remediation activities will occur in tandem:

1. Debris removal;
2. Pier demolition; and
3. Dredging and sand cover placement.

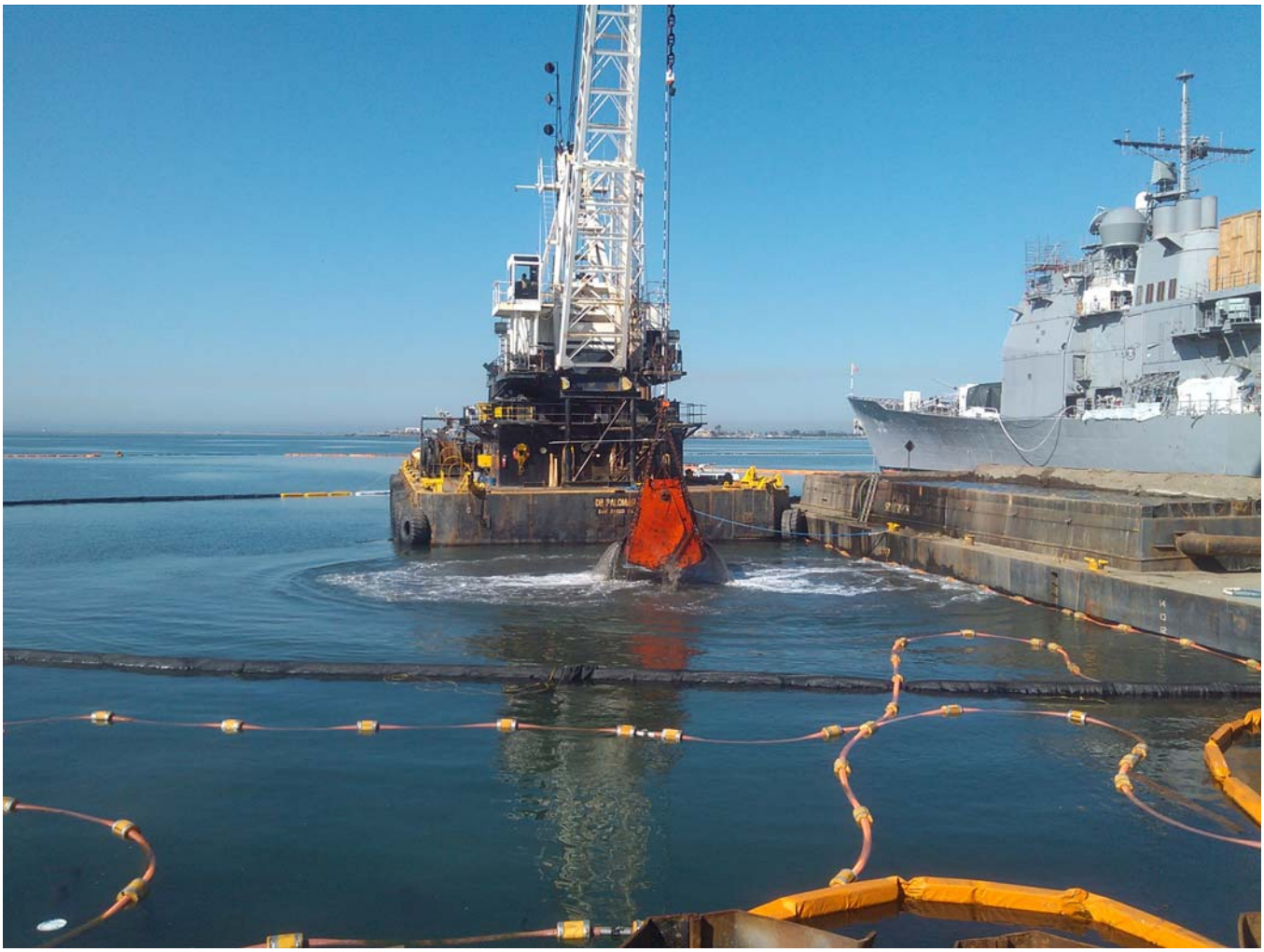

Photo: D.B. Palomar Dump Scow, Environmental Bucket, Curtains, And Decant Hose At BAE Shipyard

II. PROJECT GOALS

Our contracting goals are as follows:

1. Comply with the requirements of the Cleanup and Abatement Order;
2. timely remediation of the site prior to the start of the Least Tern season;
3. remediation of the sediments in such a manner as to prevent discharges back to the Bay; and
4. meet the cleanup goals while maximizing value to the Shipyard and the Trust.

III. PROJECT SCHEDULE AND FEATURES

In order to meet the South Shipyard remediation scheduled that will commence on September 17, 2013 and run through March 31, 2014, we would first start clearing the debris field to obtain clear access to the approximate 52,600 cubic yards (CY) of unsuitable sediment and plan for the possibility of an additional 6,000 CY of material should the first pass not meet the CAO standards. Sand capping will be provided in areas under or near structures and shorelines that could become undermined if dredging were to occur. Initially, 7,000 SY of sand would be placed after approximately 8,300 SY of gravelly sand is placed to retain the top of the dredged slopes. An additional sand cover currently estimated at 4,500 SY could be required if additional

measures are required to meet the goals of the CAO. These quantities are those given in the project specification and RFP.

IV. ENVIRONMENTAL MANAGEMENT SUMMARY

The duration of the dredging project is estimated to be approximately six to seven months. All dredged materials will be transported to Otay for disposal while pier and bottom debris may be transported to other approved disposal facilities.

Decanted Water Handling, Sediment Treatment, and Offload Procedures

A. WATER HANDLING

Once dredging and surveying activities begin on the 17th of September and as scows become full with sediments, RES will pump decanted surface water from the scows to a series of Frac tanks located on the deck of the dredge allowing suspended silts to settle before transfer of the decanted water to a secondary barge with additional Frac tanks. Once transferred, the secondary barge will be ferried to the landside water holding facility located at the SMA. When the secondary barge reaches the SMA, the water in the tanks on the barge will be transferred to a series of Frac tanks on land for inventory, storage, testing, and final discharge into the City sewer system. The barges will be outfitted with suction pumps and hoses for picking up water and tank discharge pumps for pumping water to shore. The shore station will be outfitted with storage tanks, filters, test stations, and piping which supports sanitary sewer disposal, filtration, or haul off. (see SMA diagram)

In prior completed projects requiring disposal of decanted dredge water to the municipal sewer, RES has achieved acceptable discharge standards without the need for active treatment systems. Furthermore, these projects utilized fewer tanks than are planned for this project with a shorter settling duration than is called for here. RES can further increase the settling ability of the water handling system if necessary by setting up tanks in a bottom-to-top connection series. If exceedances are still observed in the decanted water, a treatment system is an available option to implement if discharge standards are not met through the above outlined process.

Dredge scows will be sealed prior to initial filling. Scows are monitored by crews for evidence of leakage by visual means. The primary monitoring method is through monitoring the scows for loss of draft which is verified by hull draft marks. Scows will be filled so that a minimum of 12" of freeboard is remaining to eliminate the possibility of spillage over the scow bin walls during transport and offload. In the unlikely event that leakage occurs, the location of the scow will be documented at the time of leakage so that the area can be investigated for cleanup measures if necessary. The source or cause of the leak will be investigated and the scow will remain out of service until the cause is fixed.

B. SEDIMENT TREATMENT

When the scows have been filled with dredge material, the scows will be towed to the Mixing Station Barge (See Diagram) where an excavator with a mixing tool

attachment will be used to mix additives to the sediments. The material will be treated with a water-reducing binding agent to dry the sediments in each of the scows. The amount added is based on the volume of material contained in the scow and the moisture characteristics of the material. Based on past practices, RES has added agent at an average 4 percent of total quantity by volume as an effective treatment.

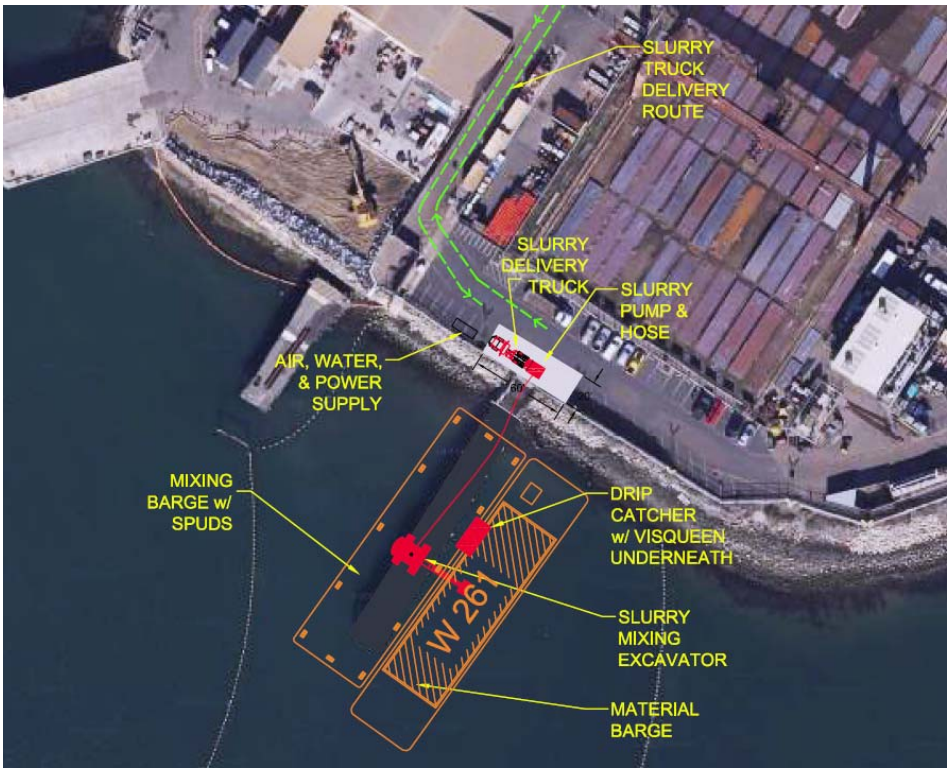

Diagram: Mixing Station

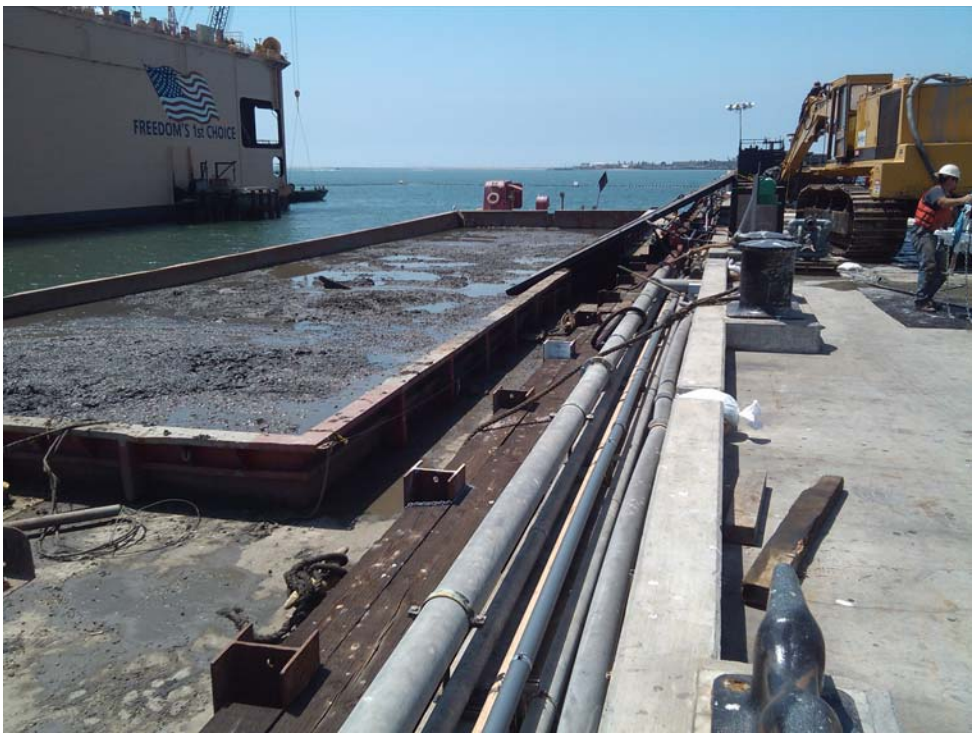

Photo: Slurry Added To Barges 2013

Once mixing is completed the scow will be ferried to the offloading station within the SMA (See diagram) and allowed to dry an additional 8 to 12 hours. Once drying is completed, the dredge sediment will be tested for saturation content prior to offload.

C. OFFLOAD PROCEDURES

The offloading station is located on the north side of Chollas Creek at the bulkhead in the SMA; this site is used for offloading into disposal trucks and truck wash down only. In other parts of the SMA there will be staging for Frac tanks, debris handling, and an auxiliary containment area for sediments. A drip catcher will be deployed during all offloading operations. (See Photo)

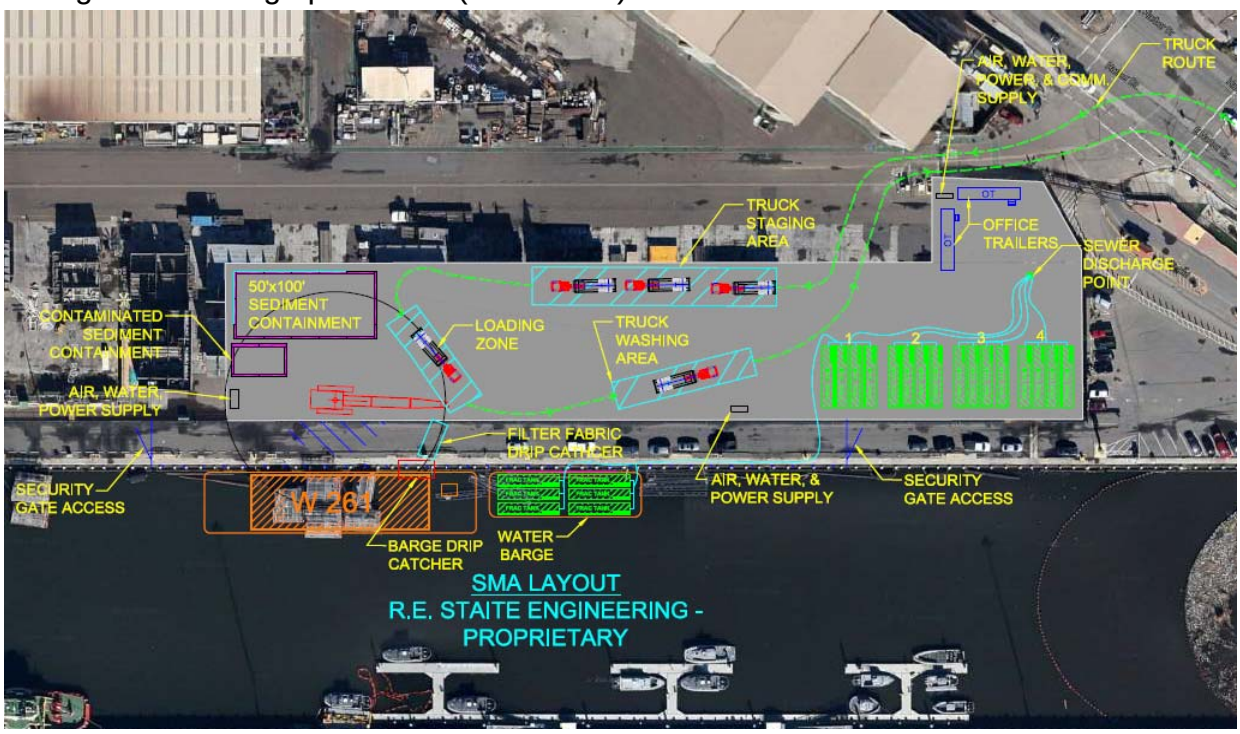

Diagram: SMA and Offload Station at Chollas Creek

The material will be offloaded from the scow using a crane and 8 cubic-yard bucket within the SMA. The material will be placed into trucks that are lined with plastic sheeting to prevent discharge.

Photo: Drip Catcher for Barge Offload

Trucks will then be directed to a contained wheel wash-down area before leaving for the landfill. All water by-product from the wheel wash-down containment area will be pumped back into the Frac tank for processing then discharged as stated above. The trucks will follow the designated route to and from the Otay disposal facility using Harbor Blvd, Civic Ctr. Drive and I-5.

Photo: Trucks Lined With Plastic Before They Are Loaded With Sediments

Approximately 50 to 60 truck trips would be used daily to transport sediment to Otay over the course of the project. This same dredging and disposal process was recently used in the Bay Remediation effort for the upland disposal dredging portion of the BAE Shipyard Pier 4 Replacement project performed by RES.

V. DEBRIS REMOVAL

As stated above, prior to sediment removal, all heavy debris must be removed to perform dredging with the environmental bucket. Given the long, industrial history of San Diego Bay, it is highly likely that bay-bottom debris will exceed what is indicated in the side-scan radar images that were provided to the bidders. The debris would be brought to the surface by a clam shell bucket. (See Photo)

Photo: Debris Removal Process BAE Shipyard 2013

A clam shell bucket is smaller but also heavier than the environmental bucket and is better suited for debris removal. The environmental bucket can easily be damaged by sea-bottom debris and is often not strong enough to bring the debris to the surface. (See Photo) The debris comes out of the clamshell bucket and is placed on the deck of the adjacent debris barge. (See Photo)

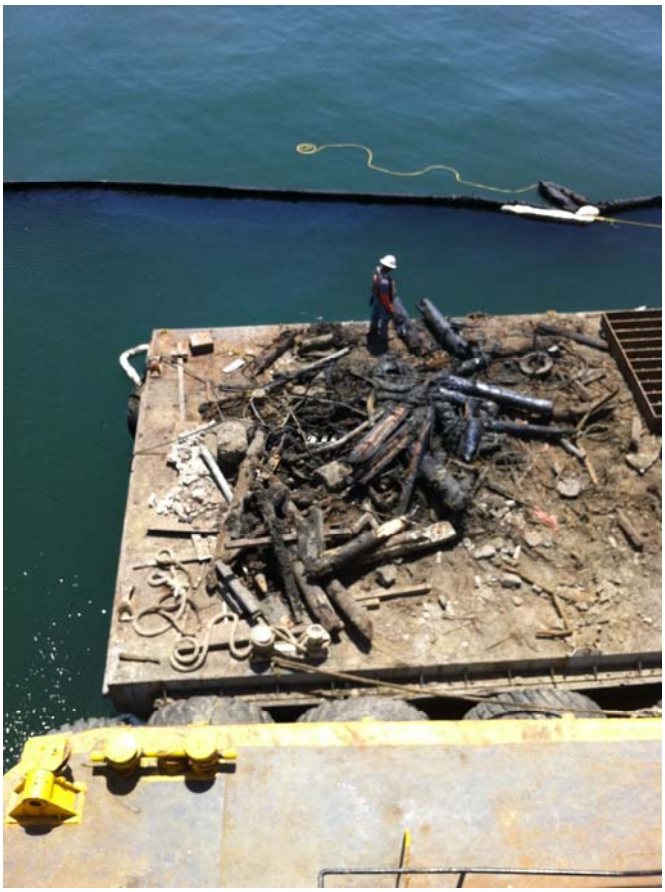

Photo: Debris Barge adjacent to Dredge Barge

Once the barge is full or the debris removal has been completed, then it is brought to the RES yard for offloading. Once removed from the barge, it is placed in a containment area to prevent discharge into the Bay. (See Photo)

Photo: Debris separated and isolated for sorting and disposal on the land

VI. SAND AND GRAVEL COVER PLACEMENT

Sand and gravel will be placed in all open areas through the use of a crane and clamshell bucket and under the piers by using a material conveyance system mounted on a barge. (see diagram) The conveyance system can be placed between the bents under the pier decking and the radial arm of the conveyer can swing between the pier piles in order to place the sand and gravelly materials. The barge can then be moved by smaller RES tugs and assist vessels to other cap locations. Materials will be staged in an offsite location prior to being loaded on the barges. Material barges will be loaded offsite and will be towed to the site for sand and gravelly sand placement. A limited amount of cover material will be stored on the barge for placement. If weather conditions require, the material stockpiles may be covered to prevent wind or rain erosion.

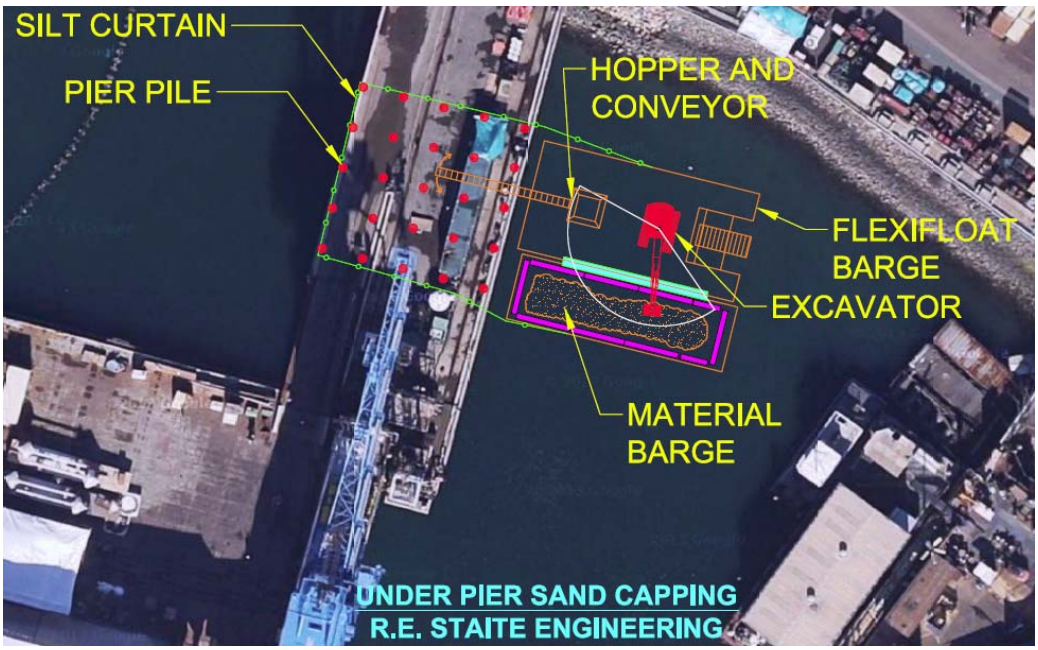

Diagram: Under-Pier Sand and Gravel Cover Placement

Placement of sand and gravelly sand cover will be controlled by several methods:

Per the project MMRP:
"Placement of clean sand covers must be done in layers of controlled lifts (where applicable) to ensure proper placement over the required areas, minimize the potential for disturbance, and intermixing of underlying sediments and appropriate thicknesses are achieved".
and;
"The sand shall be placed in such a manner as to reduce the vertical impact and lateral spreading of the clean sand cover material and the potential for resuspending the contaminated surface sediments."

Further measures include:

- In areas where cover is being placed with a clamshell bucket, the crew and operator will utilize the WinOPS positioning system to verify and track

correct placement of cover in the design areas.

- In areas where cover is being placed under piers, the pile and bent grid system will be used as a reference to verify and track correct placement of cover.
- For clamshell placement, quantities will be monitored and recorded by utilizing a metering system to ensure the proper volume per area of cover is applied. Known bucket volumes and WinOPS grid systems will direct the rate of swing and bucket opening.
- For conveyance placement, quantities will be monitored by metering the hopper and conveyor feed rates. The conveyor end will be moved in a methodical pattern and speed based on the feed rate to ensure the proper volume per area of cover is applied.
- Periodic contractor hydrographic surveys will verify proper cover and identify areas requiring modification of previously placed cover.

Cover placement activities will be performed in coordination with shipyard and commercial vessel traffic.

A silt curtain will enclose the working area to prevent turbidity from cover placement from spreading over adjacent areas in addition to other curtains already in place.

VII. ADDITIONAL ENVIRONMENTAL PROTECTION DURING REMEDIATION

During remediation operations all activities will meet or exceed current pollution prevention plans and will employ best available control technologies where feasible. We address these factors in our dredging operations, demolition practices and through the education of our employees.

A. DREDGING BEST MANAGEMENT PRACTICES

Real time GPS monitoring of dredging operations (WinOPS) will ensure that sediments will be removed from the required clean-up areas as determined by the specifications. Double silt curtains will be deployed to contain turbidity generated from the dredging operations of unsuitable sediments. Third-party turbidity testing will occur while dredging is being performed. To ensure environmental bucket closure while the sediments are hoisted to the water surface, the bucket will be closely monitored. The dredge has special indicator lines on the cables to indicate bucket closure to the operator. Follow-up third-party sampling on the dredged bay floor will occur to verify remaining sediments meet CAO standards.

Eelgrass will be protected by marking the boundaries of the beds per specifications; deployment of silt curtains that will surround the beds, and a 30' buffer (per specifications and Waste Discharge Requirements) will be established to prevent intrusion into the beds from dredging activities.

More specifically, RES will abide by the following:

- RES will ensure that the environmental clamshell bucket is tightly

closed when withdrawn from the water and moved to the barge. This action requires extra attention when debris is present to make sure debris does not prevent the bucket from completely closing.

- RES will not overfill the digging bucket because overfill results in material overflowing back into the water.

- RES will utilize wide-pocket material barges having watertight containments to prevent return water from re-entering San Diego Bay. RES operators will not overfill the material barges to a point where overflow or spillage could occur. Each material barge shall be marked on the interior bin wall in such a way to allow the operator to visually identify the maximum load level. The loading will allow sufficient interior freeboard to prevent spillage in rough water during transit.

- RES will not use weirs as a means to dewater the scow and shall allow additional room for water containment. Preventing this action shall eliminate the spillage of decanted water and the introduction of turbidity to the water column.

- RES will place material in the material barge in a manner that minimizes the reintroduction of dredge sediments into the bay.

- If the use of a grate to collect debris is required, RES will avoid allowing material to pile up and go back into the bay.

- RES will limit barge movement and work boat speeds (when feasible) in the dredge area to avoid excessive turbidity.

Actions to implement in the event of equipment failure, repair, or silt curtain breach include (also refer to the Dredge Management Plan):

* Communicate to project personnel;
* when unsafe conditions exist, proper signage and/or barriers alerting others of potentially unsafe conditions;
* specification for repair work to be conducted on land and not over water (depending on equipment type);
* identification of proper spill containment equipment (e.g., spill kit);
* a plan identifying availability of other equipment or subcontracting options;
* emergency procedures to follow in the event of a silt curtain breach;
* review procedure to evaluate the causes of an accidental silt curtain breach and steps to avoid further breaches; and
* response procedures in the event of barge overfill.

Communication Plan

A Communication Plan and operational guidelines have been developed and will be implemented between the Port of San Diego and/or the Harbor Master and all

vessel operators prior to initiation of dredging to ensure the safe movement of project vessels outside of the project area. Features of the Communication Plan include, at a minimum, identification of vessel speed limitations (wake/no wake); and notification to project personnel using air horns as necessary.

B. MIXING AND OFFLOAD BEST MANAGEMENT PRACTICES

Slurry will be mixed into the sediments prior to transportation to the Otay landfill in order to minimize dripping from trucks or spills during transport. While sediments are excavated out of the barge and into trucks, a drip catcher will be used to prevent sediments from re-entering the Bay.

Prior to initiation of dredging activities, RES will determine the swing radius (a routine practice within the industry) of the unloading equipment and shall place a sediment drip catcher between the sediment barge and the offloading area to prevent spillage from falling directly into the Bay. RES has fabricated a drip catcher that is sufficiently large enough to cover the swing radius of the unloading equipment.

Per the project MMRP- "As a secondary containment measure, filter fabric material shall be placed over the spill plate and between edges of the barge and unloading dock to prevent any drippings from falling into San Diego Bay. Upon completion of unloading a material barge, the spill plate shall be thoroughly rinsed so that excess sediment is drained into the material barge or onto the unloading dock (depending on spill plate positioning) and then placed on the lined dock until the next unloading sequence."

C. SPILL PREVENTION BEST MANAGEMENT PRACTICES

A Dredging Management Plan (DMP) has been prepared. RES will implement the measures listed in the DMP during dredging operations. The DMP contains Standard Operating Procedures (SOPs) as well the SOPs found below and in the last section of this document; for the project to assist the dredge contractor in preventing accidental spills and providing the necessary guidelines to follow in case of an oil or fuel spills.

The following measures to prevent accidental oil/fuel spills during construction activities:

- Per WDR Section V B- "The Discharger(s) must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State."
- As an operational control element, all oil and fuel shall be housed in a

secondary containment structure to ensure that any spill or leakage is prevented from entering the water column.

- RES personnel involved with dredging and handling the dredged material will be given training on the potential hazards resulting from accidental oil and/or fuel spills. This operational control shall provide RES personnel with an awareness of the materials they are handling as well as the potential impact to the environment.

- All equipment will be inspected by RES dredge personnel before starting the shift. These inspections are intended to identify typical wear or faulty parts that may contain oil or fuel. (This is a routine standard in the dredging industry).

- RES personnel will be required to visually monitor for oil or fuel spills during construction activities.

- In the event that a sheen or spill is observed, the source of the spill is identified and contained. Additionally, the spill shall be reported to the applicable agencies presented in the DMP.

- All RES personnel associated with dredging activities have been trained as to the location of spill kits and how to deploy the oil absorbent pads and proper disposal guidelines. The dredging barge, the mixing station and the SMA shall have a full complement of oil/fuel spill kits to allow for quick and timely implementation of spill containment.

- The floats on the silt curtains will serve as oil booms in the event that a spill occurs. This operational control shall be the last line of defense against accidental oil/fuel spill occurrences.

- A sand bag perimeter will be established surrounding the SMA and mixing station to prevent run-off from discharging into adjacent waters as well as run-on from adjacent areas.

D. DEMOLITION OF PIER

For the Shipyard pier demolition, several control strategies would be employed to prevent any further discharges to the Bay. These control features involve both the top deck and below deck control features. While deconstruction is occurring large floats under the deck would be placed near or under each of the pier piles to catch any debris that could otherwise fall into the Bay. (refer to project Demolition Plan)

E. ENVIRONMENTAL EDUCATION

All RES construction and marine crews are educated as to the importance of preventing discharge to the Bay. RES crews have worked in San Diego Bay for

several decades and are highly trained in the importance of bay protection. RES' educational practices will continue and as new crew members arrive they will undergo intensive training on preventing discharge to the Bay during construction activities. This internal education includes the protection of marine mammals, green sea turtles, and endangered or threatened seabirds.

RES will work cooperatively with the biologist in protecting San Diego Bay endangered seabirds, green sea turtles, and marine mammals.

Specifically, as required, RES crews will be made available for additional training and daily briefings by the Trust-retained biologist. We will alter our construction operations to ensure the best wildlife protection strategies where required. Further, our crews will be trained to identify turtles or other species of concern during the course of remediation.

F. TRUCK TRAFFIC/STAGING DURING CONSTRUCTION

All trucks used to transport unsuitable sediments will comply with CA law. Staging of trucks will occur on the Shipyard SMA. Idling of truck engines longer than 5 minutes is disallowed.

Project-related truck traffic will be directed along Harbor Drive coming through the industrial areas of National City to San Diego and not through the Barrio Community neighborhoods; as directed in the RAP. (refer to Traffic Control Plan)

G. NOISE POLLUTION CONTROL

Although construction noise impacts are not expected to exceed the construction noise thresholds established by either the City of San Diego or the City of National City, the following precautionary measures are proposed to ensure that construction noise impacts remain at a less-than significant level and comply with local regulations.

The following noise-control guidelines shall be implemented for the duration of the project (dredging, treatment and loading) and will be posted in order to reduce potential construction noise impacts on nearby sensitive receptors:

1. All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers consistent with manufacturer's standards.
2. All stationary construction equipment shall be placed so that emitted noise is directed away from sensitive receptors nearest the project site.
3. All equipment staging shall be located to create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site.

H. WATER QUALITYMONITORING

Water quality monitoring plans will be implemented for increases in turbidity and

other matter that may impact the Bay. The Engineer will monitor turbidly during dredging operations and a communication link to RES will be maintained.

Automatic water quality monitoring systems will also be used to monitor turbidity and other water quality conditions at two Early Warning stations and one Reference (Background) station to facilitate real-time adjustments by the dredging operators to control temporary water quality effects. The automatic systems will include threshold level alerts so that the operator and other appropriate project personnel recognize that conditions at the Early Warning boundary warrant implementation of additional BMPs. If the threshold-level alerts are activated, the dredge operator in conjunction with the Engineer will determine which BMPs to modify to prevent a water quality exceedance at the compliance boundary.

Should standards be compromised there are actions that can be taken:

1. Establish a smaller footprint for the silt curtains,

2. Reduce the speed of dredging when feasible, or

3. Accelerate bucket closing processes.

I. BIOLOGICAL MONITORING

In order to minimize impacts to San Diego Bay, RES will coordinate with the Engineer project biologist to implement measures to protect special-status seabirds and marine mammals. Together, the project marine biologist and RES will implement the following standard biological and environmental BMP's:

- The project marine biologist will meet with the construction crews prior to construction activities and periodically throughout the project to review construction activities to avoid disturbance to sensitive species and review proper construction techniques. A training log will be maintained by the project marine biologist and will be submitted monthly to the Trust. For the Shipyard project it is assumed daily meeting will be made on an informal basis in order to ensure the maximum protection is afforded to the bay.

- Per the project MMRP- "The contractor shall ensure that all construction activity be temporarily stopped if a sea turtle or marine mammal is sighted within 100 meters of the construction zone until the sea turtle or marine mammal is safely outside the outer perimeter of project activities. The biological monitor, who will be on site periodically during dredging activities, shall have the authority to halt construction operation and shall determine when construction operations can proceed."

- Throughout the duration of the project, work vessels and crews will operate in a manner to ensure that sensitive birds and other species are not impacted. The project marine biologist shall periodically confirm that these measures are implemented.

- Before the start of construction, construction superintendents will hold a brief meeting to remind crews of the potential for sensitive wildlife

to be present and provide identification characteristics of birds, turtles, mammals, and their Eelgrass habitat. Picture cards will be posted to all crew members for easy identification.

- The biological monitor will report any endangered or sensitive species activity in the project area and shall inform RES of such activity to allow construction crews to be aware of the potential for encounters with protected wildlife.

J. AIR QUALITY AND DUST CONTROL

It is anticipated that the majority of dredge spoils will remain in a wetted state throughout the dredging, treatment and handling, and disposal processes and will not present a direct source of fugitive dust. All motorized equipment used on the project will have appropriate licensing and registration. The following practices will be implemented to mitigate impacts to local air quality:

- Traffic speeds on all unpaved surfaces shall be limited to 15 mph
- Prevent inactive trucks from idling more than 5 minutes during construction once they arrive on the construction site
- All construction equipment shall be maintained in peak condition to reduce operational emissions
- Diesel equipment shall use low-sulfur diesel fuel
- Electric equipment shall be used to the maximum extent feasible during construction
- Construction employees shall be provided with transit and ride share information
- Alternative control methods to prevent fugitive dust and other nuisances, including covering the stockpiles, may be utilized in addition to the required Mitigation Measures as long as the proposed alternatives are protective of water quality and human health

Anticipated sources of dust will be from the tracking of dredge material within the SMA by truck tires and equipment working within the SMA. Fugitive dredge materials and dust will be contained within the SMA using the following practices:

- Trucks will be washed of all exterior mud and dirt in the truck washing station within the SMA prior to exiting the SMA. Trucks will exit with clean tires and exteriors. The truck washing personnel will maintain the SMA in a swept state and will clean the washing station area daily.
- Haul routes within the SMA will be frequently swept manually or mechanically to reduce accumulations of material on the haul routes.
- If necessary, haul routes and other areas within the SMA will be misted with clean water to hold dust down.

- If necessary, areas will be misted prior to manual or mechanical sweeping. Mist water will be less than enough to create runoff. Collected dust and debris will be disposed along with dredge sediments to Otay Landfill.

- It will be the responsibility of every vehicle driver leaving the project to assure that the vehicle is free of excess mud which otherwise could be tracked onto nearby public roads, creating a source of dust and flying debris (i.e. small stones) on the public roads.
- Should dirt, in the form of mud, be tracked onto the main arterial streets RES will take appropriate action utilizing personnel and/or equipment to immediately correct the situation.

To comply with MMRP requirements for Air Quality related mitigations the following is applied:

1. RES will restrict hauling activities during Shipyard shift changes and if necessary, a flag person shall be retained by the construction supervisor to maintain safety adjacent to existing roadways. MMRP 4.6.1

2. RES is not storing sediment or using earth moving equipment so therefore high wind conditions will not create dust. MMRP 4.6.2.

3. Onsite vehicle speed will adhere to Shipyard posted speed limits or less should conditions call for lower speed limits. MMRP 4.6.3

4. All dewatering activities occur in Frac tanks and barges, paved roads will be used. MMRP 4.6.4.

5. All sediments dredged will be damp and then transferred from barge to trucks, once treated, no additional watering is required to control dust. MMRP 4.6.5.

6. Since no storage of sediments will occur at the SMA, the use of earth moving equipment operations will not be halted during times of high winds. MMRP 4.6.6.

7. During transportation the sediments will be sufficiently wet to prevent dust. 4.6.7

8. All diesel-powered equipment used meet State and local air quality standards and are permitted; additional retrofit technology is not readily available in the San Diego Air Basin (SDAB) and is a non-performable condition. MMRP 4.6.8.

9. All heavy-duty diesel-powered equipment will use low sulfur diesel fuel. MMRP 4.6.9.

10. Alternative fuel construction equipment is not readily available in order to meet the timing demands of the CAO. MMRP 4.6.10.

11. All RES equipment will be maintained in good working order and will met appropriate specifications. MMRP 4.6.11

12. All equipment not in use will be turned off, if it will not harm equipment or endanger workers, after five minutes of not being in use. MMRP 4.6.12

13. Where applicable RES will rely on the electricity infrastructure of the NASSCO facility. MMRP 4.6.13.

14. All RES equipment meet both local and State standards and permits are

available on request. The heavy duty dredging equipment in most case's exceed State permitting requirements. Alternative-fueled construction equipment is not feasible at this time in order to meet the timing demands of the CAO. MMRP 4.6.14.

15. Sediments will not be stored on land. The sediments will be treated for a few hours and during this time no odors should occur. If odors occur a mixture of Simple Green and water (a ratio of 10:1) will be applied. MMRP 4.6.15.

VIII. CONSTRUCTION EQUIPMENT

For dredging activities, RES self-performs with the following marine equipment:

- A dredge crane on a barge with a environmental bucket for sediment dredging and a clam shell bucket for debris removal;
- two (2) to three (3) scows (two 1,000 CY and one 2,000 CY scow) for transporting the dredge sediments;
- support deck barges for debris handling and decanted water handling;
- an crane and clamshell bucket to offload the scows;
- a mixing excavator for mixing slurry into the sediments;
- a drip catcher to prevent re-entry of sediments to the Bay;
- an RES dump truck to dispose of debris;
- a bobcat to SMA areas when off loading;
- runoff control features and containment structures;
- subcontractor trucks to transport the sediments to the Otay landfill;
- subcontractor slurry trucks for mixing with the sediments; and
- supporting tug and other vessels to survey the dredged areas, deploy the silt curtains and to assist in the dredging operations.

Assist Vessels

For construction, tug and push boat vessels owned by RES will be used to move barges and scows throughout the project site for dredging, mixing, and disposal operations.

Positioning Equipment

To determine barge positioning within the dredge area the dredge barge will be equipped with the DGPS positioning system (WinOPS). This system will provide real-time barge and boom positioning information as well as tide information via a computer display on board in the operator's cab and in the crew office. DGPS will be used to make and track all movements of the barge and dredge boom for the project.

Turbidity Curtains

For excavation operations, a single continuous turbidity curtain will be deployed around the immediate dredge working area. A secondary continuous curtain will surround the local dredge site. The curtains are held in position with weighted

mooring buoys and with lines to fixed points on the barges and shoreline. Curtains are deployed, moved, and retrieved with small work boats and cranes. Single curtains will also be deployed around the immediate work area for the placement of sand and gravel cover and timber pier demolition. Single curtains will be deployed to protect identified eelgrass beds. (See photo)

Per requirements of the project MMRP: "Inner- and outer-boundary floating silt curtains will be placed around the dredging area at all times. Double silt curtains shall be utilized for containment of the dredge area. The floating silt curtain shall be comprised of connected lengths of Type III geotextile fabric. A continuous length of floating silt curtain shall be arranged to fully encircle the dredging equipment and the scow barge being loaded with sediment. The silt curtain shall be supported by a floating boom in open water areas (such as along the bay ward side of the dredging areas). Along pier edges, the contractor shall have the option of connecting the silt curtain directly to the structure. The contractor shall continuously monitor the silt curtain for damage, dislocation, or gaps and immediately fix any locations where it is no longer continuous or where it has loosened from its supports. The bottom of the silt curtain shall be weighted with ballast weights or rods affixed to the base of the fabric. Where feasible and applicable, the floating silt curtains shall be anchored and deployed from the surface of the water to just above the substrate."

Photo: Multiple turbidity curtains deployed during CAO dredging at BAE San Diego Ship Repair in 2013

IX. KEY PERSONNEL AND SUPERVISION CONTACTS

Position	**Name**	**Affiliate**	**Phone Number**
Project Manager	Chad Carpenter	R.E. Staite Engineering	619 233-0178
QC Manager	Ross McDonald	R.E. Staite Engineering	619 233-0178
Health and Safety	Mike Johnson	R.E. Staite Engineering	619 233-0178

X. BMP's AND SOP's

SOP-VESSEL FUELING & OIL TRANSFERS

Background:

A vessel owner/operator must provide any and all pollution prevention and emergency response activities associated with spills that occur while fueling or transferring oil. If there is an accidental release, R.E. Staite will provide any resources it may have available, but the vessel owner/operator is responsible for any releases from its operations.

Objective:

Prevent the release of fuel during transfer/fueling operations. Applicability:

The BMP shall be implemented whenever fuel or petroleum products are being transferred to or from a ship. Transfers may occur on or around the piers and dry docks.

Best Management Practices (BMPs):

- *Anyone who sees a discharge of oil going into the Bay shall report it to the environmental department. A supervisor should be notified immediately.*
- An oil spill containment boom will be in place before a vessel takes on petroleum products by hose transfer.
- Receiving stations will be manned with communications established between the pier/barge and the ship's representative (Person In-Charge or PIC).
- Overflow watch shall be posted for the duration of the transfer.
- Emergency response material shall be on hand for immediate use.
- DC plugs shall be in drains surrounding the receiving stations and scuppers shall be blocked.
- The pre-fueling checklist shall be completed for each day of fueling.

The barge superintendent is responsible for giving the environmental department 24-hour. notice.

Background:

Shrouding systems are installed on vessels to minimize accidental discharges where material might enter San Diego Bay either directly or via surface runoff. These discharges may be due to abrasive blasting, hydro blasting/power washing, spray painting, welding/burning, and other operations.

Objective:

To prevent fugitive particulate matter from discharge to surface waters.

Applicability:

This BMP applies to any employee, subcontractor and Ship's force whose work generates dust or particulates exposed to wind or rain, or who perform tasks over the side.

Best Management Practices (BMPs):

- When performing abrasive blasting, spray painting, welding/burning/cutting, deck grinding, or other dust generating operations, shrouding or other means of containment shall be installed.

- Containment may include a plywood barrier along the outside edge of the deck railings and/or a curtain or Visqueen to help prevent fugitive material from entering surface waters.
- When blasting or spray painting a vessel the area shall be contained with Visqueen, shrink-wrap or tarpaulins . The containment must allow the grit to fall onto the deck for proper cleanup or prevent paint overspray from drifting.

- Camels, pontoons, small floating decks, or barges may also be utilized to catch waste pollutant material where the particulate- generating activity is near the waterline of waterborne vessels.

- Containment shall be inspected by the Engineer before the work begins.

- Entity performing work shall ensure containment adequate continuously monitor containment
and immediately shut down if containment breached.

- Shrouds shall be large enough to adequately enclose the working area and isolate it from the Bay.

- Support structures such as scaffolding may be used with shrouding in order to withstand potential wind stress.

SOP-EMPTY CONTAINERS

Containers that previously held hazardous materials are exempt from further regulation after certain conditions are met. Two of the most important conditions are that they be "empty" and properly managed. The Department of Toxic Substance Control (DTSC) defines "empty" based on the type of material the container previously held:

a) If the container held a material that can be easily poured, then all material left in the container must be removed by any practical means such as pumping or draining.

b) If the material is non-pourable, then all material that can be feasibly removed by physical means such as scraping or chipping must be removed.

c) If the container held an acute or extremely hazardous waste, the container should be triple rinsed using a solvent capable of removing the material or cleaned by another method to achieve equivalent removal (performed by a licensed facility}.

Objective:

To manage "empty containers" in accordance with legal requirements.

Applicability:

This BMP applies to all employees and subcontractors who generate hazardous wastes or use hazardous materials.

Best Management Practices (BMPs):

- Subcontractors or employees using hazardous materials are responsible for ensuring container meets definition of “empty" prior to disposal.
- Empty containers holding greater than 5 gallons, shall be marked with the date emptied and reclaimed as scrap, reconditioned, remanufactured within one year of being emptied as per California Code of Regulations Title 22.
- Empty containers holding 5 gallons or less will be disposed of at an approved solid waste facility or reclaimed as scrap, reconditioned or remanufactured.
- Empty aerosol cans shall be segregated from all other waste streams and treated in with law.
- Empty containers shall not be reused to store materials or chemicals, unless the container has been reconditioned and properly labeled.

If empty containers are to be reused, then they shall be labeled "EMPTY" and shall also include a description of the former contents and the date the container was emptied.

BMP- USED OIL FILTERS

Background:

In order for R.E. Staite to avoid the cost of managing and disposing of used filters as hazardous waste, proper management of used oil filters for recycling is required. California Code of Regulations Title 22 sets forth the requirements for handling, storage and transportation of used oil filters with which R.E. Staite must comply.

Objective:

R.E. Staite shall manage used oil filters in accordance with the requirements of Title 22, of the California Code of Regulations.

Definitions:

Free-flowing oil is defined to be a continuous stream of oil exiting the filter when the filter is inverted.

Applicability:

This HMP applies to all employees and subcontractors working with used oil filters.

Best Management Practices (BMPs):

- Used oil filters shall be drained of all free-flowing oil.
- Some oil filters may be equipped with a device which inhibits the drainage of used oil from the filter. This device shall be manipulated (i.e., crushed, opened, drained, etc.) to allow the oil to flow freely.
- All used oil filters shall be accumulated, stored, and transferred to a closed rainproof container.

The container must be capable of containing any used oil that may discharge from the filters.

- Containers of used oil filters should be labeled with the words "drained used oil filters" and include the initial date of accumulation.
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BMP-OIL SPILL CONTAINMENT BOOMS

Background:

Oil spill containment booms shall be used when a vessel is moored. Booms play a crucial role in containing spills on the water and determining accountability. It is therefore necessary to keep them in good working order. Booms are also made available in case of spills or other emergencies.

Objective:

To ensure that all booms are in good operating condition through preventive maintenance and standard operating procedures.

Applicability:

This BMP applies to all employees and subcontractors involved in moorage of ships, especially when oily water or fuel transfers are conducted.

Best Management Practices

- Booms should be monitored for proper buoyancy.
- All gaps, rips and problem areas should be repaired immediately.
- Any breaks observed on booms surrounding ships berthed at R.E. Staite will be repaired immediately.
- If the protection boom is opened to conduct a vessel operation, the boom shall be replaced within 24 hours after the operation is complete, or as soon as practical.
- When a boom is no longer in use as a prevention tool to contain oil spills or accidents occurring during transfer operations, the boom may be removed from the water within.
- Absorbent oil booms deployed to collect spilled oil shall be removed as soon as practical following their use.
- Oil spill boom shall not be cleaned in the water

SOP -SECONDARY CONTAINMENT (CONTAINER)

Background:
Storage of liquids such as paints, thinners, and oil products presents a potential for accidental spillage into storm drains, surface waters, ponds, pavement or underlying soil. Therefore, secondary containment such as drip pans and tarps (plastic, Visqueen, canvas etc.), shall be used to ensure that spillage does not soak into pavement, soil or enter surface waters.

Objective:
Secondary containment techniques will be utilized at R.E. STAITE when working with or temporarily storing all hazardous liquids.

Applicability:
This BMP applies to all employees and subcontractors who work with or store hazardous liquids.

Best Management Practices (BMPs): All employees and subcontractors shall ensure that proper secondary containment is in place at all times. The secondary containment must be capable of holding spilled liquids without leaks. Asphalt is not adequate for use as a surface to contain fuels or other hydrocarbons.

- When a secondary containment area or container accumulates rainwater, it shall be removed as soon as practical following the rain event

- All leaks in primary or secondary containment must be reported to Environmental Services and repaired immediately.

- Incompatible materials shall not be stored in the same secondary containment. Materials to be stored must be compatible with the composition of the secondary containment.

- Secondary containment for containers (paint cans, 55-gallon drum, etc.) shall have a capacity of at least 110% of the largest container. The 110% requirement does not pertain to "transportation related" tanks. However, "transportation related" tanks must have adequate secondary containment to capture reasonably anticipated spills and drips.

Background:

R.E. Staite constructs projects. If not controlled these projects have the potential for discharges into bays, ponds, storm drains, surface waters, pavement or underlying soil. Therefore, best management practices (BMPs) must be observed to control and minimize these risks.

Objective:

When performing work, measures must be taken to prevent construction materials or other substances from entering the Bay, or any other unauthorized location outside the specific work site. These BMPs, in addition to all other R.E. Staite' BMPs, must be implemented as appropriate to control worksite substances and prevent pollution.

Applicability:

This BMP applies to all employees and subcontractors performing work at the direction of R.E. Staite.

Best Management Practices:

Erosion Control- or soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control protects the soil surface by covering and/or binding soil particles. Implement the following practices for effective erosion control:

- To the extent possible avoid scheduling the work to be done during a rain event.
- Maintain sufficient erosion control materials on site before the onset of rain events.
- Use plastic sheeting or tarps to cover stockpiled materials.
- Use silt fence material for work site perimeter protection where practical.
- Use fiber rolls to keep substances and runoff in desirable areas and keep substances and runoff out of undesirable areas.
- Use water or other dust palliatives to prevent or wind erosion and to minimize dust nuisance. Ensure water used for dust control will be applied in such a manner to minimize runoff from the work site.

Tracking Control- preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. Implement the following practices for effective tracking control:

- Establish and maintain a Stabilized Construction Entrance/Exit in accordance with CASQA TC-1 where appropriate.

- Continually maintain the cleanliness of the area around any Stabilized Construction Entrance/Exit.

- Where a Stabilized Construction Entrance/Exit is not established, monitor vehicles leaving the work site for sediment that could be deposited on roadways .

Non-Stormwater Discharge Controls- source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source or eliminating off-site discharge from sources other than stormwater. Implement the practices listed below as appropriate:

- Conduct concrete finishing in accordance with Shipyard EMP

Waste Management and Materials Pollution Controls- source controls that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with stormwater. Waste management consists of implementing procedural and structural controls for handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater runoff or discharges through proper management wastes. Implement the following practices for effective waste management controls:

Inspection and Maintenance-- In addition to normal pollution prevention monitoring of the shipyard, inspections of facility project work sites will be conducted by the R.E. Staite representatives as follows:

- Weekly

- Prior to a forecast storm event

- After a rain event that causes runoff from the construction site

- At 24-hour intervals during extended rain events.

Inspections will be performed to verity that the appropriate pollution prevention measures and BMPs are being implemented with the following being emphasized :

- Areas where active construction is occurring (including staging areas)

- Ensuring that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day

- Ensuring land areas disturbed during construction are returned to preconstruction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

If deficiencies are identified during an inspection, repairs or design changes to BMPs must be initiated within 72 hours of identification and need to be completed as soon as possible.

SOP-PREVENTATIVE MAINTENANCE

R.E. Staite PM program applies to all equipment and operations. R.E. Staite has implemented and maintains a preventive maintenance ("PM") program that establishes specific procedures and requirements to prevent breakdowns and failures by adjustment, repair, and replacement. R.E. Staite PM program revolves around inspections, testing of plant equipment and systems, and includes a detailed record keeping program. This records system helps to ensure scheduling of tests, inspections, test results, and corrective action.

High Risk Areas are defined as having either large volumes or highly toxic materials and have ready access to a pathway leading to surface or groundwater. Inspection areas include: storage facilities, transfer pipelines, loading and unloading areas, pipes, pumps and valves, tank corrosion (internal and external), tank supports or foundation deterioration, primary and secondary containment, housekeeping, tank drain valves, docks, and storm water collection systems.

Only qualified personnel are designated to inspect equipment and plant areas. These foremen in R.E. Staite have been trained to perform visual inspections of their respective systems and equipment.

R.E. Staite is responsible for all discharges associated with construction, repair, and maintenance activities at its other facility, except those caused by vessel owners, operators, and crew. However, R.E. Staite may also be responsible for the consequences (i.e. clean up) of all discharges within and from its construction sites.

To ensure the timely response and mitigation of spills, all R.E. Staite employees are required to notify R.E. Staite project manger's or foremen immediately, but no later than 30 minutes following the discovery of environmental incidents such as spills and leaks. The implementation of response actions shall not delay notification. Those spills and leaks reported to R.E. Staite management team shall be investigated immediately to determine what containment and clean-up actions are necessary. In the event that a clean-up effort is deemed necessary, R.E. Staite shall respond with appropriate on-site resources, or may seek outside assistance from a spill response subcontractor. A record of the date, time, location, size of the spill, and action taken shall be maintained by the project manager.

All new employees at R.E. Staite are initially indoctrinated into the risks of working with hazardous materials and how their work activity can cause environmental impacts. This training, termed New Hire Employee Orientation is conducted prior to allowing the employee to start construction work. All employees are made aware of R.E. Staite Best Management Practice (BMP) objectives, the processes and materials with which they are working, the safety hazards, practices for preventing discharges, and procedures for responding properly and rapidly to toxic and HAZMAT incidents in a shipyard environment. Additional specialized training is also conducted where that employee participate in activity that is of a greater threat to the environment, or is regulated for that employees job requirements. Examples include, Spill Prevention Control and Countermeasure ("SPCC") Program, Over-water transfer of oil, and hazardous waste management , to name a few. Subsequent recurring training for all employees is conducted on a weekly basis (Safety Meetings) to ensure that employees are updated in policy, procedure and legislative changes as they relate to safety and environmental practices. Training is incorporated into company related Hazard Communication and other safety training. In addition to full time employees, subcontractors or temporary personnel working at the shipyard in areas where pollutants or hazardous materials are stored, used, and/or present in significant quantities, are educated on the policies and procedures of R.E. Staite BMP objectives before commencing production activities. Records of training including name and position of employee, lesson plan, subject material covered, BMP instructors' names and positions are kept on file in the R.E. Staite home office. There will be specialized training for the Shipyard project of all crew team members to avoid impacts to wildlife and marsh habitat; these training lessons should aid the construction crew in identification of endangered or rare species and habitat construction methods in avoiding impacts to the Bay.

SUBCONTRACTORS and THIRD PARTIES

In order to ensure the safety and welfare of all workers and the environment, subcontractors and third parties receive training on the federal, state, and local environmental regulatory ordinances, statutes, laws, rules and regulations that must be adhered to at R.E. Staite.

Areas of primary concern include compliance with R.E. Staite the Shipyard EMP, Storm Water Pollution Prevention Plan (SWPPP), Spill Prevention Control and Countermeasures (SPCC), and Industrial Wastewater Discharges. These various regulatory requirements are successfully achieved at R.E. Staite through the implementation of Best Management Practices (BMPs).

SOP-INSPECTIONS AND RECORDS

R.E. Staite keeps an inspection and records system designed to detect actual or potential BMP incidents. R.E. Staite inspections and records system includes written instructions and procedures regarding both appropriate time intervals and evaluation criteria. R.E. Staite records also show both the completion date and the results of each inspection. These results in turn are signed by the appropriate supervisor and maintained for a minimum of three years. Furthermore, R.E. Staite routinely examines its many logs/records for any needed improvements, corrections or overall redesign.

Inspection areas include: Material Storage areas, Liquid Storage areas, In-Plant Transfer and Materials Handling, Loading and Unloading Operations and Plant Runoff, while any other procedures and inspection criteria are considered on a site-specific basis. Moreover, R.E. Staite has instituted various tracking procedures that ensure immediate response and corrective actions are taken when inspections reveal deficiencies.

For the Shipyard project all deficiencies will be reported to the Engineer and NASSCO and referred for correction on a weekly and monthly basis if not sooner.

BMP-DISCHARGE PROHIBITIONS

R.E. Staite is currently operating under a variety of local, state, and federal environmental laws, rules and regulations. To ensure the safety and welfare of workers and the environment, it is required that all pertinent regulatory ordinances, statutes, laws, rules and regulations be adhered to. To successfully accomplish this, R.E. Staite operates under Best Management Practices ("BMPs").

No hazardous material/substance/waste or miscellaneous debris shall be allowed to enter receiving waters. It is R.E. Staite position that any violation of these prohibitions and/or specifications will be cause for immediate shutdown of any operation at cause. Furthermore, under R.E. Staite BMPs governing storm water pollution prevention, it is required that all materials/areas which have the potential for contaminating storm water runoff be managed in such a way to prohibit contamination from entering R.E. Staite storm/pond water conveyance system.

Regular inspections of facility operations are conducted to ensure that operational controls (BMPs) are implemented.

DISCHARGE PROHIBITIONS

A. The Discharger shall comply with all requirements of the Basin Plan Waste Discharge Prohibitions which are hereby included in this Order be reference.

B. The discharge of sewage to San Diego Bay is prohibited.

C. The discharge of industrial process water, to San Diego Bay is prohibited.

D. The discharge of the flush of storm water runoff from high risk areas is prohibited.

E. The discharges of municipal and industrial waste to San Diego Bay is prohibited.

F. The discharge of rubbish, refuse, debris, materials of petroleum origin, waste zinc plates, abrasives, primer, paint, paint chips, solvents and marine fouling organisms, and the deposition of such wastes at any place where they could eventually be discharged is prohibited. This prohibition does not apply to the discharge of marine fouling organisms removed from unpainted, uncoated surfaces by underwater operations and discharges that result from floating booms that were installed for "Force Protection" purposes. Rubbish and refuse include, but are not limited to, any cans, bottles, paper, plastic, vegetable matter, or dead animals deposited or caused to be deposited by man.

G. The discharge of materials of petroleum origin in sufficient quantities to be visible is prohibited.

H. The discharge of bypassing of untreated waste to San Diego Bay is prohibited.

I. The discharge of polychlorinated biphenyl compounds, such as those used for transformer fluid, is prohibited.

J. The discharge of wastes and pollutants from underwater operations, such as underwater paint and coating removal and underwater hull cleaning, is prohibited . This prohibition and uncoated surfaces by underwater operations, or to discharges that result from the cleaning of floating boons that were installed for "Force Protection" purposes.

K. The discharge of wastes that cause or contribute to the violation of water quality standard (designated beneficial uses and water quality objectives developed to protect beneficial uses) is prohibited.

R.E. Staite will implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, the good housekeeping measures shall consist of the following:

1. Identify the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions
(i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

2. Cover and berm loose stockpiled construction materials that are not actively being used
(i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.). Inactive areas are defined as stockpiled materials: not scheduled to be re-disturbed for at least 14 days. Note: with the onset of precipitation all stockpile materials shall be protected.

3. Store chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage or in a storage shed providing complete enclosure.

4. Minimize exposure of construction materials to precipitation (not applicable to materials designed to be outdoors and exposed to the environment).

5. Implement BMPs to control the off-site tracking of loose construction and landscape materials.

R.E. Staite will implement good housekeeping measures for waste management, which at a

minimum shall consist of the following:

1. Preventing disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

2. Ensuring the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the ponds or receiving water.

3. Cleaning or replacing sanitation facilities and inspecting

them regularly for leaks and spills.

4. Covering waste disposal containers at the end of every business day and prior to a rain event.

5. Preventing discharges from waste disposal containers to the stormwater drainage system or receiving water. Containing and securely protecting stockpiled waste material from wind and rain at all times unless actively being used.

6. Implementing procedures that effectively address hazardous and non-hazardous spills.

7. Developing a spill response and implementation procedure prior to commencement of construction activities. To these require that:

- Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

- Appropriate spill response personnel are assigned and trained.

8. Ensuring the containment of concrete washout areas and other washout areas that may contain additional pollutants to prevent discharge into the underlying soil and onto the surrounding areas.

R.E. Staite will implement good housekeeping for vehicle storage and maintenance, which at a minimum, shall consist of the following:

1. Preventing oil, grease, or fuel from leaking into the ground, storm drains or surface waters.

2. Implementing appropriate BMPs whenever equipment or vehicles are fueled, maintained, or stored.

3. Cleaning leaks immediately and disposing of leaked materials properly.

R.E. Staite will implement good housekeeping for landscape materials, which at a minimum shall consist of the following:

R.E. Staite will implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients,

trash, metals, bacteria, oil and grease and organics.

Non-Stormwater Management

R.E. Staite will practice proper management of non-stormwater by:

1. Implementing measures to control all non-stormwater discharges during construction.

2. Washing vehicles in such a manner as to prevent non-stormwater discharges to surface waters or Municipal Separate Storm Sewer System (MS4) drainage systems.

3. Cleaning streets in such a manner as to prevent unauthorized non-stormwater discharges from reaching surface water or MS4 drainage systems.

Erosion Control

R.E. Staite will practice proper and effective erosion control by:

1. Implementing effective wind erosion control

2. Providing effective soil cover for inactive areas, all finished slopes, and utility backfill.

3. Limiting the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, R.E. Staite will consider the use of plastic materials resistant to solar degradation.

Sediment Controls

R.E. Staite will practice proper and effective sediment control by:

4. Establishing and maintain effective perimeter controls as needed, and implementing effective BMPs for all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

Wind Erosion Control

Wind erosion control consists of applying water or other dust palliatives to prevent or minimize dust nuisance. This project will implement the following practices for effective wind erosion control:

- WE-1: Wind Erosion Control

Water trucks and/or a portable tank shall be made available to the field crews with an adequate supply of water to be used as necessary to mitigate the generation of airborne dust particulates.

Inspections of active construction areas will be conducted by the Site biologist or their qualified designee who has received project specific training as follows:

- Weekly to monthly
- Prior to a forecast storm event
- After a rain event that causes runoff from the construction site
- At 24-hour intervals during extended rain events.
- Quarterly non-stormwater visual inspections

Daily inspections will be performed by the Foreman or a designee with appropriate training to verify that the appropriate BMPs for pond and non-stormwater are being implemented in the following construction site locations:

- Areas where active construction is occurring (including staging areas)
- Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day
- Land areas disturbed during construction are returned to preconstruction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

If deficiencies are identified during BMP inspections, repairs or design changes to BMPs must be initiated within 72 hours of identification and need to be completed as soon as possible.

Pre-Storm, During Storm, and Post-Storm Inspection

Pre-storm, during storm, and post-storm inspections shall be conducted to:

- Inspect all drainage areas for the presence or absence of

floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants;

- Identify any spills, leaks, or uncontrolled pollutant sources that have or may discharge from the site;
- Inspect all BMPs;
- Identify all BMPs that need maintenance to operate effectively;
- Identify all BMPs that have failed;
- Identify all BMPs that could fail to operate as intended;
- Identify the need for additional BMPs;
- If needed implement appropriate corrective action items to repair all BMPs that need maintenance or have failed (include updates in SWPPP); and
- Inspect all locations for the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.