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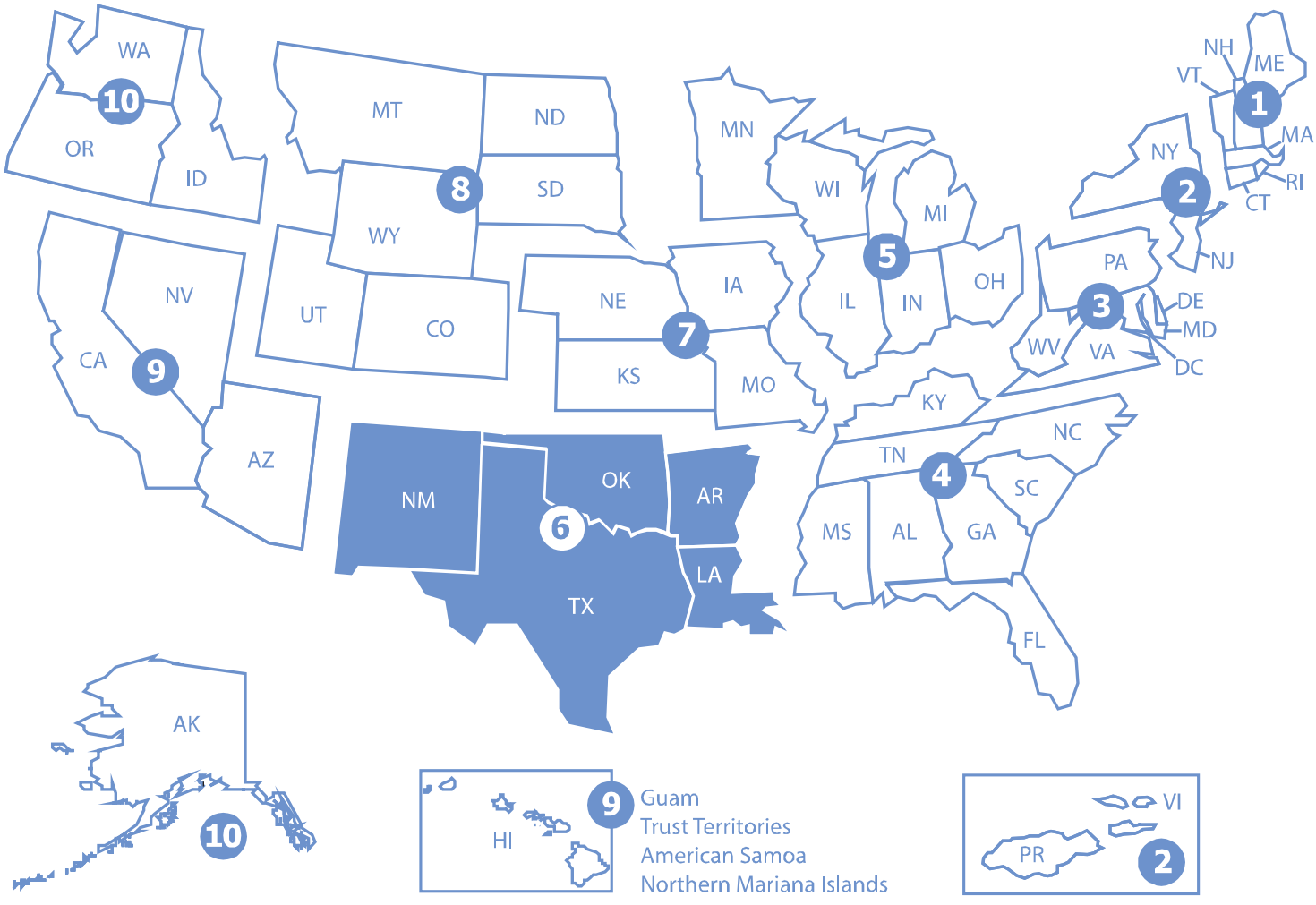
Office of Land and Emergency Management

Support Document for the Revised National Priorities List Final Rule – SBA Shipyard



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Support Document for the Revised National Priorities List Final Rule

SBA Shipyard

September 2016

Site Assessment and Remedy Decisions Branch
Office of Superfund Remediation and Technology Innovation
Office of Land and Emergency Management
U.S. Environmental Protection Agency
Washington, DC 20460

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Executive Summary

Section 105(a)(8)(B) of CERCLA, as amended by SARA, requires that the EPA prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. An original National Priorities List (NPL) was promulgated on September 8, 1983 (48 FR 40658). CERCLA requires that EPA update the list at least annually.

This document provides responses to public comments received on the SBA Shipyard site, proposed on September 30, 2015 (80 FR 58658). This site is being added to the NPL based on an evaluation under EPA's Hazard Ranking System (HRS) in a final rule published in the *Federal Register* in September 2016.

Introduction

This document explains the rationale for adding the SBA Shipyard site in Jennings, Louisiana to the National Priorities List (NPL) of uncontrolled hazardous waste sites and provides responses to public comments received on this site listing proposal. The EPA proposed this site to the NPL on September 30, 2015 (80 FR 58658). This site is being added to the NPL based on an evaluation under the Hazard Ranking System (HRS) in a final rule published in the *Federal Register* in September 2016.

Background of the NPL

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Sections 9601 *et seq*. in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended on October 17, 1986, by the Superfund Amendments and Reauthorization Act (SARA), Public Law No. 99-499, stat., 1613 *et seq.* To implement CERCLA, EPA promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA Section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On March 8, 1990 (55 FR 8666), EPA further revised the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include

> criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable, take into account the potential urgency of such action, for the purpose of taking removal action.

Removal action involves cleanup or other actions that are taken in response to emergency conditions or on a short-term or temporary basis (CERCLA Section 101). Remedial action is generally long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA Section 101). Criteria for placing sites on the NPL, which makes them eligible for remedial actions financed by the Trust Fund established under CERCLA, were included in the HRS. EPA promulgated the HRS as Appendix A of the NCP (47 FR 31219, July 16, 1982). On December 14, 1990 (56 FR 51532), EPA promulgated revisions to the HRS in response to SARA, and established the effective date for the HRS revisions as March 15, 1991.

Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the NPL.

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). At that time, an HRS score of 28.5 was established as the cutoff for listing because it yielded an initial NPL of at least 400 sites, as suggested by CERCLA. The NPL has been expanded several times since then, most recently on April 7, 2016 (81 FR 20252). The Agency also has published a number of proposed rulemakings to add sites to the NPL. The most recent proposal was on April 7, 2016 (81 FR 20277).

Development of the NPL

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Committee on Environment and Public Works, Senate Report No. 96-848, 96th Cong., 2d Sess. 60 [1980]).

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or

> operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The NPL, therefore, is primarily an informational and management tool. The identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation. Finally, listing a site may, to the extent potentially responsible parties are identifiable at the time of listing, serve as notice to such parties that the Agency may initiate CERCLA-financed remedial action.

CERCLA Section 105(a)(8)(B) directs EPA to list priority sites among the known releases or threatened release of hazardous substances, pollutants, or contaminants, and Section 105(a)(8)(A) directs EPA to consider certain enumerated and other appropriate factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases. Where other authorities exist, placing sites on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen not to place certain types of sites on the NPL even though CERCLA does not exclude such action. If, however, the Agency later determines that sites not listed as a matter of policy are not being properly responded to, the Agency may consider placing them on the NPL.

Hazard Ranking System

The HRS is the principle mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations -- the preliminary assessment and site inspection -- to assess the relative potential of sites to pose a threat to human health or the environment. HRS scores, however, do not determine the sequence in which EPA funds remedial response actions, because the information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. Moreover, the sites with the highest scores do not necessarily come to the Agency's attention first, so that addressing sites strictly on the basis of ranking would in some cases require stopping work at sites where it was already underway. Thus, EPA relies on further, more detailed studies in the remedial investigation/feasibility study that typically follows listing.

The HRS uses a structured value analysis approach to scoring sites. This approach assigns numerical values to factors that relate to or indicate risk, based on conditions at the site. The factors are grouped into three categories. Each category has a maximum value. The categories are:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (e.g., toxicity and waste quantity); and
- targets (e.g., people or sensitive environments) affected by the release.

Under the HRS, four pathways can be scored for one or more components and threats as identified below:

- Ground Water Migration (S_{gw})

- Surface Water Migration (S_{sw})
  The following threats are evaluated for two separate migration components, overland/flood migration and ground water to surface water.
  - drinking water
  - human food chain
  - sensitive environments

- Soil Exposure (S_s)
  - resident population
  - nearby population

- Air Migration (S_a)
  - population

After scores are calculated for one or more pathways according to prescribed guidelines, they are combined using the following root-mean-square equation to determine the overall site score (S), which ranges from 0 to 100**:**

$$S = \sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2}{4}}$$

If all pathway scores are low, the HRS score is low. However, the HRS score can be relatively high even if only one pathway score is high. This is an important requirement for HRS scoring because some extremely dangerous sites pose threats through only one pathway. For example, buried leaking drums of hazardous substances can contaminate drinking water wells, but -- if the drums are buried deep enough and the substances not very volatile -- not surface water or air.

Other Mechanisms for Listing

There are two mechanisms other than the HRS by which sites can be placed on the NPL. The first of these mechanisms, authorized by the NCP at 40 CFR 300.425(c)(2), allows each State and Territory to designate one site as its highest priority regardless of score. The last mechanism, authorized by the NCP at 40 CFR 300.425(c)(3), allows listing a site if it meets the following three requirements:

- Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation of individuals from the release;
- EPA determines the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority than to use its emergency removal authority to respond to the site.
-

Organization of this Document

The following section contains EPA responses to site-specific public comments received on the proposal of the SBA Shipyard site on September 30, 2015 (80 FR 58658). The site discussion begins with a list of commenters, followed by a site description, a summary of comments, and Agency responses to each comment. A concluding statement indicates the effect of the comments on the HRS score for the site.

Glossary

The following acronyms and abbreviations are used throughout the text:

Agency	U.S. Environmental Protection Agency
ATSDR	Agency for Toxic Substances and Disease Registry
AWQC	Ambient Water Quality Criteria
BCF	Bioconcentration factor
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sections 9601 *et seq*., also known as Superfund
CFR	Code of Federal Regulations
CLP	EPA Contract Laboratory Program
CRDL	Contract-required detection limit
CRQL	Contract-required quantitation limit
DL	Detection limit
ECOTOX	The U.S. EPA ECOTOXicology database
EDL	Estimated detection limit
EPA	U.S. Environmental Protection Agency
FIRM	Flood insurance rate map
FR	Federal Register
FS	Feasibility study
HRS	Hazard Ranking System, Appendix A of the NCP
HRS score	Overall site score calculated using the Hazard Ranking System; ranges from 0 to 100
IM/RA	Interin Measures/Removal Action
IRA	Immediate removal action
LDEQ	Louisiana Department of Environmental Quality
LTU	Land treatment unit
MCL	Maximum contaminant level
MDL	Method detection limit
µg/kg	Microgram per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
NPL	National Priorities List, Appendix B of the NCP
NRC	National Response Center
OPA	Oil Pollution Act
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PPE	Probable point of entry
PRP	Potentially responsible party

QAPP	Quality assurance project plan
RECAP	Risk Evaluation/Corrective Action Program
RI	Remedial investigation
SARA	Superfund Amendments and Reauthorization Act
SCDM	Superfund Chemical Data Matrix
SFHA	Special flood hazard area
SVOC	Semi-volatile organic compounds
SETF	Southeast Environmental Task Force
SOW	Statement of work
SQL	Sample quantitation limit
TDL	Target distance limit
USCG	United States Coast Guard
VOC	Volatile organic compounds

1. List of Commenters and Correspondence

EPA-HQ-SFUND-2015-0576-0004	Correspondence, dated July 13, 2015, from Peggy Hatch, Secretary, Louisiana Department of Environmental Quality (LDEQ) with attached memorandum from Gary Fulton, Administrator, LDEQ.
EPA-HQ-SFUND-2015-0576-0005	Comment, dated November 30, 2015, submitted by Michael Pisani, Michael Pisani & Associates, Inc., on behalf of SSIC Remediation, LLC: American Commercial Barge Line LLC; Ashland, Inc.; Canal Barge Company Inc.; Cenac Towing Co., LLC; Hornbeck Offshore Transportation, LLC; Martin Operating Partnership, LP; and Phillips 66 Company (as successor in interest to ConocoPhillips Company) (the Companies).

2. Site Description

The SBA Shipyard site (the Site) is a release from SBA Shipyard located in Jennings, Louisiana. The Site as scored by the HRS at proposal includes six sources with metals, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), dioxins/furans, and polychlorinated biphenyls (PCBs) contamination and a documented observed release to surface water of PAHs and metals. The sources at the Site at proposal are:

- Source 1, the Partially Buried Barge (a container);
- Source 2, the Former Oil Pit (a surface impoundment, buried/backfilled)
- Source 3, the Former Water Pit 1 (a surface impoundment, buried/backfilled)
- Source 4, the Former Land Treatment Unit (a land treatment)
- Source 5, the Dry Dock (a surface impoundment, not buried/backfilled)
- Source 6, the Former Water Pit 3 (a surface impoundment, not buried/backfilled)

Impacted targets include a human food chain fishery located within and outside of the zone of actual contamination delineated in the Mermentau River, and wetlands frontage within the zone of actual contamination subject to Level II contamination. Additional wetland frontage is present within the target distance limit (TDL).

SBA used the facility for construction, repair, retrofitting, sandblasting, and cleaning and painting of barges beginning in 1965. Three barge slips and a dry dock are located off the Mermentau River. Two of the barge slips are located on the northern portion of the property and are not included in the Site as scored; the third barge slip is part of the Site for HRS scoring purposes. The slips were used to dock barges during cleaning or repair. The wastes from barges consisted of hydrocarbons and typically included diesel, coal, tar crude oil, gasoline and asphalt. Some of the barges serviced at the facility held coal tar, creosote, miscellaneous chemicals, agricultural related materials such as tallow, or corn or soybean oil. Cleaning of barges also occurred at the facility, and chlorinated solvents are known to have been used in cleaning processes at the facility. Wastes from the barge cleaning, for the most part, consisted of petroleum hydrocarbon residues. In addition to the hydrocarbons, other wastes at the facility included asphalt, creosote, methyl-methacrylate, caustic soda, styrene, coal tar, vinyl acetate, carbon tetra chloride, ethyl acrylate, and acrylates.

The SBA Shipyard facility operated without the required RCRA permits and was ordered to close in 1990 by the Louisiana Department of Environmental Quality (LDEQ). In 1992, LDEQ conducted a site inspection and found that SBA failed to perform correct hazardous waste determinations of its waste paint, wash waters, sludges removed from the surface impoundments, and waste disposed of in dug-out areas next to the Mermenteau River. In 1994, LDEQ notified SBA Shipyard that closure activities would be handled by LDEQ. In July 1997, EPA issued SBA Shipyard a RCRA Complaint, Compliance Order, and Notice of Opportunity for Hearing, finding the

facility had stored, disposed of, and treated hazardous waste without a RCRA permit. SBA Shipyard never acquired appropriate RCRA permits for facility operations.

In 2001, a group of potentially liable parties (PRPs) that had been former customers of the SBA Shipyard facility formed an organization called the SSIC Remediation, LLC (hereinafter, the Companies) to address removal actions at the Site.[1] In 2002, EPA approved an Interim Measures/Removal Action (IM/RA) of Hazardous/Principal Threat Wastes at SBA Shipyards, Inc. (pursuant to RCRA Section 3008(h)) that was proposed by SBA Shipyard and the Companies. Interim removal activities were conducted from March 2001 through January 2005 under an EPA 2002 Order and Agreement. Interim removal activities consisted of the removal of approximately 33.8 million pounds of oils, waxes and sludges, pumpable oily material, and oily tank heels; 70 tons of contaminated debris; and 88 tons of recyclable scrap metal from the Site. In 2006, EPA determined that this limited RCRA IM/RA was successfully completed pursuant to the terms outlined in the 2002 Order and Agreement. LDEQ conducted periodic field investigations from 2005 to 2012. In September 2012, LDEQ requested EPA address the SBA Shipyard site under CERCLA authority.

In October 2012, the U.S. Coast Guard received notification from an anonymous party that a barge located at SBA Shipyard was being scrapped and that oil was leaking from the breached hull onto the soil and discharged oil was being set on fire. In response to this notification, the U.S. Coast Guard and LDEQ conducted a site investigation and found an old barge was leaking an oil waste due to extensive cutting of the vessel.

EPA conducted a site reconnaissance inspection in 2012 and a site inspection in 2013. In 2015, EPA determined that the Site continued to release contamination into the environment and that it had not yet had a comprehensive evaluation of the nature and extent of contamination or an evaluation of alternative remedies. EPA determined that proposing the site for inclusion on the NPL under CERCLA authority would offer the best route for a comprehensive solution.

3. Summary of Comments

One commenter, the State of Louisiana Department of Environmental Quality (LDEQ) submitted comments in support of placing the Site on the NPL. The LDEQ supported listing based on the contaminants remaining at the Site and the threat posed to the Mermentau River, residents, and wetlands.

One commenter, the Companies, submitted comments in opposition to placing the Site on the NPL.

The Companies commented that:

> Companies are directly affected by the proposed NPL listing of the Site because these Companies (1) worked with USEPA's RCRA enforcement initiative on the Site in the late 1990s,1,2 (2) entered into a December 2002 RCRA 3008(h) Order and Agreement with the USEPA to address Hazardous/Principal Threat Wastes at the Site per the requirements, direction, and oversight of the USEPA,3 (3) provided technical resources and qualified contractors to perform the work,4,5 (4) spent approximately $2.4 million fulfilling the obligations of the 3008(h) Order and Agreement,6 (5) obtained verbal and written commitments from USEPA that USEPA would pursue non-participating companies to address the remaining Areas of Concern beyond the scope of the RCRA 3008(h) Statement of Work,7 and (6) obtained written concurrence in February 2006 from USEPA that the RCRA 3008(h) Work by the Companies was accepted and complete.

[1] SSIC Remediation, LLC was formed in 2001 by a group of PRPs to address RCRA removal actions at the Site. SSIC was dissolved in 2009. Comments were submitted on behalf of the following SSIC companies: American Commercial Barge Line LLC; Ashland, Inc.; Canal Barge Company, Inc.; Cenac Towing Co., LLC; Hornbeck Offshore Transportation, LLC; Martin Operating Partnership, LP; and Phillips 66 Company.

The Companies also urged EPA to reconsider listing the Site on the NPL because listing will stigmatize the Site and neighborhood.

The Companies asserted that the HRS evaluation encompasses two facilities and two separate sites, not a single site, referring to the southern facility/property owned by Louis & Suzanne Smailhall and the northern facility/property currently owned by Leevac Shipyard and (which includes the Dry Dock evaluated as Source 5 in the HRS documentation record at proposal). The Companies commented that without the inclusion of both facilities within the Site, the HRS site score would not be high enough to qualify the Site for listing on the NPL.

The Companies submitted comments related to liability for cleanup costs at the Site, including that:

- The 2002 Order and Agreement with EPA bars future claims against them.
- EPA should make the parties who "illegally scrapped" materials at the Site (causing contamination to leak from the barge) pay for any additional cleanup.
- The responsibility for some of the release following scrapping activities is should be assigned EPA, due to asserted inactivity on EPA's part following the September 2012 EPA site visit at which the initial scrapping-related release was identified.

The Companies stated that any remaining risks posed by the Site that need to be abated should be addressed through alternatives to the NPL listing, including additional removal actions, deferral to RCRA, and use of alternative enforcement actions. The Companies argue that they already offered to remove additional contamination from the Site and remain willing to do so, although they were denied by EPA. The Companies also suggest that any release associated with steel scrapping activities, should be remediated through an enforcement action against parties responsible for the scrapping work.

The Companies submitted comments questioning the HRS scoring of permitted discharges, asserting that the HRS evaluation of Source 6, Water Pit 3, is problematic because the water stored in Water Pit 3 was allowed to discharge to the wetlands under LDEQ authorization/permit.

The Companies submitted several comments related to consideration of previous removal actions performed under the 2002 IM/RA and affecting the sources at the Site; the Companies claimed that these actions were not properly taken into account in the HRS evaluation of the Site, and that this error resulted in inflated HRS scores.

The Companies submitted comments on each of the HRS sources scored at the Site. The Companies argued that Source 1, the Partially Buried Barge, should be removed from the HRS package. In support of this assertion, the Companies provided the following related comments:

- A qualified removal action was performed.
- Some of the contamination associated with Source 1 was caused during illegal scrapping activities.
- EPA's response to these activities was inadequate.
- Dioxins/furans data associating hazardous substances with Source 1 are suspect, based on interferences and blank contamination related to the analyses, and do not meet EPA data standards.
- Dioxins/furans associated with Source 1 may have originated in the fire during the illegal scrapping activities.
- Metals associated with Source 1 are suspect based on the levels found in background samples.
- The description of Source 1 as a partially buried barge is inaccurate and misleading related to the risk it poses to the environment.

Regarding Source 2, the Former Oil Pit, the Companies asserted that this source should be deleted from the HRS package. The Companies made several specific arguments to support this, including that the samples associating hazardous substances with Source 2 were incorrectly located, a qualified removal action was performed, and that the Former Oil Pit is closed and cannot be a contributor to the surface water migration pathway.

On Source 3, Former Water Pit 1, the Companies commented that EPA had not appropriately considered the removal actions performed in the HRS scoring of this source. The Companies also commented that the Former Water Pit 1 was not considered a hazardous principal threat waste in the Statement of Work for the RCRA IM/RA. The Companies also commented that the contamination associated with Source 3 is at depth and questioned whether it can pose a threat to the surface water migration pathway. Based on these considerations, the Companies questioned the resulting eligibility of Source 3 for scoring as part of the surface water migration pathway.

The Companies asserted that Source 4, the Former Land Treatment Unit (LTU), should be deleted from the evaluation of the surface water migration pathway. In support of this, the Companies commented that a removal action has been performed, samples associating hazardous substances with Source 4 are too deep to pose a threat to surface water, and that the location of Source 4 shown in figures of the HRS documentation record at proposal is incorrect.

The Companies asserted that Source 5, the Dry Dock, should be deleted from the evaluation of the surface water migration pathway. The Companies specifically argued that the Source 5 Dry Dock does not qualify as a surface impoundment, and that the Source 5 Dry Dock gate has been closed for many years and does not allow communication between the source and the river.

On Source 6, the Former Water Pit 3, the Companies asserted that Figures 2, 3 and 4 of the HRS documentation record at proposal are incorrect in their representation of the source.

The Companies submitted several comments questioning the observed release established at the Site. These included that:

- The Site would not have achieved an NPL-qualifying HRS score if it were not for the contamination release associated with the illegal scrapping of Source 1, the Partially Buried Barge, while the Site was under EPA authority.
- The release related to Source 6, Former Water Pit 3, was due to an EPA-authorized cut in the southern berm, connecting the pit to surface water.
- The samples used to establish an observed release by direct observation at Source 6 are pit bottom samples and not wetland samples. The Source 6 area should not be scored in the surface water migration pathway.

The Companies contended that EPA "has demonstrated that it has not adequately understood the Site and its operational history and features, and accordingly improperly incorporated in its HRS scoring analyses potential exposure scenarios that are neither realistic nor allowed to be included by HRS Guidance." The Companies claimed that "proper evaluation of the Site" based on their comments would yield an HRS site score less than the threshold for NPL listing of 28.50. The Companies requested that EPA rescore the site, reconsider NPL listing, and utilize alternatives for cleanup, allowing the avoidance of stigmatizing the area and maintenance of resources for "sites that truly warrant NPL listing."

3.1 Support for Listing and Other Non-opposition Comments

Comment: The State of Louisiana Department of Environmental Quality (LDEQ) expressed support for listing the Site on the NPL, noting:

> LDEQ believes that the site is eligible for proposed listing on the NPL by virtue of the nature of the volatile and semi-volatile, and metals contamination that remains at the site, and the threat this contamination poses to the Mermentau River, local residents, and waterway and wetland areas that are adjacent to the site.

The LDEQ further stated that it "will continue to assist the EPA in making the necessary cleanup decisions designed to protect public health and the environment in this part of Louisiana."

Response: EPA has added the SBA Shipyard site to the NPL. Listing makes a site eligible for remedial action funding under CERCLA, and the EPA will examine the site to determine what response, if any, is appropriate. The EPA will determine the need for using Superfund monies for remedial activities on a site-by-site basis, taking into account the NPL ranking, State priorities, further site investigation, other response alternatives, and other factors as appropriate.

3.2 Definition of Site/Site Boundaries

Comment: The Companies discussed the proposed NPL site in terms of property boundaries[2], the contamination associated with the barge (Source 1), and the removal activities conducted under the 2002 Interim Measures/Removal Actions Order and Agreement (hereinafter 2002 Order and Agreement).

Response: The Companies' incorrectly equate the Site boundaries for HRS purposes with the boundaries of the SBA shipyard property. For HRS purposes a site is defined as the area where contamination has come to be located; an NPL site is not defined by property boundaries.

Specifically, for HRS purposes, a site is defined in HRS Section 1.1, Definitions, as:

> Area(s) where a hazardous substance has been deposited, stored, disposed, or placed, or has otherwise come to be located. Such areas may include multiple sources and may include the area between sources.

The HRS documentation record at proposal also does not identify the boundaries of the Site as the SBA Shipyard property boundaries, facility, or Source 1. Page 1 of the HRS documentation record at proposal states that "EPA lists national priorities among the known 'releases or threatened releases' of hazardous substances; thus, the focus is on the release, not precisely delineated boundaries." Page 22 of the HRS documentation record at proposal states that "[t]he site defines the release from SBA Shipyard (SBA) referring to sources of hazardous substances and areas of contaminated water that are to be scored as a single unit." Page 22 of the HRS documentation record at proposal further describes the specifics of the Site noting that:

> The SBA Shipyard site as scored includes six sources . . . The surface water overland migration pathway is the pathway of concern being evaluated for this HRS package. An observed release has been documented to the Mermentau River and associated wetlands.

This description of the Site meets the criteria of a site as defined by the HRS.

Regarding the Companies' assertion that Leevac Shipyards, Inc. is a discrete operating entity with separate ownership and control and should not be considered within the boundaries of the SBA Shipyard NPL site, ownership and liability are not considered at the listing stage of the Superfund process or in defining the boundaries of a site for inclusion on the NPL. (See Section 3.5, Liability, of this support document, for discussion regarding liability at listing). As discussed above, the Site is properly defined for HRS purposes as the release from SBA Shipyard operations and not defined based on ownership.

[2] For example, the Companies discuss property boundaries related to Source 5, the Dry Dock, and whether it should be included in the NPL listing; the Companies comment that Source 5 is located on a separate property owned and operated by Leevac Shipyards.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.3 Extent of Site

Comment: The Companies argued that the HRS evaluation encompasses two facilities and two separate sites, not a single site, and that without the inclusion of both facilities within the Site, the HRS site score would not be high enough to qualify the Site for listing on the NPL. The Companies stated that the "Graving Dock Area, as well as the entire northern portion of the identified Site, should be removed from the defined boundaries of the Site." The Companies commented that, absent the scrapping and release of pollutants that occurred while the Site was under EPA's authority and recognizing that the Leevac Shipyards, Inc. is a discrete operating entity with separate ownership and control, the Site would not have scored for inclusion on the NPL.

The Companies asserted that Source 5, the Dry Dock (commonly referred to as the graving dock), is a discrete operating entity on a separate property controlled since 1993 by Leevac Shipyards, Inc. [3] According to the Companies, this area has never been associated with vessel cleaning or gas freeing operations; is recognized by Risk Evaluation/Corrective Action Program (RECAP) and the Louisiana Department of Environmental Quality (LDEQ) as a separate and distinct unit with its own unique Agency Interest Number (AI No. 24993); and was not included by EPA in the 2002 Order and Agreement. The Companies asserted that any scoring associated with the Leevac Shipyards, Inc. should be excluded from the Site, referred to the State for compliance under RECAP, or alternatively, scored as a separate NPL site.

Citing from Chapter 2 of the November 1992 Interim Final Hazard Ranking System Guidance Manual (hereafter referred to as the HRS Guidance Manual), the Companies stated:

> When multiple sources are in an area, Regional EPA personnel must decide whether to treat the area as one site or several sites for HRS scoring purposes . . . Keep in mind the following criteria for defining sites in multiple source situations:
>
> - Proximity of the sources to each other . . .
> - Common owner, operator, or potentially responsible party.

Emphasizing their comments, the Companies stated that Source 5:

> has no commonality in ownership, operator, or potentially responsible party. To the extent USEPA may contend that SBA Shipyards, Inc. had common control and is a common PRP, USEPA is well aware that SBA Shipyards, Inc. no longer exists and Mr. Smaihall [*sic*] is long deceased. It also knows that Leevac Shipyards leased and separately operated the property beginning in 1993 and then acquired title to that parcel in 1998, and thus has operated that parcel for over two decades and continues to own and operate it.

The companies requested that the graving dock be deleted from the HRS package and the score revised for the barge cleaning area.

Response: The SBA Shipyard site consists of a release resulting from the SBA Shipyard barge repair and cleaning operations conducted on what are now two separately owned, contiguous, plots of land as described in the HRS documentation record at proposal. Some of this release may also have been from leaks associated with the scrapping of the Source 1 Partially Buried Barge. The discussion of the parcels of real property, such as the

[3] The Companies cite to Reference 30 of its comment document, docket ID EPA-HQ-SFUND-2015-0576-0005: Plat of Survey; Property to be acquired by Leevac Shipyards, Inc. from SBA Shipyards, Inc.; February 15, 1999.

ownership of Dry Dock by Leevac Shipyards, and facility boundaries do not define the extent of the Site for listing purposes.

As discussed in section 3.2, Definition of Site/Site Boundaries, of this support document, the SBA Shipyard has been identified in accordance with the HRS as the release from SBA Shipyard. Page 22 of the HRS documentation record at proposal states that "[t]he site defines the release from SBA Shipyard (SBA) referring to sources of hazardous substances and areas of contaminated water that are to be scored as a single unit." This extent of site, as described in the HRS documentation record at proposal, includes Source 5, the Dry Dock; however, the extent of the SBA Shipyard site may be refined or expanded following the site investigation, occurring at later stage in the process.

Furthermore, the inclusion of the Source 5 Dry Dock is consistent with the HRS documentation record description of the Site as the release from SBA Shipyards. The Site as described in the HRS documentation record at proposal is not limited to a release from vessel cleaning or gas freeing operations as the commenter implies. As noted above, page 22 of the HRS documentation record at proposal states that "[t]he site defines the release from SBA Shipyard (SBA) referring to sources of hazardous substances and areas of contaminated water that are to be scored as a single unit." Page 22 of the HRS documentation record at proposal states:

> **SBA used the facility for construction, repair, retrofitting, sandblasting, and cleaning and painting of barges beginning in 1965** (Ref. 7, p. 13). Three barge slips and a dry dock are located off the Mermentau River (Ref. 5, pp. 38-39; Ref. 6, p. 7; Figure 2). Two of the barge slips are located on the northern portion of the property and are not included in the site as scored; the third barge slip is applicable and will be considered in the site HRS scoring (Figure 2). The slips were used to dock barges during cleaning or repair (Ref. 7, p. 13). [emphasis added]

The Source 5 Dry Dock was part of operations related to barge construction and repair. Pages 38-39 of Reference 5 to the HRS documentation record at proposal as cited above, note that "[b]eginning in 1993, the portion of the site used to construct and repair barges and other marine vessels was leased to another firm; that firm has since acquired the leased portion of the SBA facility." Page 30 of Reference 33 of the HRS documentation record at proposal (a 1990 Solid Waste Closure Plan for SBA Shipyards, Inc.) describes that "[t]he facility maintains a graving dock for barge and ship repair and a barge cleaning facility for gas freeing barges." Page 65 of Reference 36 of the HRS documentation record at proposal (a 1997 Water Permit Application for SBA Shipyards, Inc.) notes that a "portion of the site was leased to Leevac Inc. to construct and repair gambling riverboats and other barges."

Additionally, although property boundaries and ownership do not limit the extent of a site for HRS purposes, the Dry Dock was directly part of SBA Shipyard operations between 1965 and 1993. Additionally, the HRS documentation record at proposal at page 59 links the Dry Dock to other facility operations via the hazardous substances detected, stating that "[t]he constituents detected in the dry dock sediment samples are the same or similar to those detected in the waste sample collected from the Partially Buried Barge (Source 1) used in the barge cleaning process."

Regarding leaks caused during scrapping operations at Source 1, the Partially Buried Barge, regardless of the event that caused this specific portion of the release of hazardous substances at the Site, this source and the hazardous substances associated with it were historical products of SBA operations[4]; it is therefore consistent with the HRS to consider this source and related wastes part of the Site.

[4] See pages 22 and 28-29 of the HRS documentation record at proposal for discussion related to Source 1. See also section 3.10.2, Source 1 Eligibility and Cause of Spill, of this support document, which explains that when identifying sources, the HRS is concerned with identifying the presence of hazardous substances, but does not take into account the origin of those hazardous substances. The origin of the hazardous substances is essentially a liability issue and liability is not assessed as part of the HRS evaluation.

Finally, even if the Leevac property (location of Source 5) was considered a separate site due to it being under separate ownership during part of its time of operation, the Companies' mistakenly assert that the extent of the SBA Shipyard site was determined inconsistently with the *HRS Guidance Manual*. The EPA, however, complies with the HRS to place sites on the NPL and may use the *HRS Guidance Manual* depending on the facts or circumstances presented at each site. The fuller criteria from the manual which the Companies cite reads as:

> Keep in mind the following criteria for defining sites in multiple source situations:
>
> - Proximity of the sources to each other;
> - Similarity of wastes contained in the sources;
> - Similarity of targets (e.g., potential to affect one or more of the same aquifers, surface water bodies, sensitive environments, or populations); and
> - Common owner, operator, or potentially responsible party (PRP).

The manual also states that the above criteria are not comprehensive and professional judgment and experience must be used, on a case-by-case basis, in deciding how to evaluate sources. In this case, the EPA did not need to use the HRS Guidance Manual because the Site is not two separate sites and EPA did not aggregate two separate sites; however, EPA acted consistently with the HRS Guidance Manual (see pages 9 and 10 in Chapter 2 of the HRS Guidance Manual). EPA considered the contiguous proximity of sources, the similarity of wastes and similarity of targets. (See pages 75 to 77, 84, 92 to 94, 97, 102 to 103 and Figure 5 of the HRS documentation record at proposal.) Further, as stated in the HRS Guidance Manual, there is no list of comprehensive requirements that must be satisfied, yet in EPA's professional experience, sufficient criteria and data exist to warrant the extent of the SBA Shipyard site.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.4 Stigma of NPL Listing

Comment: The Companies urged EPA to reconsider listing the Site on the NPL because listing will stigmatize the Site and neighborhood.

Response: The stigma associated with listing, as suggested by the Companies, is not a consideration during the process to add a site to the NPL. Economic factors such as those raised by the Companies are generally not considered in the assessment of whether a site belongs on the NPL. Inclusion of a site or facility on the NPL does not in itself reflect a judgment on the activities of the owner(s) or operator(s), but rather reflects the EPA's judgment that a significant release or threat of release has occurred and that the site is a priority for further investigation under CERCLA.

There are both costs and benefits that can be associated with listing a site to the NPL. Among the benefits are increased health and environmental protection as a result of increased public awareness of potential hazards. In addition to the potential for Federally financed remedial actions, the addition of a site to the NPL could accelerate privately financed, voluntary cleanup efforts. Listing sites as national priority targets also may give States increased support for funding responses at particular sites. As a result of the additional CERCLA remedies, there will be lower human exposure to high-risk chemicals, and higher quality surface water, ground water, soil, and air. Therefore, it is possible that any perceived or actual negative fluctuations in property values, development opportunities, or stigma associated with listing the Site to the NPL due to contamination may also be countered by positive fluctuations when a CERCLA investigation and any necessary cleanup are completed.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.5 Liability and Enforcement Actions to Address Release

Comment: The Companies argued that they should not be held liable for cleanup costs related to the Site because the 2002 Order and Agreement with EPA bars future claims against them, and that EPA should make the parties who "illegally scrapped" materials at the Site (causing contamination to leak from the barge) pay for any additional cleanup. The Companies commented that, as a result of the 2002 Order and Agreement, they are allowed protection from further actions or claims related to matters addressed by Section 3008(h) of RCRA. The Companies cited various references (provided as attachments to their comment) in support of these assertions. The Companies also assign responsibility for some of the release following scrapping activities to EPA, due to asserted inactivity on EPA's part following the September 2012 EPA site visit at which the initial scrapping-related release was identified.

The Companies alleged that EPA made a commitment to the Companies, after the Companies completed the 2002 IM/RA, to have other non-participating organizations conduct additional future cleanup needed at the Site. The Companies argued that EPA has not done this and that this failure to require other responsible parties to finish cleaning the Site is in "contravention of the terms and spirit of USEPA's NPL/RCRA policy and HRS policy." The Companies asserted that EPA must honor the terms and conditions of the 2002 Order and Agreement.

The Companies commented on the spill incident associated with scrapping activities at the Site, and claimed EPA bears some responsibility for the related release due to inaction following initial identification of the spill. The Companies summarized the related events as follows:

- The Companies commented that the barge was also known to be secured in 2005 as part of IM/RA events.
- On September 6, 2012, EPA inspected the Site after Hurricane Isaac. According to the EPA facility report included as Reference 17 of the Companies' comment document (docket ID EPA-HQ-SFUND-2015-0576-0005), EPA found that "unauthorized metal scrapping operation" was occurring at the Site and that "[w]aste residue [was] observed on ground near salvaging equipment." The Companies assert this waste, along with the eventual leaks associated with the Source 1 barge, later became part of the basis for NPL listing. The Companies discussed pictures in the EPA facility report commenting that they show the Source 1 barge fully intact at this point.
- On October 23, 2012, LDEQ and the United States Coast Guard (USCG) responded to an anonymous call reporting a spill and fire related to scrapping at the Site. The Companies point to the LDEQ incident report (included as Reference 18 of the Companies comment document, docket ID EPA-HQ-SFUND-2015-0576-0005), stating this report indicates "the Site had been turned over to the LDEQ Remediation Division and USEPA" and that the "LDEQ Remediation Division said the Site was under USEPA authority."
- On December 11, 2012, EPA conducted a Preliminary Assessment reconnaissance at the Site during which the scrapping and associated spill from the Source 1 partially barge were noted.
- On August 19, 2013, EPA was conducting a Site Inspection at the Site. The Companies pointed to text from a related EPA field logbook which states the following related to EPA photographs 105, 106, and 107:

> View of oily material leaking/releasing from a barge being dismantled, NW of Source No. 1. Oily leak was not visible during the EPA site recon/Preliminary Assessment inspection on December 11, 2012.[5]

Related to photographs taken during the same Site Inspection, the Companies further stated that:

[5] This field logbook text is available on page 157 of Reference 4 of the HRS documentation record at proposal.

> The captions to USEPA Photographs No. 109 and 110 document that USEPA sample location SBA-038SL was from this active release that began as a result of barge dismantling activities occurring between USEPA's Preliminary Assessment (December 11, 2012) and USEPA's Site Inspection (August 19, 2013).

- In November 2013, EPA was again present on-site as part of continued Site Inspection activities. The Companies pointed to text in a related field logbook page from November 7, 2013 (page 154 of Reference 4 of the HRS documentation record at proposal) which states:

> Arrive at SBA Shipyard site. The front gate was unlocked and several people are onsite cutting up metal to scrap it.

The Companies commented that:

> The logbook indicates (Page 12) that five photographs of "oil on ground leaking from barge" were taken and two photographs of "photos of oil" were taken but copies of the photographs were not produced.[6]

With respect to the events summarized above, the Companies asserted that the EPA and LDEQ failed to notify previous SSIC members "about the scrapping, oil spills, fire(s), pollution to the wetlands, and pollution to the surface water occurring during this time period."

The Companies commented that:

> there is written and photographic documentation by USEPA and its contractors that known or unknown parties began steel dismantling and scrapping activities at the Site on or about September 2012 and continued through at least November 2013, a period of over thirteen months, while USEPA had authority over the Site and a significant presence on the Site.

The Companies stated that they "found no record that USEPA took any action to stop these scrapping and polluting activities but instead allowed them to continue for over thirteen months unabated." The Companies commented that "[w]hile USEPA has conducted emergency removal activities to address certain conditions relating to the 'illegal scrapping' of the boiler shed (i.e., boiler barge, also referred to as the alkyl storage tank) in 2015," some effects "still have not been fully abated."

The Companies argued that:

> USEPA's inaction following the site inspection in September 2012 resulted in an intact tank (barge) being cut open with its oily residuals released to the water and adjacent wetlands. . . . USEPA's further inaction following a report in October 2012 to the National Response Center concerning fire(s) and on-going pollution at the Site resulted in oily fluid being leaked from a boiler shed (aka boiler barge) to the ground and into the wetlands. These releases and apparent unauthorized activities occurred while the Site was under USEPA's authority and with USEPA presence on the Site. [7]

The Companies claimed that "[a]bsent the scrapping and release of pollutants that occurred while the Site was under USEPA's authority" the Site would not score high enough to be placed on the NPL.

The Companies further argued that the release associated with steel scrapping activities, post RCRA actions, should be addressed through an enforcement action against parties responsible for "illegal scrapping work." The

[6] This field logbook text is available on page 154 of Reference 4 of the HRS documentation record at proposal.
[7] The Companies cite References 17 through 20 of their comment document, docket ID EPA-HQ-SFUND-2015-0576-0005.

Companies commented that the "use of EPA's CERCLA program to address a site that clearly should have been addressed as a trespass and pollution incident when first observed and documented by USEPA in September 17, and October 18, 2012 appears inappropriate and wasteful." They stated:

> This release and the release associated with the scrapping of the buried barge would have been better addressed through an enforcement action against the responsible parties performing the "illegal" scrapping work and dropped from the HRS scoring package, rather than employ CERCLA funds and resources. USEPA has adequate enforcement authority and has had the opportunity for several years to pursue the persons who conducted and/or authorized the scrapping work to remediate the release they caused. [emphasis added]

The Companies added that EPA already has an open RCRA enforcement action on the Site, EPA has already identified and made demands on responsible parties to undertake further investigation and remediation, and the Companies have already demonstrated a willingness to take action to respond to environmental conditions at the Site. The Companies cited various references (provided as attachments to their comment) in support of these assertions.

Additional comments by the Companies argued that the burning of tar and heavy oils during the illegal scrapping of the barge is the source of the dioxins/furans identified in samples from Source 1, and because this activity occurred when the Site was under EPA's watch, the dioxins/furans should be addressed under EPA's enforcement, and hence, not be scored at the Site. The Companies requested that EPA and/or LDEQ seek enforcement against the metal scrappers and/or the current landowner to address the releases or threatened releases at the Site.

Response: Liability is not considered in evaluating a site under the HRS, and the assignment of liability to a specific entity is not determined at the listing stage of the Superfund process. The NPL serves primarily as an informational tool for use by the EPA in identifying those sites that appear to present a significant risk to public health or the environment. Listing a site on the NPL does not reflect a judgment on the activities of the owner(s) or operator(s) of a site. It does not require those persons to undertake any action, nor does it assign any liability to any person. This position, stated in the legislative history of CERCLA, has been explained more fully in the Federal Register (48 FR 40674, September 8, 1983, and 53 FR 23988, June 24, 1988). See Kent County v. EPA, 963 F.2d 391 (D.C. Cir. 1992).

Regarding the Companies' concerns about consideration of work completed under other programs, the HRS evaluation was completed based on the current conditions at the Site, and therefore takes into consideration work completed as part of the IM/RA. The HRS site score of 50.00 is based on the current conditions at the Site including contamination from a release from SBA Shipyard. The Site is eligible for listing on the NPL based on this HRS site score.

Regarding monetary concerns and cost recovery as commented on by the Companies, these costs associated with cleanup and remediation are determined at a later stage in the Superfund process—after an RI/FS has been completed and a remedy has been selected. As such, cost recovery is not a factor in the decision to place a site on the NPL.

Regarding the Companies allegations that EPA did not take any actions at the Site following the 2012 scrapping incident, these allegations are misplaced. EPA did in fact proceed with previously planned site investigations, requested by LDEQ, to assess the threat the Site might pose to human health or the environment. Following the cessation of RCRA removal activities (conducted approximately between 2001 and 2005), EPA again became involved at the site when on September 4, 2012, LDEQ requested EPA address the Site under CERCLA authority. (See Reference 16 of the Companies' comment document, docket ID EPA-HQ-SFUND-2015-0576-0005.)

First, to clarify, the scrapping/leak observations over time include multiple discrete incidents:

- The initial scrapping/leak-related observations by EPA in September 6, 2012, involved the scrapping of tanks.[8]
- October 23-25, 2012, LDEQ and USCG observations and December 11, 2012, EPA observations of scrapping and related leaks concerned the scrapping of the Source 1 partially buried barge.[9] It was determined that this improperly executed scrapping was conducted by a contractor at the direction of the SBA Shipyard facility owner (This scrapping contractor is neither affiliated with nor directed by EPA or its contractors.)[10]
- August 19, 2013, EPA Site Inspection observations of scrapping and related leaks, including photographs 105-107 and 109-110 noted by the commenter involved the scrapping of the buried barge associated with the alkyne storage tank pump house (not the Source 1 partially buried barge).[11] November 2013 EPA Site Inspection observations of scrapping and related leaks were again related to the buried barge associated with the alkyne storage tank pump house (not the Source 1 partially buried barge).[12]

Thus, this was not a single scrapping process accompanied by a continuous release over thirteen months.

Furthermore, EPA was not inactive with respect to the Site following the September 4, 2012, request by LDEQ for EPA/CERCLA attention:

- As shown in Attachment 1, October, 25, 2012 Email from LDEQ to EPA, of this support document, following the October 2012 scrapping incident the scrapping subcontractor was informed that the barge contents must be appropriately handled before continuing scrapping actions.
- EPA conducted a site reconnaissance for a Preliminary Assessment in December 2012, a Site Inspection in August 2013, and an Expanded Site Inspection in September 2014.
- As described on pages 73-74 of the HRS documentation record at proposal, in May - June of 2015, an Oil Pollution Act (OPA) removal action was performed to remove the oily water waste that had been observed leaking at the buried barge and associated alkyne storage tank pump house.[13]
- In 2015, EPA determined that the Site continued to release contamination into the environment and that it had not yet had a comprehensive evaluation of the nature and extent of contamination or an evaluation of alternative remedies. EPA determined that proposing the Site for inclusion on the NPL under CERCLA

[8] See notes and photographs in the EPA facility report included as Reference 17 of the Companies' comment document, docket ID EPA-HQ-SFUND-2015-0576-0005.

[9] See notes and photographs from LDEQ in the incident report included as Reference 18 of the Companies' comment document, docket ID EPA-HQ-SFUND-2015-0576-0005. See notes and photographs from USCG in the USCG report included as Reference 25 of the HRS documentation record at proposal. See notes and photographs from EPA's Preliminary Assessment field logbooks at pages 46-48 and 53-55 of Reference 9 of the HRS documentation record at proposal.

[10] See notes in the USCG report included as Reference 25 of the HRS documentation record at proposal, in which the USCG made contact on October 25, 2012, with a subcontractor for Two Moore Services hired to scrap the Source 1 partially buried barge. See Attachment 1, October, 25, 2012 Email from LDEQ to EPA, of this support document. See Attachment 2, May 9, 2014 Draft NRG Agreement, of this support document, which notes that Two Moore Services was contracted by the facility owner. (EPA notes that a draft agreement and not an executed contract is included as Attachment 2 of this support document.)

[11] See notes and photographs from EPA on page 135-139 and 157 of Reference 4 of the HRS documentation record at proposal.

[12] See field logbook notes on page 154 of Reference 4 of the HRS documentation record at proposal. The missing seven photographs referred to by the commenter are supplied in Attachment 3, November 7, 2013, Site Inspection Photographs, of this support document.

[13] See also page 2 of Reference 38 of the HRS documentation record at proposal.

authority would offer the best route for a comprehensive solution. The Site was proposed to the NPL in September 2015.

- In October 2015, an additional OPA removal action was conducted to remove further oily waste from the buried barge.[14]
- CERCLA non-time critical removal activities were conducted at the Site from September through November 2015 to remove hazardous sludge and oily liquid waste from the buried barge and non-hazardous solid waste from the alkyne storage tank pump house and perimeter area of the buried barge.[15]

These actions taken by EPA provide evidence that contrary to the Companies assertions, EPA has worked to address the risk the Site poses to human health and the environment since being notified by LDEQ in September 2012. Nevertheless, none of these comments concern the scoring of the Site under the HRS, which is the subject of this rulemaking, and none of these comments result a change in the decision to place the Site on the NPL.

Regarding enforcement actions related to site cleanup liability, this issue is not addressed at this stage of the Superfund process and is therefore not within the scope of this site NPL listing determination. Placing the Site on the NPL is appropriate because the Site scores above the required listing threshold of 28.50. Additionally, as discussed above in section 3.6.2, Deferral from CERCLA, of this support document, this listing determination is consistent with EPA's deferral policy. And, there is no open RCRA action for the Site.

It is not relevant at this stage of the Superfund process to determine what statutory authority may be used to facilitate any potential future cleanup actions. The HRS is only a screening tool used to identify whether a site warrants further investigation. It is not a determination that remedial actions will be taken or whether any particular party is liable for cleanup costs. The primary purpose of the NPL is stated in the legislative history of CERCLA:

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government action in the form of remedial actions or enforcement actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

(Report of the Committee on Environment and Public Works, Senate Report No. 96-848, 96th Cong., 2d Sess. 60 (1980)).

Furthermore, there is no open RCRA action for this Site so the ability to address the Site under RCRA is a misrepresentation.

Finally, as stated above, liability for site cleanup actions is not established at the time a site is placed on the NPL. The NPL serves primarily as an informational tool for use by the EPA in identifying those sites that appear to present a risk to public health or the environment. Listing a site on the NPL does not reflect a judgment on the activities of any owner or operator of a site. Therefore, Consistent with CERCLA, enforcement and liability issues are addressed at a later phase of Superfund process and are not determined at this time. These comments result in no change to the HRS score and no change in the decision to place the Site on the NPL.

[14] See page 11 of Attachment 4, February 25, 2016 OPA Removal Report for SBA Shipyard.
[15] See page ii of Attachment 5, February 4, 2016 CERCLA Removal Report for SBA Shipyard.

3.6 Alternatives to Listing

The Companies stated that any remaining risks posed by the Site that need to be abated should be addressed through alternatives to the NPL listing, including additional removal actions, deferral to RCRA, and use of alternative enforcement actions. The Companies argue that they already offered to remove additional contamination from the Site and remain willing to do so, although they were denied by EPA. The Companies also suggest that any release associated with steel scrapping activities, post RCRA actions, should be remediated through an enforcement action against parties responsible for "illegal scrapping work."

Response: Addressing the Site under CERCLA authority is appropriate because placing the Site on the NPL is based on the HRS site evaluation and complies with EPA's deferral policy. The HRS documentation record at proposal and this support document clearly document that the HRS Site score meets the required listing threshold of 28.50 and the Site is therefore eligible for placement on the NPL. The HRS Site score properly considers all relevant removal actions. Any future remedial actions or liability for such actions are not considered at the NPL listing stage of the Superfund process.

The following sections address the specific alternatives to NPL listing suggested by the commenters:

- 3.6.1 Additional Removal Activities
- 3.6.2 Deferral From CERCLA

3.6.1 Additional Removal Activities

Comment: The Companies asserted that they have offered to conduct additional removal activities at the Site to remove contamination but that EPA declined these offers. The Companies claimed that they have made several proposals to EPA since August 2015 to conduct additional removal activities to address the Site conditions noted in the Preliminary Assessment, Site Investigation, and Extended Site Investigation documents, but EPA has "declined to grant the Companies permission to conduct those removal activities." The Companies provided Reference 23 of their comment (docket ID EPA-HQ-SFUND-2015-0576-0005), a letter dated September 18, 2015, addressed to Michael A. Chernekoff, Partner, Jones Walker LLP, in which the Companies provided the scope and specifics of a proposed Immediate Removal Action (IRA) at the SBA Shipyard site.

Response: The Companies did not agree prior to proposal of the Site to the NPL to complete a Remedial Investigation/ Feasibility Study (RI/FS) that would achieve needed site characterization goals prior to any additional response actions. However, the NPL listing process does not prevent parties from entering into agreements to carry out remedial investigations or interim response actions.

As noted in section 3.5, Liability, of this support document, EPA conducted CERCLA and OPA removal actions to address immediate risks. Prior to and following NPL proposal, EPA and the Companies had several conversations regarding possible future remedial or removal actions at the Site to address remaining possible risks posed by the Site. EPA expressed to the Companies that additional removal actions should not be taken without first conducting sufficient site investigations to characterize site conditions. Therefore, EPA requested the Companies provide commitments to fund an RI/FS that would collect adequate data to properly characterize the Site conditions, determine the nature of the Site waste, and evaluate the remedial action alternatives. However, the Companies did not agree to conduct an RI/FS that would achieve these Site characterization goals, rather they only offered to conduct an Immediate Removal Action (IRA) to "remove exposed oily materials associated with both a partially dismantled barge and a partially buried tug or barge remnant". This proposed IRA included that the objective of the proposed IRA was only to "remove oily material . . . from open and exposed areas of two former marine vessels at the SBA Shipyard site." This proposed IRA also stated that, "[t]he role of the regulatory agencies is yet to be defined." (See pages 1 and 6 of Reference 23 of the Companies comments [docket ID EPA-HQ-SFUND-2015-0576-0005], letter dated September 18, 2015, addressed to Michael A. Chernekoff, Jones Walker LLP). The proposed IRA did not include any of the investigations needed to comprehensively evaluate the nature and extent of contamination or evaluate alternative remedies.

Thus, the Companies did not commit to conduct an RI/FS meeting EPA's requirements. During communications between EPA and the Companies leading up to and following NPL proposal, EPA made it clear to the Companies that any Site investigation would need to include comprehensive Site characterization and that a removal action alone would not be appropriate. The Companies did not offer an adequate and appropriate site characterization proposal to conduct interim response actions.

Furthermore, the NPL listing process does not prevent parties from entering into agreements to carry out remedial investigations or remedial actions. Consistent with CERCLA, the EPA has in place an orderly procedure for identifying sites where releases of substances addressed under CERCLA have occurred or may occur, placing such sites on the NPL, evaluating the nature and extent of the threats at such sites, responding to those threats, and deleting sites from the NPL. The evaluation or remedial investigation/feasibility study (RI/FS) phase involves on-site testing to define the nature and extent of the threat posed by the contamination and to identify alternatives for remedial action. After a period of public comment, the EPA responds to those threats by issuing a Record of Decision, which selects the most appropriate alternative. The selected remedy is implemented during the remedial design/remedial action phase.

The EPA makes decisions during all stages of the procedure. Potentially responsible parties (PRPs) can affect remedy selection, as can any other member of the public, through the public comment process. PRPs may undertake the RI/FS and/or remedial design/remedial action stages under EPA supervision and pursuant to appropriate agreements with governmental authorities (under enforcement authorities of CERCLA or those of other statutes). The listing process does not encumber or preclude PRPs from entering into these agreements and such an alternative is available to the commenter.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.6.2 Deferral from CERCLA

Comment: The Companies asserted that the remaining cleanup activities should be deferred to RCRA, and that these activities would have parity with CERCLA actions. The Companies commented that the EPA December 2002 Order and Agreement specifically noted that the work performed pursuant to that Order and Agreement was intended to, and did achieve "programmatic parity" with actions under CERCLA. The Companies cited various references (provided as attachments to their comment) in support of these assertions.

Citing from Section IV of the 2002 Order and Agreement for the IM/RA (submitted as Reference 3 of the Companies comment document, docket ID EPA-HQ-SFUND-2015-0576-0005), the Companies stated:

> EPA acknowledges that the work performed at this facility in accordance with this Agreement would achieve programmatic parity, avoid duplication and delay, and achieve substantive constancy between remedial programs as described in the NPL/RCRA deferral policy (54 FR 410000).

The Companies added that the applicable provision of EPA's NPL/RCRA deferral policy cited in the 2002 Order and Agreement provides that:

> [EPA] has developed the NPL/RCRA policy to avoid duplication and delays. In addition, **EPA will ensure that actions undertaken by one program will be adopted by the other program if programmatic responsibility shifts**. One of the Agency's primary objectives in the development of the RCRA corrective action regulations is to achieve substantive consistency with the remedial program under CERCLA. 51 FR 41015, 10/4/1989. [emphasis added by the Companies]

The Companies made the following claims in support of their request to address the Site under RCRA:

- EPA already has an open RCRA enforcement action on the Site and EPA RCRA Group has already identified and made demands on responsible parties to undertake further investigation and remediation at the Site.
- The Companies have also already demonstrated a willingness to take action to respond to environmental conditions at the Site.
- The HRS Guidance Manual provides guidance (Chapter 2, Policy and Statutory Issues) concerning the application of CERCLA to RCRA sites where it states the Agency's policy is to use RCRA Subtitle C authority to respond to sites that can be addressed under RCRA Subtitle C corrective action authority and not place such sites on the NPL (see generally, 54 Federal Register 41000, October 4, 1989).]

The Companies asserted that, in accordance with guidance, they have demonstrated willingness to take action and pay for cleanup, and EPA's proposed listing for this site conflicts with policy and should be reversed.

The Companies further added that EPA made a commitment to the Companies who completed the IM/RA to seek additional work (which was known to be necessary at the time) from non-participating companies but EPA did not complete this commitment. The Companies commented that EPA is potentially penalizing the Companies who stepped up to perform the IM/RA work by advancing the Site under another regulatory initiative and this is against the spirit and terms of EPA's NPL, RCRA, and HRS policies.

Response: Placing the Site on the NPL is appropriate because this decision is based on the HRS evaluation, the State of Louisiana has requested this action, and site deferral complies with EPA's deferral policy[16]. Regarding that the removal actions were designed to achieve "programmatic parity" between the IM/RA and any future CERCLA cleanup, listing the Site to the NPL is not prohibited by the 2002 Order and Agreement, and the determination of whether the Site requires any future cleanup actions is not made at this stage of the Superfund process and is therefore outside the scope of this listing decision; and these previous removal actions have not addressed all contamination associated with sources and observed releases at the Site.

Listing the Site on the NPL based on a HRS Site score above 28.50 represents EPA's determination that further investigation under CERCLA authority is warranted and that alternatives to listing are not sufficient at this stage in the process.

Furthermore, the state of Louisiana has expressed support for placing the Site on the NPL. On September 4, 2012, LDEQ formally requested EPA address the SBA Shipyard site under CERCLA authority. (See Reference 16 of the Companies' comment document, docket ID EPA-HQ-SFUND-2015-0576-0005.) And, in a July 13, 2015, letter regarding the proposed NPL listing of the Site (docket ID EPA-HQ-SFUND-2015-0576-0004), the LDEQ confirmed its continued support, stating that the:

> nature of the volatile and semi-volatile, and metals contamination that remains at the site, and the threat this contamination poses to the Mermentau River, local residents, and waterway and wetland areas that are adjacent to the site.

Placing the Site on the NPL, instead of addressing the Site under RCRA Subtitle C corrective authority, is appropriate because the SBA Shipyard facility never obtained an approved RCRA permit for facility operations and had little or no history of RCRA compliance.[17] EPA's deferral policy states that non- or

[16] See general information on EPA's deferral policy at 54 FR 41000, October 4, 1989.

[17] See pages 32, 39, 40 of Reference 5 of the HRS documentation record at proposal; page 7 of Reference 24 of the HRS documentation record at proposal; and pages 11, 12 of Reference 35 of the HRS documentation record at proposal.

late filer sites are not appropriate for deferral to RCRA for action at these sites, even though RCRA technically may apply.[18]

Non-or late filers are those:

> facilities that were treating, storing or disposing of hazardous waste after November 19, 1980, but did not file a Part A permit by that date or have little or no history of compliance with RCRA. [53 FR 22992].

SBA Shipyard never acquired appropriate RCRA permits for facility operations and was found to be in violation of RCRA permitting requirements on numerous occasions, as summarized below:

- In 1992, LDEQ found that SBA Shipyard failed to perform a correct hazardous waste determination as required for facility closure. The 1992 LDEQ inspection and violation documentation states that the facility was ordered to be shut down in 1990 and the facility was instructed to submit a closure plan.[19] The facility closure plan submitted by SBA Shipyard indicated that the only hazardous waste determination performed did not include all hazardous substances of concern. LDEQ found that the facility failed to perform a correct hazardous waste determination of its wash waters.[20] (Ref. 33, p. 2).
- On page 3 of Reference 33 of the HRS documentation record at proposal, the 1992 LDEQ violation documentation states:

  > [SBA Shipyard] failed to perform a correct hazardous waste determination of its waste paint, of material discarded into the ravine between the boat slips next to the Mermenteau [*sic*] River, waste waters generated from the barge cleaning operation, sludge removed from the facility's surface impoundments and placed onto the land in the ravine by the facility's boiler unit, and sludge removed from the oil pit and placed onto the land. The landfill in the ravine discharged to the Mermenteau [*sic*] River and the other sites with contamination could migrate into the ground water potentially both causing extensive environmental contamination.

- On page 7 of Reference 24 of the HRS documentation record at proposal, a 1994 EPA inspection report for the SBA Shipyard facility states that the "facility is operating without interim status or a standard permit." On pages 11- 12 of Reference 35 of the HRS documentation record at proposal, a July 1997 RCRA Violation Complaint issued by EPA to SBA Shipyard Inc. states that the facility:

  > has not filed an amendment to its September 19, 1980 Permit Application to seek a permit or other authorization to dispose of hazardous waste at the Facility…failed to obtain interim status authority to dispose of hazardous waste at the facility…has not been issued a permit authorizing it to dispose of hazardous waste at the facility.

- The Complaint also states that the facility:

  > failed to obtain interim status authority to treat hazardous waste at the Facility . . . has not been issued a permit authorizing it to treat hazardous waste at the Facility.

- The 2002 Order and Agreement, agreed to by both the Companies and the owner of SBA Shipyard, Inc., also states that "SBA should have had interim status or a permit to store characteristic hazardous wastes in impoundments and operate a land farm."[21]

[18] See 53 FR 23978, June 24, 1988. The deferral policy has been amended at times, as noted in 54 FR 41000, October 4, 1989.
[19] See pages 1–3 of Reference 33 of the HRS documentation record at proposal.
[20] See page 2 of Reference 33 of the HRS documentation record at proposal.
[21] See page 32 of Reference 5 of the HRS documentation record at proposal.

As these documents indicate, the SBA Shipyard facility did not obtain the appropriate RCRA permitting and therefore meets the criteria for a non-or late filer because the facility treated, stored, and disposed of hazardous substances and had little or no history of compliance with RCRA permitting requirements. The non-operating facility is also currently not subject RCRA permit authority and does not have a viable owner or operator able to conduct a RCRA corrective action. These two factors make the Site ineligible for the deferral policy.

Regarding the Companies' comment that the 2002 Order and Agreement between EPA and the Companies create "programmatic parity" between the IM/RA and any future CERCLA cleanup, listing the Site to the NPL is not prohibited by the 2002 Order and Agreement and the determination of whether the Site requires any future cleanup actions is not made at this stage of the Superfund process and is therefore outside the scope of this listing decision:

- The December 9, 2002 letter from EPA to SBA Shipyards, Inc. regarding the 2002 Order and Agreement clearly indicates that the IM/RA only required the Companies and SBA to complete a limited cleanup action. As shown on page 32 of Reference 5 of the HRS documentation record at proposal, the letter states in relevant part:

  > SBA agrees to implement an IM/RA on the SBA-SOU to meet visual removal levels as outlined in the SOW . . . Implementing activities described in the SOW will remove the hazardous/principle threat wastes and allow future long term remedial work at SBA to proceed safely. EPA intends to pursue future long-term remedial work at the SBA facility, under subsequent agreement to be finalized within three (3) years.[22]

- As shown on pages 38-47 of Reference 5 of the HRS documentation record at proposal, the IM/RA Statement of Work (SOW) states that the work to be completed included interim measures to address pumpable oil mixtures, waxes, and sludges only and would not address ground water or soil contamination. The IM/RA SOW states:

  > The objective of the Interim Measures described herein is to minimize the potential for release of contaminants from the site by reducing the mobility, toxicity and volume of contaminated media. The volume, mobility and toxicity of contaminated media will be reduced through the removal from the site of pumpable oils and oily material generated by previous barge cleaning activities….[23]

- The IM/RA SOW then discusses the limitation of the IM/RA action:

  > Management of ground water and/or contaminated soils which may be associated with SBA's barge cleaning activities will be addressed in the future, after the Interim Measures described herein have been completed and evaluated with respect to Preliminary Remedial Goals for the site.[24]

- Additionally, although previous removal actions may have been designed to achieve programmatic parity with CERCLA, these previous removal actions have not addressed permanently or comprehensively all contamination associated with sources and observed releases. Both the December 9, 2002 letter from EPA to SBA Shipyards, Inc. regarding the 2002 Order and Agreement and the IM/RA SOW explicitly state that the IM/RA only included limited removal actions in discrete areas within the current Site. This action did not permanently and significantly reduce the dangers of the release or threat of release at the Site. And, the Site score meets the threshold for listing based on current conditions at the Site that take into consideration the limited removal action.[25] Sampling for the Site score was conducted after the removal

[22] See page 32 of Reference 5 of the HRS documentation record at proposal.
[23] See page 39 of Reference 5 of the HRS documentation record at proposal.
[24] See page 40 of Reference 5 of the HRS documentation record at proposal.
[25] Note that, as further explained in section 3.9, Source Hazardous Waste Quantity – Removal Actions, of this support document, the removal actions have no effect on the estimation of the source hazardous waste quantity calculated using the

action occurred. As shown in the HRS documentation record at promulgation and throughout this support document, the site meets the HRS listing criteria based on this post-removal sampling.

The Companies comment regarding their offer to conduct additional removal actions is addressed in section 3.6.1, Additional Removal Activities, of this support document, which explains that the Companies did not agree prior to proposal of the Site to the NPL to complete an RI/FS that would achieve needed site characterization goals.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.7 Permitted Discharges

Comment: The Companies commented that the HRS evaluation of Source 6, Water Pit 3, is problematic because the water stored in Water Pit 3 was allowed to discharge to the wetlands under LDEQ authorization/permit. The Companies explained that water was stored in Water Pit 3 over an extended period of time on multiple occasions, and was tested for the very organic constituents used in the proposed listing; all values were within allowed discharge limits before the water was discharged to the adjacent wetlands under LDEQ authorization/permit. In support of their comments, the Companies provided the August 15, 2005, IM/RA Completion Report[26]

Response: Surface impoundments with federal permits for discharges, such as Source 6, the Water Pit 3, and the discharges from such sources, are eligible for consideration in an HRS evaluation, even if discharges from these sources were within allowed limits. CERCLA does not limit permitted releases from placement on the NPL. While CERCLA provides a definition for a "federally permitted release" (see CERCLA Section 101(10)), that the release or discharge may have been "federally-permitted" does not preclude listing on the NPL. CERCLA Section 105(a)(8)(B) directs the EPA to list on the NPL "releases" of hazardous substances, pollutants, and contaminants according to specific criteria set out in CERCLA Section 105(a)(8)(A). The definition of "release" in CERCLA Section 101(22) exempts certain releases from its scope, but it does not exempt "Federally-permitted releases"; thus, even if discharges occur within the regulatory limits set by those Federal laws enumerated in CERCLA Section 101(10), so as to constitute "Federally-permitted releases," the discharges may be considered releases under CERCLA and, if appropriate under the HRS, placed on the NPL. CERCLA provides certain exemptions for "Federally-permitted releases" only from the notification (Section 103(a) and cost-recovery (107(j)) sections of the statute; such releases remain subject to the other sections of the statute. Additionally, the hazardous substances in remaining Water Pit 3 pit bottom wastes are not addressed by the related permitting. Therefore, Source 6, Water Pit 3, and the associated discharges from this source are eligible for evaluation in the HRS scoring of the Site, and Water Pit 3, has been appropriately evaluated as a source for HRS purposes. The actual degree of contamination associated with Source 6, however, will be determined at a later stage in the Superfund process during the RI that typically follows listing.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.8 Consideration of Previous Removal Action

Comment: The Companies asserted that EPA did not fully consider previous removal actions when it evaluated the Site for HRS scoring purposes. The Companies stated, "EPA failed to adequately or properly consider the previous removal action conducted as part of the 2002 IM/RA with the result that it has substantially overestimated potentials for surface water pathway impacts and thus substantially erred in its scoring of the Site." The Companies point to the HRS Guidance Manual and to the EPA removal policy in support of their assertions.

HRS tiering system employed to assign a source waste quantity for these sources—the HRS volume measure and HRS area measure.

[26] The Companies cite to Reference 4 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005), the Interim Measures/Removal Action Completion Report re SBA Shipyard Site, Jennings, LA, by Michael Pisani & Associates, August 15, 2005.

They added that if EPA finalizes listing of the Site, it must give proper consideration to the removal action conducted pursuant to the 2002 IM/RA Order and Agreement and revise the boundaries of the Site to account for previous work.

Response: The IM/RA actions undertaken by the Companies pursuant to the 2002 Order and Agreement were considered in the HRS evaluation of the Site and in the decision to list the Site on the NPL. Although partial removals may have occurred, there was still no documentation or indication that there is no remaining release or potential for a release that could cause adverse environmental or human health impacts. Contamination at HRS Sources 1-6 and releases (and threat of future releases) from those sources are still present at the Site and may still require remedy under CERCLA. EPA acknowledges the Companies conducted a limited removal action under RCRA, as discussed in the 2002 Order and Agreement and the IM/RA SOW.[27]

Conditions following removal actions are generally considered during the scoring process when the EPA has documentation that clearly demonstrates there is no remaining release or potential for a release that could cause adverse environmental or human health impacts. This approach is reasonable as it ensures that the risk posed by released hazardous substances not abated by the action can be properly evaluated by the EPA. The Companies have not claimed that releases to the surface water migration pathway have been addressed. Comments regarding actions to remove source materials also do not claim that any specific source has been completely removed (i.e., there are still source hazardous substances remaining); and, none of the sources identified in the HRS documentation record at proposal have been completely contained according to the HRS.[28] As shown in section 4.1.2.1.1, Observed Release, on pages 77-83 of the HRS documentation record at proposal and defended in part in section 3.16, Likelihood of Release, of this support document, an observed release by direct observation and an observed release by chemical analysis have been established in surface water for the Site. Additionally, as shown in section 2.2.2, Hazardous Substances Associated With the Source, of the HRS documentation record at proposal for each source (on pages 29-31, 38-40, 46-48, 53-54, 59-61, and 67-69) hazardous substances were associated with Site sources using samples collected in 2013 and 2014, after removal actions were conducted. Furthermore, as shown in section 3.9, Source Hazardous Waste Quantity – Removal Actions, of this support document, even with consideration of the removal actions considered for each source, the HRS site score would not change.

Therefore, risk to the public and environment still exists based on previous releases and the potential for future releases from the sources at the Site. Accordingly, based on the fact-specific circumstances in this rulemaking, the removal actions discussed by the commenter result in no change to the HRS site score.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.9 Source Hazardous Waste Quantity – Removal Actions

Comment: The Companies submitted several comments related to Sources 1, 2, 3, and 4 on the subject of removal actions conducted at the Site. The Companies asserted that these removal actions had not been properly taken into account in determining the HRS hazardous waste quantity measures, source hazardous waste quantity factor values, or general eligibility of the sources for scoring in the surface water migration pathway overland/flood migration component.

Response: For HRS scoring purposes, the removal actions at the Site have been properly considered in assigning both the source and the pathway hazardous waste quantity factor values. For the scored sources at promulgation—Sources 1, 3 and 4, which are classified as HRS source types container, surface impoundment buried/backfilled, and land treatment, respectively—the removal actions have no effect on the estimation of the source hazardous

[27] See pages 31-37 and 38-47 of Reference 5 of the HRS documentation record at proposal.

[28] See pages 32, 41, 49, 55 and 62 of the HRS documentation record at proposal related to containment of each source. See also sections 3.10.2, Source 1 Eligibility and Cause of Spill, 3.12, Source 3 Eligibility and Consideration of Removal Actions, 3.13.1, Source 4 Eligibility and Consideration of Removal Actions, 3.14.2, Source 5 Containment, of this support document for further discussion showing the Site sources are uncontained for HRS evaluation purposes.

waste quantity calculated using the HRS tiering system employed to assign a source waste quantity for these sources (the HRS volume measure for Source 1 and HRS area measure for Sources 3 and 4). The Source 1 HRS hazardous waste quantity volume estimate evaluated for source type "container" consists of a one-time capacity measurement of the container, not the waste contained in the source at any specific time; therefore the removal actions modification of the volume of waste in Source 1 do not affect the value assigned. For Sources 3 and 4, the HRS hazardous waste quantity area estimates are not affected by the related removal actions in that the estimate is based on the footprint area of the source. Although there may be some information regarding the depth of the source material removed prior to backfill with clean soil, there is not adequate information on the extent of depth of the contamination at each source prior to removals to clearly determine how each removal would affect the areal footprint of the remaining post-removal contamination.

Regarding the Source 2 Former Oil Pit, as described in section 3.11, Source 2 Sample Locations, Availability to Surface Water Migration Pathway, and Removal Actions, of this support document, Source 2 has been removed as a scored source in the HRS evaluation of the Site in the HRS documentation record at promulgation.

First, as explained in section 3.8, Consideration of Previous Removal Action, of this support document, EPA acknowledges the Companies conducted a limited removal action under RCRA authority of the LDEQ, as discussed in the 2002 Order and Agreement and the IM/RA SOW.[29] These removal actions and post-removal conditions were considered in the HRS evaluation, and the Site qualifies for listing because the risks posed to the public and the environment by past and future migration of hazardous substances from these sources have not been fully addressed. These 2002 IM/RA actions discussed by the Companies neither removed all the hazardous substances from the SBA facility sources that may be currently releasing hazardous substances, nor did they eliminate the risk posed by the migration of those hazardous substances to the surface water migration pathway prior to those removal actions.

The effects of the prior removal actions on Site sources are explained in the following subsections of this response:

- HRS Consideration of Removal Actions
- Tier C Volume Estimate for Source 1
- Tier D Area Estimates for Sources 3 and 4
- Hypothetical Site Score Based on Minimum Source Estimates

HRS Consideration of Removal Actions

The HRS directly addresses removal actions as they affect the HRS hazardous waste quantity factor value assigned for all pathways being scored in HRS Section 2.4.2.2, *Calculation of hazardous waste quantity factor value*. Specifically for the surface water migration pathway, calculation of the waste quantity assigned value is addressed in HRS Sections 4.1.2.2.2, *Hazardous waste quantity* (for the drinking water threat), 4.1.3.2.2, *Hazardous waste quantity* (for the human food chain threat), and 4.1.4.2.2, *Hazardous waste quantity* (for the environmental threat); all three sections direct the user to HRS Section 2.4.2.2, *Calculation of hazardous waste quantity factor value*.

HRS Section 2.4.2.2, *Calculation of hazardous waste quantity factor value*, takes into account removal actions. This section explains the selection of the hazardous waste quantity factor value for a pathway considering all of the sources affecting that pathway, in relevant part:

> Sum the source hazardous waste quantity values assigned to all sources (including the unallocated source) or areas of observed contamination for the pathway being evaluated and round this sum to

[29] See pages 31-37 and 38-47 of Reference 5 of the HRS documentation record at proposal.

the nearest integer, except: if the sum is greater than 0, but less than 1, round it to 1. Based on this value, select a hazardous waste quantity factor value for the pathway from table 2–6.

Hazardous waste quantity value	Assigned value
0	0
1[a] to 100	1[b]
Greater than 100 to 10,000	100
Greater than 10,000 to 1,000,000	10,000
Greater than 1,000,000	1,000,000

This section then includes instruction on the consideration of removal actions, in relevant part:

For a migration pathway, if the hazardous constituent quantity is adequately determined (see section 2.4.2.1.1) for all sources (or all portions of sources and releases remaining after a removal action), assign the value from table 2–6 as the hazardous waste quantity factor value for the pathway. If the hazardous constituent quantity is not adequately determined for one or more sources (or one or more portions of sources or releases remaining after a removal action) assign a factor value as follows:

- **If any target for that migration pathway is subject to Level I or Level II concentrations (see section 2.5), assign either the value from table 2–6 or a value of 100, whichever is greater, as the hazardous waste quantity factor value for that pathway**.
    - If none of the targets for that pathway is subject to Level I or Level II concentrations, assign a factor value as follows:
    - If there has been no removal action, assign either the value from table 2–6 or a value of 10, whichever is greater, as the hazardous waste quantity factor value for that pathway.
    - If there has been a removal action:
        - Determine values from table 2–6 with and without consideration of the removal action.
        - If the value that would be assigned from table 2–6 without consideration of the removal action would be 100 or greater, assign either the value from table 2–6 with consideration of the removal action or a value of 100, whichever is greater, as the hazardous waste quantity factor value for the pathway.
        - If the value that would be assigned from table 2–6 without consideration of the removal action would be less than 100, assign a value of 10 as the hazardous waste quantity factor value for the pathway. [emphasis added]

In determining the source hazardous waste quantity values, based on the source types assigned and the available information, Source 1 was evaluated using the Tier C, Volume estimate, and Sources 3 and 4 were evaluated using the Tier D, Area estimate. [30, 31] These source-specific HRS volume measure and HRS area measures used to determine the pathway hazardous waste quantity factor are explained below in subsections of this response: Tier C Volume Estimate for Source 1, and Tier D Area Estimates for Sources 3 and 4.

[30] For each source, see section 2.4.2, Hazardous Waste Quantity, of the HRS documentation record at proposal (pages 33-35, 41-43, 50-51, and 55-57) for explanation on which HRS hazardous waste quantity measure was evaluated for each source, based on the source type and the available information.

[31] The HRS contains four measures for estimating source hazardous waste quantity: hazardous constituent quantity, hazardous wastestream quantity, volume, and area. Generally, the estimated HRS measure that results in the highest assigned value is used to determine the source hazardous waste quantity value. (See HRS Section 2.4.2.1.1, *Source hazardous waste quantity*, and its subsections.)

Tier C Volume Estimate for Source 1

The removal action at Source 1 does not result in a reduction in the waste quantity estimate for the Source 1 Partially Buried Barge. This is because the estimate was developed based on Tier C, volume. Per HRS Section 2.4.2.1.3, *Volume* (cited below), this estimate is based on the capacity of the source while being used to store waste, not on the waste contained in the source at any specific time. HRS Section 2.4.2.1.3, *Volume*, describes the evaluation of the HRS volume measure, stating in relevant part:

> Evaluate the volume measure using the volume of the source . . .
> Based on the volume, designated as V, assign a value to the volume measure as follows:
> - For the migration pathways, assign the source a value for volume using the appropriate Tier C equation of table 2–5.
>
> . . .
> If the volume of the source . . . can be determined, do not evaluate the area measure. Instead, assign the area measure a value of 0 and proceed to section 2.4.2.1.5. If the volume cannot be determined (or is not applicable for the soil exposure pathway), assign the source (or area of observed contamination) a value of 0 for the volume measure and proceed to section 2.4.2.1.4.

As quoted above from HRS Section 2.4.2.1.3, Volume, the scorer is directed to "[e]valuate the volume measure using the volume of the source," not the volume of the waste at any one time within the source. (The volume of the waste in the Source 1 may vary with time for two reasons: first, because of precipitation and evaporation which may affect the barge which is currently open to the environment, the volume may change for Source 1 with rainfall and by drying up of rainfall and other liquids present in the barge; second, for Source 1, waste was added and removed during facility operations. Therefore, because the situations are encountered often, the HRS uses the volume of the source as a measure of a source's volume for screening purposes, not the volume of the waste in a source.) Volume of the source is measured using capacity of the source, i.e., the volume the source is designed or able to hold.

Regarding removal activities at Source 1, page 33 of the HRS documentation record at proposal notes:

> Completed interim measures/removal actions (IM/RA) at SBA specify that a total of 1.19 million gallons of pumpable oily material was pumped from the Partially Buried Barge and thermal destroyed (Ref. 5, p. 14). Pumpable oily material was removed from the partially buried barge till approximately 4 to 6 inches of heel remained between the structural members in the vessel, which could not be removed (Ref. 5, p. 14).

Pages 33-34 of the HRS documentation record at proposal describe the HRS volume measure evaluation for Source 1, stating:

> The volume of Source 1 can be adequately determined based on a one time capacity volume, and not the actual contents of the source (Ref 1, Sec. 2.4.2.1.3).
>
> . . .
>
> After completion of the IM/RA on the Partially Buried Barge the emptied vessel was used as a collection tank for contaminated water generated by subsequent (IM/RA) cleanup activities (Ref. 5, p.14). The approximate 850,000 gallons of contaminated water collected in the Partially Buried Barge was later removed (Ref. 5, p. 8). The partially buried barge was ultimately emptied of all but approximately 2 to 6 inches of water and oily heel retained by structural members in the vessel (Ref. 5, p. 17). To prevent water from refilling the vessel, all hatches and covers on the Partially Buried Barge were tack-welded shut (Ref. 5, p. 17). This was ineffective, because in October 2012 an anonymous caller notified the National Response Center (NRC) that the barge

was being scrapped and oil was being allowed to discharge to the ground (Ref. 21, p. 2). LDEQ conducted an investigation and reported evidence of the barge scrapping activities and that oil was still visible inside the portion of the barge being salvaged, and along the perimeter and east end of the barge (Ref. 21, p. 14).

Based on the IM/RA information available the one time volume capacity volume can be determined for the Partially Buried Barge (Source No. 1). According to the pumpable oily material inventory the estimated maximum capacity was calculated for each compartment of the vessel (Ref. 5, p. 47). The one time capacity volume will be based on the IM/RA which calculated the estimated maximum capacity for each compartment of the partially buried barge.

Bow Rake Tank	26,853 gallons
Deck Tank S	Not Measured
Deck Tank P	Not Measured
Compartment 1S	75,054 gallons
Compartment 1P	75,054 gallons
Compartment 2S	71,808 gallons
Compartment 2P	71,808 gallons
Compartment 3S	100,279 gallons
Compartment 3P	100,279 gallons
Compartment 4S	100,279 gallons
Compartment 4P	100,279 gallons
Compartment 5S	86,908 gallons
Compartment 5P	86,908 gallons
Aft Trim Tank	18,388 gallons
TOTAL	913, 897 gallons

The hazardous waste quantity evaluation equation applied for the conversion of gallons to cubic yards (yds^3) is 1 yd^3 = 200 gallons (Ref. 1, Table 2-5, footnote b). The one time estimated capacity of the Partially Buried Barge is 4,569.49 cubic yards (Ref. 1, Sec 2.4.2.1.3).

913,897 gallons X 1 yd^3 / 200 gallons per 1 yd^3 = 4,569.49 yd^3

The hazardous waste quantity evaluation equation for a container is V/2.5 (Ref. 1, Table 2-5). The volume source will be assigned a volume hazardous waste quantity value of 1,827.79

4,569.49 yd^3 / 2.5 = 1,827.79

Volume of Source No. 1 (yd^3): 4,569.49
Reference(s): Ref. 1, Table 2-5, p. 51591
Volume Assigned Value: 1,827.79

Thus, the volume of the Source 1 Partially Buried Barge was calculated based on the capacity of the source, consistent with the HRS. Unless the entire source has been removed, removal actions affecting the volume of waste in the source are not considered for this hazardous waste quantity measure. To actually account for the reduction in waste for the Source 1 Partially Buried Barge, the HRS Tier A hazardous constituent quantity measure would need to be evaluated; but this would require more information than is available—the total mass of all CERCLA hazardous substances in the source and released from the source—as explained on page 33 of the HRS documentation record at proposal.

Tier D Area Estimates for Sources 3 and 4

The removal actions do not result in a reduction in the waste quantity estimate for Source 3, Former Water Pit 1, or Source 4, Land Treatment Unit. This is because the estimate is based on HRS Tier D, area. The area estimates are not affected by the related removal actions in that the estimate is based on the footprint area of the source.

Although there is some information regarding the depth of the source material removed prior to backfill with clean soil, there is not adequate information on the extent of depth of the contamination at each source prior to removals to clearly determine how each removal would affect the areal footprint of the remaining post-removal contamination. HRS Section 2.4.2.1.4, *Area*, describes the evaluation of the HRS area measure, stating in relevant part:

> Evaluate the area measure using the area of the source . . . Based on this area, designated as A, assign a value to the area measure as follows:
> - For the migration pathways, assign the source a value for area using the appropriate Tier D equation of table 2–5.

For Source 3, Former Water Pit 1, page 51 of the HRS documentation record at proposal describes the evaluation of the HRS area measure:

> Historical maps and historical aerial photographs were used to estimate the size of the former Water Pit 1 (Ref. 16, p. 2; Ref. 18, p. 2). Based on Figure 2, the scale of the figures in reference 16, page 2 and 18, page 2, the former Water Pit 1 dimensions were 135 feet in length and approximately 85 feet in width; therefore, it occupied 11,475 square feet (ft^2).
>
> The hazardous waste quantity evaluation equation for a buried/backfilled surface impoundment is A/13 (Ref. 1, Table 2-5). The area source will be assigned an area hazardous waste quantity value of 882.69.
>
> $11{,}475\ ft^2/13 = 882.69$
>
> Area of source (ft^2): 11,475.00
> Area Assigned Value: 882.69
> References: Fig. 2; Ref. 1, Sec. 2.4.2.1.4

For Source 4, Former Land Treatment Unit, pages 56-57 of the HRS documentation record at proposal describes the evaluation of the HRS area measure:

> The LTU was located approximately 200 feet northwest of water pit 1, and had approximate dimensions of 100 feet wide and 200 feet long when put into use (Ref. 24, pp. 15 & 107). In 1996 it was noted that the LTU had approximate surface dimensions of 190 feet x 93 feet (Ref. 6, p. 8). The LTU is currently covered with soil and no closure or post closure care measures have been enacted for the LTU (Ref. 4, p. 32; Ref. 24, p. 15).
>
> Using the most conservative estimate for the source area of the former LTU of 190 feet x 93, it occupied approximately 17,670 square feet (ft^2) (Ref. 6, p. 8). The hazardous waste quantity evaluation equation for a land treatment unit is A/270 (Ref. 1, Table 2-5). The area source will be assigned an area hazardous waste quantity value of 65.44.
>
> $17{,}670\ ft^2/270 = 65.44$
>
> Area of source (ft^2): 17,670.00
> Area Assigned Value: 65.44
> References: Fig. 2; Ref. 1, Sec. 2.4.2.1.4

Regarding activities at Source 3, page 44 of the HRS documentation record at proposal states:

> By 1994, Water Pit 1 was inactive and had undergone partial closure (Ref. 24, p. 13). In mid-1990 SBA began closure on Water Pit 1 by using an aerator to biologically treat the

> wastewater and sludges, and by early 1991 the process was deemed unsuccessful (Ref. 6, p. 10; Ref. 24, p. 13). Prior to closure activities in 1991, an estimated 2,542 cubic yards of sludge was present in Water Pit 1 (Ref. 24, p. 13). In 1992, SBA implemented a new closure technique, the free water and oil was pumped from Water Pit 1 to the storage tanks or into the oil pit (Ref. 6, p. 10; Ref. 24, p. 13). The remaining sludge in Water Pit 1 was then solidified by mixing with fly ash and lime (Ref. 6, p. 10). Approximately one third of the solidified/stabilized sludges was removed from Water Pit 1 and placed on the ground at the area formerly designated as the Land Treatment Unit (Ref. 6, p. 10; Ref. 24, p. 13). The remaining sludges in Water Pit 1 were piled in the southeast/east end of the impoundment, with accumulated rainwater periodically pumped to storage tanks (Ref. 6, p. 10; Ref. 24, p. 13). No information has been found mentioning or detailing the closure of Water Pit 1.

Regarding removal activities at Source 4, page 43 of Reference 5 of the HRS documentation record at proposal (in the August 15, 2001 Statement of Work to implement the IM/RA) notes that "soils will be excavated to a depth of approximately 18 inches" from the LTU.

In each case for Sources 3 and 4, the HRS documentation record at proposal explains that the vertical extent of the contamination is not known with confidence (therefore a post-removal HRS area measure cannot be determined). For Source 3, as part of the HRS volume measure explanation, pages 50-51 of the HRS documentation record at proposal state:

> Initially, the Former Water Pit 1 was excavated for active use to an approximate depth of 18 feet bgs [below ground surface] around 1968 (Ref. 24, pp. 8 & 107). Prior to closure activities in 1991, an estimated 2,542 cubic yards of sludge was present in Water Pit 1 (Ref. 24, p. 13). By 1994, Water Pit 1 was inactive and had undergone partial closure (Ref. 24, p. 13). In 1996 dimensions were approximated at 160 feet x 100 feet x 15 feet and was estimated to contain an approximate 6,900 cubic yards of solidified sludge piled in the east end of the impoundment (Ref. 4, p. 30; Ref. 6, p. 7).
>
> However, the information available is not sufficient to evaluate an score Tier C because **details of closure activities on Water Pit 1 are incomplete, the dimensions of Water Pit 1 are approximate, there exists an inconsistency and conflict in the depth of the pit according to site evidence from 1968 and 1996, the depth of excavation is unknown and may not have been uniform and unvarying throughout the source, and closure details mention solidified/stabilized sludge being piled and remaining in the southeast/east end of the impoundment** (Ref. 6, p. 10; Ref. 24, p. 13); therefore, it is not possible to adequately determine a source volume (Tier C) (Ref. 1, Sec. 2.4.2.1.3, p. 51591). As a result, the evaluation of source volume proceeds to the evaluation of Tier D, source area (Ref. 1, Sec. 2.4.2.1.4, p. 51591). [emphasis added]

For Source 4, as part of the HRS volume measure explanation, page 56 of the HRS documentation record at proposal explains that the vertical extent of the contamination is not known with confidence, stating:

> Volume was not calculated by reason of Source No. 4 being a land treatment source type and **the depth of contamination in the soil is unknown**; therefore, it is not possible to adequately determine a source volume (Tier C) in cubic yards (yd3) (Ref. 1, Sec. 2.4.2.1.3, p. 51591). As a result, the evaluation of source volume proceeds to the evaluation of Tier D, source area (Ref. 1, Sec. 2.4.2.1.4, p. 51591). [emphasis added]

Therefore, for each of Sources 3 and 4, because the full vertical extent of the original contamination is not known, the effects of the removal actions on the footprint of the remaining contamination are not known, and the HRS area measures must rely on the initial approximate dimensions of the source. The HRS area measures for Sources 3 and 4 presented in the HRS documentation record at proposal are consistent with the HRS.

Hypothetical Site Score Based on Minimum Source Estimates

EPA notes that even if all the sources were evaluated as having a source hazardous waste quantity value of unknown but greater than zero based on the presence of hazardous substances in source samples collected post-removal, the resulting surface water migration pathway score and overall site score would not change.

As explained above, the HRS considers removal actions in Section 2.4.2.2, Calculation of hazardous waste quantity factor value. Consistent with that section, because there are Level II targets for the Site, hazardous waste quantity factor value for the surface water migration pathway is subject to a minimum value of 100. At this site, Level II concentrations have been established in the fishery in the Mermentau River and in the wetland located on the southeast side of SBA and along the east bank of the Mermentau River (as shown on pages 94 and 102 of the HRS documentation record at proposal). Because these targets are subjected to Level II concentrations, a value of 100 would be the minimum assigned hazardous waste quantity factor value for the pathway.

As shown in the hypothetical scoring below, the resulting impact would be that the pathway hazardous waste quantity would be reduced from 10,000 to 100 and the waste characteristics factor category value would be reduced from 1,000 to 320 for both threats evaluated (human food chain threat an environmental threat). At a minimum, the components of the surface water migration pathway scores and site score would be as follows:

Human Food Chain Threat	**Environmental Threat**
Observed release = 550 (same at proposal)	Observed release = 550 (same at proposal)
Pathway hazardous waste quantity = 100 (altered based on the hypothetical scenario discussed here)	Pathway hazardous waste quantity = 100 (altered based on the hypothetical scenario discussed here)
Waste Characteristics = 320 (altered based on the hypothetical scenario discussed here)[1]	Waste Characteristics = 320 (altered based on the hypothetical scenario discussed here)[2]
Targets = 45.030006 (same at proposal)	Targets = 25.065 (same at proposal)
Human Food Chain Threat Score = 96.06 (altered based on the hypothetical scenario discussed here)	Environmental Threat Score = 53.47 (altered based on the hypothetical scenario discussed here)
Surface Water Migration Pathway Score: 96.06 + 53.47 = 100.00 (subject to a maximum of 100.00) (same at proposal)	
HRS Site Score: 50.00 (same at proposal)	

[1] = The waste characteristics factor category value would be re-calculated as follows for the human food chain threat based on the hypothetical scenario discussed here:

Toxicity/Persistence Factor Value: 10,000
Hazardous Waste Quantity Factor Value: 100

(Toxicity/Persistence x Hazardous Waste Quantity):
$10{,}000 \times 100 = 1 \times 10^6$ (Subject to a maximum product of 1.0×10^8

Bioaccumulation Potential Factor Value: 50,000
(Toxicity/Persistence x Hazardous Waste Quantity) x Bioaccumulation Potential Factor Value:
$(1 \times 10^6) \times (50{,}000) = 5.0 \times 10^{10}$ (Subject to a maximum product of 1.0×10^{12})

A waste characteristics product value of 5.0×10^{10} yields a waste characteristics factor category value of 320 in HRS Table 2-7, *Waste Characteristics Factor Category Value*.

[2] = The waste characteristics factor category value would be re-calculated as follows for the environmental threat based on the hypothetical scenario discussed here:

Toxicity/Persistence Factor Value: 10,000
Hazardous Waste Quantity Factor Value: 100

(Toxicity/Persistence x Hazardous Waste Quantity):
$10{,}000 \times 100 = 1 \times 10^6$ (Subject to a maximum product of 1.0×10^8

Bioaccumulation Potential Factor Value: 50,000
(Toxicity/Persistence x Hazardous Waste Quantity) x Bioaccumulation Potential Factor Value:
$(1 \times 10^6) \times (50{,}000) = 5.0 \times 10^{10}$ (Subject to a maximum product of 1.0×10^{12})

A waste characteristics product value of 5.0×10^{10} yields a waste characteristics factor category value of 320 in HRS Table 2-7, *Waste Characteristics Factor Category Value*.

See source-specific sections of this support document for further related discussion (Sections 3.10.1, Source 1, Consideration of Removal Actions, 3.12, Source 3 Eligibility and Consideration of Removal Actions, 3.13.1, Source 4 Eligibility and Consideration of Removal Actions).

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10 Source 1 Eligibility

Comment: The Companies asserted that Source 1, the Partially Buried Barge, should be deleted from the HRS package. The Companies asserted that the barge at Source 1 was secured as part of the IM/RA actions in 2005 and the condition was inspected at that time and ultimately formally approved by EPA and LDEQ in 2006. The Companies commented that all hatches to the barge were welded shut to prevent further use of the barge for storage of liquids and to prevent escape of remaining un-pumpable materials. Regarding the contamination associated with Source 1, the Companies asserted that "exposed barge residuals and ground where leakage occurred as a result of the salvage/scrap operations are now one of the primary focus areas of the EPA's Site Inspection and Expanded Site Inspection, which form much of the basis of the proposed listing."

The Companies made several specific arguments to support their claim that Source 1 should be deleted from the HRS package, including that:

- A qualified removal action was performed.
- Some of the contamination associated with Source 1 was caused during illegal scrapping activities.
- EPA's response to these activities was inadequate.
- Dioxins/furans data associating hazardous substances with Source 1 are suspect, based on interferences and blank contamination related to the analyses, and do not meet EPA data standards.
- Dioxins/furans associated with Source 1 may have originated in the fire during the illegal scrapping activities.
- Metals associated with Source 1 are suspect based on the levels found in background samples.
- The description of Source 1 as a partially buried barge is inaccurate and misleading related to the risk it poses to the environment.

Response: Source 1, the Partially Buried Barge, is accurately characterized and evaluated for scoring purposes, consistent with the HRS; the Companies comments do not negate this. Source No. 1 was evaluated consistent with the HRS definition of *source*, and consistent with the HRS requirement that this source has a containment factor value greater than zero indicating hazardous substances associated with it are available to migrate from the source to the pathway. Hazardous substances are associated with Source 1, and Source 1 is assigned a source

containment factor value of 10.[32] Although some portion of the Source 1 contamination was removed, contamination remains as evidenced by the samples used to show that hazardous substances are associated with the source. And, this removal action did not address Source 1-related contamination that may have migrated to surface water (see section 3.10.1, Source 1 Consideration of Removal Actions, of this support document).

The following subsections address specific comments related to Source 1:

- 3.10.1 Source 1 Consideration of Removal Actions
- 3.10.2 Source 1 Eligibility and Cause of Spill
- 3.10.3 Association of Hazardous Substances with Source 1 – Dioxins/Furans Data Quality
- 3.10.4 Association of Hazardous Substances with Source 1 – Origin of Dioxins/Furans
- 3.10.5 Association of Hazardous Substances with Source 1 – Metals Background Levels
- 3.10.6 Source 1 Description

3.10.1 Source 1 Consideration of Removal Actions

Comment: The Companies identified removal actions performed by them and by EPA at Source 1, the Partially Buried Barge, and requested that Source 1 be deleted from the HRS package.

Commenting on EPA's activities, the Companies commented that, although EPA has conducted emergency removal activities to address certain conditions relating to the "illegal scrapping" of the barge, the resulting release of oil residues to soil, wetlands, and surface water still have not been fully abated.

Response: As explained above, it has not been documented that the removal actions removed all wastes placed in the source or the possible risk posed by the remaining waste, therefore the Partially Buried Barge remains an eligible source.

And, as explained in section 3.9, Pathway Hazardous Waste Quantity – Removal Actions, of this support document, the HRS addresses removal actions as they affect the HRS hazardous waste quantity factor value assigned for the pathway being scored. And, the volume measure evaluated for the Source 1 Partially Buried Barge is not affected by the related removal actions because this measure reflects the capacity of the source, not the waste contained in the source at any specific time, consistent with the HRS. Unless the entire source were removed, removal actions affecting the volume of waste in the source are not considered for this source using the volume hazardous waste quantity measure. The IM/RA actions discussed by the Companies neither removed all the hazardous substances from the SBA facility sources that may be currently releasing hazardous substances, nor did they eliminate the risk posed by the release of those hazardous substances to the surface water migration pathway prior to those removal actions. Finally, even if the all source measures for the Site were only evaluated as greater than zero, the HRS site score would remain the same as that at proposal.

Regarding the comment on EPA not abating releases, the selection of remedy measures will be determined, if any, at a separate phase of the CERCLA process. As noted in section 3.6.1, Additional Removal Activities, of this support document, consistent with CERCLA, the EPA has in place an orderly procedure for identifying sites where releases of substances addressed under CERCLA have occurred or may occur, placing such sites on the NPL, evaluating the nature and extent of the threats at such sites, responding to those threats, and deleting sites from the NPL. The purpose of the initial two steps is to develop the NPL, which identifies for the States and the public those sites that appear to warrant remedial action (56 FR 35842, July 29, 1991). The evaluation or remedial investigation/feasibility study (RI/FS) phase involves on-site testing to assess the nature and extent of the public health and environmental risks associated with the site and to determine what CERCLA-funded remedial actions,

[32] See also sections 3.10.2, Source 1 Eligibility and Cause of Spill; 3.10.3, Association of Hazardous Substances with Source 1 – Dioxins/Furans Data Quality; 3.10.4 Association of Hazardous Substances with Source 1 – Origin of Dioxins/Furans; 3.10.5, Association of Hazardous Substances with Source 1 – Metals Background Levels; and 3.10.6, Source 1 Description, of this support document

if any, may be appropriate. After a period of public comment, the EPA responds to those threats by issuing a Record of Decision which selects the most appropriate alternative. The selected remedy is implemented during the remedial design/remedial action phase.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.2 Source 1 Eligibility and Cause of Spill

Comment: The Companies made several comments related to the cause of contamination associated with Source 1, calling into question the use of data derived from the spill associated with a scrapping activity at the barge in the scoring of the Site.

The Companies asserted that the barge at Source 1 was secured as part of the IM/RA actions in 2005 and the condition was inspected at that time and was ultimately formally approved by EPA and LDEQ in 2006. The Companies commented that all hatches to the barge were welded shut to prevent further use of the barge for storage of liquids and to prevent escape of remaining un-pumpable materials.[33] Regarding the contamination associated with Source 1, the Companies asserted that "exposed barge residuals and ground where leakage occurred as a result of the salvage/scrap operations are now one of the primary focus areas of the EPA's Site Inspection and Expanded Site Inspection, which form much of the basis of the proposed listing."[34]

The Companies provided several comments to support their claims related to the documentation of Source 1:

- EPA Photographs No. 109 and 110 document that EPA sample location SBA-038SL was from the active release that began as a result of barge dismantling activities occurring between EPA's Preliminary Assessment (December 11, 2012) and EPA's Site Inspection (August 19, 2013).[35]
- On November 11, 2013, when the EPA contractor arrived at the Site, the contractor noted in the field logbook that, "[t]he front gate was unlocked and several people are on site cutting up metal to scrap it." The November 11, 2013 field logbook indicates on page 12 that "five photographs of 'oil on ground leaking from barge' were taken and two photographs of 'photos of oil' were taken but copies of the photographs were not produced."[36]
- "The resulting analytical data including analyses of residuals and contaminated soil resulting from the recent scrapping activities is now used in the HRS to score the site."

[33] The Companies cited to References 4, 5, 8, 9 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005). Reference 4 is the Interim Measures/Removal Action Completion Report re SBA Shipyard Site, Jennings, LA, by Michael Pisani & Associates, August 15, 2005. Reference 5 is the Letter to G. Keepper, EPA, from Michael Pisani & Associates Re: Report Addendum and Supplemental Information Interim Measures/Removal Action, SBA Shipyards, Inc. (Jefferson Davis Parish, Louisiana) EPA ID No. LAD008434185 / Docket No. RCRA-6-2002-090, LDEQ AINO. 1478, December 22, 2005. Reference 8 is the Letter from G. Keeper, EPA, to Michael Pisani & Associates Re: Completion Report on Order and Agreement ("Agreement") for Interim Measures/Removal Action ("IM/RA") of Hazardous /Principal Threat Wastes at SBA Shipyards, Inc., Jennings, LA, EPA ID No. LAD008434185 ("SBA") pursuant to Section 3008 (h) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6928 (h). Docket No. RCRA-6-2002-0908, February 24, 2006. Reference 9 is an Email from S. McDonald, EPA to M. Chernekoff, Re: EPA Approval for SBA Shipyards IM/RA Completion Report with Cost Addendum, March 13, 2006.

[34] The Companies cited to References 19, 20, and 21of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005). Reference 19 is the Preliminary Assessment Report for SBA Shipyards; Jennings, Jefferson Davis Parish, Louisiana; dated June 3, 2013. Reference 20 is the Site Inspection (Report); SBA Shipyards, Inc., 9040 Castex Landing Road; Jennings, Jefferson Davis Parish, Louisiana; CERCLIS No. LAD008434185; dated August 6, 2014. Reference 21 is the Expanded Site Inspection (Report); SBA Shipyards, Inc., 9040 Castex Landing Road, Jennings, Jefferson Davis Parish, Louisiana; CERCLIS No. LAD008434185; dated July 24, 2015.

[35] The Companies cited to Reference 20 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005).

[36] The Companies cited to Reference 20 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005).

The Companies asserted that the spill was not due to activities taken by the Companies, but rather, it was caused by tampering with the barge after it had been closed as part of the IM/RA. The Companies commented that the EPA produced photographic documentation to this effect, noting that the scrapping activity resulted in release of oil residues to soil, wetlands, and surface water and exposed residuals that were previously contained/enclosed in steel barge vessel tanks; and the exposed residuals also caught fire as a result of the scrapping operation.

Response: Source 1 was scored correctly and consistent with the HRS as part of the Site being evaluated in the HRS documentation record at proposal. The contamination associated with Source 1 is based on samples of the waste from inside the barge (forming the basis of the HRS scoring associated with the source itself). When identifying sources, the HRS is concerned with identifying the presence of hazardous substances, but does not take into account the origin of those hazardous substances. The cause of the release is not assessed as part of the HRS evaluation of source eligibility. (See also sections 3. 5, Liability, and 3.3, Extent of Site, of this support document.) Concerning EPA Photographs No. 109 and 110 collected at sample location SBA-038SL, these photographs are not of Source 1 as explained below.

Source No. 1, the Partially Buried Barge, was considered eligible for including in the HRS scoring for the Site consistent with the HRS definition of *source*, and the HRS requirement that this source has a containment factor value greater than zero indicating hazardous substances associated with the source are available to migrate from the source to the pathway. A source need not be linked to a specific operation to meet the HRS definition of a source, nor must the original cause of the contamination be known. The eligibility of Source 1 in the surface water migration pathway is explained in the following subsections of this response:

- Hazardous Substances are Associated with Source 1
- Source 1 is Available to the Watershed

The relevance of EPA Photographs No. 109 and 110 collected at sample location SBA-038SL is explained in the following subsection of this response:

- EPA Photographs No. 109 and 110 collected at sample location SBA-038SL

Hazardous Substances are Associated with Source 1

In considering the eligibility of Source 1 as a source, the EPA first considered the definition of a source. HRS Section 1.1, *Definitions*, defines *source* as:

> Any area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

HRS Section 2.2.1, *Identify sources*, outlines the requirements to be followed when identifying sources at a site; it states:

> For the three migration pathways, identify the sources at the site that contain hazardous substances. Identify the migration pathway(s) to which each source applies.

HRS Section 2.2.2, *Identify hazardous substances associated with a source*, discusses the HRS requirement used to identify the hazardous substances associated with a source; it states:

> For each of the three migration pathways, consider those hazardous substances documented in a source (for example, by sampling, labels, manifests, oral or written statements) to be associated with that source when evaluating each pathway.

Page 28 of the HRS documentation record at proposal states that Source 1, the "Partially Buried Barge is approximately 250 feet x 50 feet. . . . An anonymous caller notified the National Response Center (NRC) in

October 2012 that the barge was being scrapped and oil was being allowed to discharge to the ground." LDEQ conducted an investigation in October 2012 and reported evidence of the barge scrapping activities and that oil was still visible inside the portion of the barge being salvaged, and along the perimeter and east end of the barge. Page 28 of the HRS documentation record at proposal also states that:

> [t]wo (2) waste samples were collected from within the Partially Buried Barge: one at location SBA-040 (Figure 3; Ref. 4, pp. 18, 22, 29, 141-142, 157, 895, 906-907 & 1026) and one at SBA-ESI-15 (Figure 3; Ref. 7, pp. 18, 21, 26, 93, 151, 921, 926-927 & 981).
>
> - Location SBA-040, Sample SBA-040 – collected from the west corner of buried barge. Sample description is oily, asphaltic, black/saturated, and tarry material (Figure 3; Ref. 4, pp. 29 & 1026).
> - Location SBA-ESI-15, Sample SBA-ESI-15 – collected at the northwestern edge of the partially buried barge. Sample description is hard, black and oily (Figure 3; Ref. 7, pp. 26 & 981)."

Analytical data associating hazardous substances with Source 1 is shown in Tables 1 and 2 on pages 30 and 31 of the HRS documentation record at proposal; a summary of these hazardous substances is provided on pages 32-33 of the HRS documentation record at proposal.

Source 1 is Available to the Watershed

In considering the availability of Source 1 to the surface water migration pathway, HRS Section 2.2.3, *Identify hazardous substances available to a pathway*, states:

> In evaluating each migration pathway, consider the following hazardous substances available to migrate from the sources at the site to the pathway:
>
> Surface water migration – overland/flood component.
>
> -Hazardous substances that meet the criteria for an observed release to surface water in the watershed being evaluated.
> -All hazardous substances associated with a source with a surface water containment factor value greater than 0 for the watershed (see sections 4.1.2.1.2.1.1 and 4.1.2.1.2.2.1).

HRS Section 4.1.2.1.2.1.1, *Containment*, directs the scorer that:

> . . . If none of the sources is located in surface water in the watershed, assign a containment factor value from Table 4-2 to each source at the site that can potentially release hazardous substances to the hazardous substance migration path for this watershed.

For a source, HRS Table 4-2, *Containment Factor Values for Surface Water Migration Pathway*, includes the following containment features/factor values:

Source	Assigned value
….	…
Containers	
Evidence of hazardous substance migration from source area (i.e., source area includes containers and any associated containment structures). [Emphasis added]	10
No diking (or no similar structure) surrounding container area [Emphasis added]	10
Diking surrounding container area unsound or not regularly inspected and maintained	10
No evidence of hazardous substance migration from container area, container area	9

Source	Assigned value
surrounded by diking that is regularly inspected-and maintained, and .	
No evidence of hazardous substance migration from container area, container area surrounded by sound diking that is regularly inspected and maintained, and:	9
(a) Essentially impervious base under container area with liquids collection and removal system	7
(b)Containment system includes essentially impervious base, liquids collection system, sufficient capacity to contain 10 percent of volume of all containers, and functioning and maintained run-on control; and spilled or leaked hazardous substances and accumulated precipitation removed in timely manner to prevent overflow of collection system, at least weekly inspection of containers, hazardous substances in leaking or deteriorating containers transferred to containers in good condition, and containers sealed except when waste is added or removed.	5
(c) Free liquids present, containment system has sufficient capacity to hold total volume of all containers and to provide adequate freeboard, and single liner under container area with functioning leachate collection and removal system below liner.	5
(d)Same as (c) except: double liner under container area with functioning leachate collection and removal system between liners.	3
Containers inside or under maintained intact structure that provides protection from precipitation so that neither runoff nor leachate would be generated from any unsealed or ruptured containers, liquids or materials containing free liquids not deposited In any container, and functioning and maintained run-on control present.	0
No evidence of hazardous substance migration from container area, containers leaking, and all free liquids eliminated at closure (either by removal of liquids or solidification of remaining wastes and waste residues).	Evaluate using All Sources criteria (with no bulk or free Liquids deposited).

The HRS documentation record at proposal establishes that Source 1 is in the same watershed as the scored surface water body, and that there is an overland flow path from the source to surface water. Regarding the overland migration path, page 75 of the HRS documentation record at proposal states in relevant part that:

> Four probable points of entries (PPEs) have been identified:
> . . .
> - PPE 2, located directly north of the partially buried barge is a zone where the overland flow meets the barge slip, is also located on the eastern portion of the property and a probable entry point from Source No. 1. (Figure 4).
> - PPE 3 is a segment along where the partially buried barge and former water pit 3 (Sources No.1 & 6), have been reported to have discharged into the adjacent wetlands along a perennial drainage ditch which runs on the property from the northwest, through the wetlands and drains to the Mermentau River (Ref. 6, p. 13; Ref. 20, pp. 4 & 5; Ref. 24, pp. 5, 10 & 128; Figure 4). Surface run-off from Sources No. 2, 3, & 4 eventually flow into a segment of PPE-3, the depressed area of the drainage ditch that flows through the wetland that drains to the Mermentau River (Ref. 24, p. 5,107 & 128; Ref. 20, pp. 4-5; Figure 5).

On the overland flow path, the table entry for Source 1 on page 75 of the HRS documentation record at proposal further notes related to Source 1: "A Partially Buried Barge located on the southeast portion of the property, north of a designated wetland area. Distance to the PPE-2 is approximately 25 feet and distance to PPE-3 is approximately 35 feet (Ref. 5, p . 24; Figure 2 & 4)." The same page states that PPE 2 is a " Zone adjacent to the Barge Slip that is part of the Mermentau River" and PPE 3 is a "segment of the drainage ditch that flows through

the Palustrine Forested Wetlands contiguous with Mermentau River." Figure 4 of the HRS documentation record at proposal shows the overland flow direction from Source 1 to the Mermentau River and toward the wetlands.

Regarding the Source 1 containment factor value, the HRS documentation record at proposal states on page 32 that:

> [e]vidence exists to indicate that Source No. 1 had neither a dike or similar structure surrounding the container area, but hazardous substances have migrated from the container area….The containment factor value of 10 is assigned to Source No.1 because of evidence of hazardous substance migration from the container area.

Page 32 of the HRS documentation record also states that because the containment for this source is greater than zero, the substances associated with the source can migrate via the surface water migration pathway.

Source 1 was found to be uncontained to prevent hazardous substance migration from the source to surface water. The Partially Buried Barge was evaluated as a container source type under the "Container" section in HRS Table 4-2 cited above. A containment factor value of 10 was assigned to Source 1 using the criteria specified in HRS Table 4-2, because there was evidence of migration of hazardous substances from Source 1 and Source 1 did not have a dike or similar structure surrounding the container area. The Source 1 containment factor value is listed on pages 32 and 73 of the HRS documentation record at proposal. And, during August 2016 flooding affecting the area, the Site was at least partially inundated by water—further indication of the risk of hazardous substances migrating from Site sources to surface water.

EPA Photographs No. 109 and 110 collected at sample location SBA-038SL

EPA Photographs 109 and 110 are not photographs of Source 1. EPA Photographs 109 and 110 at EPA sample location SBA-038SL were taken on August 19, 2013, and the photographs document Site conditions (see pages 138 and 139 of Reference 4 of the HRS documentation record at proposal). Photographs 109 and 110 at sample location SBA-038SL document waste oil leaking from a barge and associated alkyne tank/pump house and are not photographs of the Partially Buried Barge evaluated as Source 1. This barge and associated alkyne tank/pump house and sample location SBA-038SL are discussed on page 73 of the HRS documentation record at proposal in the Other Possible Sources section. EPA further notes that the oily leak related to photographs 109 and 110 as well as in photographs 105, 106, and 107 was not visible during the EPA site reconnaissance/preliminary assessment inspection on December 11, 2012 (see pages 135 to 139 of Reference 4 of the HRS documentation record at proposal). The oil leaks in the photographs collected in August 2013 are separate from the oil leaks at the Source 1 Partially Buried Barge, about which an anonymous caller notified the National Response Center (NRC) in October 2012.[37] Photographs (collected on December 12, 2012) of the Source 1 barge scrapping and leaking oil on the ground are shown in the preliminary assessment report, on pages 52 to 55 of Reference 9 of the HRS documentation record at proposal.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.3 Association of Hazardous Substances with Source 1 – Dioxins/Furans Data Quality

Comment: The Companies called into question the association of dioxins/furans with Source 1, the Partially Buried Barge, based on several assertions:

[37] Neither of the oil leaks shown in the 2012 and 2013 photographs are a result of the EPA activity at the Site but they do document Site conditions. However, as explained in section 3.5, Liability, of this support document, liability is not considered in evaluating a site under the HRS, and the assignment of liability to a specific entity is not completed at the NPL listing stage of the Superfund process.

- The related analyses were associated with matrix interference issues.
- Dioxins/furans contamination was detected in the related analytical quality control blanks.
- The data do not meet EPA standards.

Response: The data used to associate dioxins/furans with Source 1, the Partially Buried Barge, were of sufficient quality to associate these hazardous substances with the source for HRS purposes by documenting their presence in samples of the waste collected from within the barge. The following subsections address specific comments and responses related to dioxins/furans association with Source 1:

- 3.10.3.1 Interference in Source 1 Sample Analyses
- 3.10.3.2 Contamination in Blank Sample Analysis
- 3.10.3.3 Analytical Data Standards

3.10.3.1 Interference in Source 1 Sample Analyses

Comment: The Companies called into question the association of dioxins/furans with Source 1. The Companies commented that EPA uses the "potential presence" of dioxins/furans to evaluate Source No. 1 but analyses of the samples from the barge for dioxins/furans are reported to have exhibited substantial matrix interference issues causing a second round of extractions in an attempt to address these matrix interference issues. The Companies noted that "[e]ven worse recoveries/results were observed for the second extraction and the laboratory reverted to the original extraction results." [38]

Response: Dioxins/furans were correctly identified as being detected within a waste sample, SBA-ESI-15, from the partially buried barge; the interferences[39] associated with some dioxins/furans compound analyses do not negate the presence of these hazardous substances in the waste sample. While interference may have occurred in some analyses for sample SBA-ESI-15, the interference does not demonstrate the substances were not correctly identified as in the sample. The samples were reanalyzed because in the initial analysis, other constituents of the waste sampled caused interferences with the analysis. This was not resolved in the second analysis. The interference did not affect the identification of the presence of the dioxins/furans, it only affected the quantitation of these analytes.

The U.S. Court of Appeals for the D.C. Circuit has specifically ruled on the use of analytical data in the scoring of a site using the HRS when there were possible weaknesses in the laboratory analysis. In the case of Board of Regents of the University of Washington v. EPA, 86 F.3d 1214 (DC Cir. 1996), the Court, in response to the petitioner's challenge regarding the quality of the data being fed into the complex HRS model—specifically, when there were issues dealing with the analysis—stated that "EPA does not face a standard of absolute perfection. . . . Rather, it is statutorily required to 'assure to the maximum extent feasible,' that it 'accurately assesses the relative degree of risk,'" [emphasis in original] and that "[i]t would hardly make sense for the courts to respond to the resulting evidence by treating a lab's findings as fatally defective whenever it comes up short in any way." The Court also said that "[i]f there are 'minor contractual deficiencies,' the appropriate response is to review the deficiencies on a 'case–by-case' basis to determine their impact on the 'usability of the data.'" Also in this decision, the Court repeated a statement in an earlier NPL HRS case (*Eagle–Picher Indus., Inc. v. EPA, 759 F.2d. 905, 921, D.C. Cir. 1985*) that explained the Agency has met its obligations when "[t]he EPA has thus 'examined [the] relevant data and . . . articulated a rational explanation for its action.'" [addition of "the" in original] Therefore, analytical data used in HRS scoring need not be from absolutely perfect analyses as long as a reasoned explanation can be provided supporting the use of the data for the specific intended purpose.

[38] The Companies cited to Reference 21 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005).
[39] An interference is generally a shift in analytical results for a substance caused by one or more specific chemical constituents in the sample matrix.

HRS Section 2.2.2, *Identify hazardous substances associated with a source,* discusses the HRS requirement used to identify hazardous substances associated with a source. It states:

> For each of the three migration pathways, consider those hazardous substances *documented in a source (for example, by sampling*, labels, manifests, oral or written statements) to be associated with that source when evaluating each pathway. (Emphasis added.)

For Source 1, analytical results were used to associate hazardous substances with Source 1, and for sample SBA-ESI-15, the HRS documentation record at proposal on page 31 lists 1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF), 1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF), 2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF), 2,3,4,7,8-Pentachlorodibenzofuran (PeCDF), 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) and Octachlorodibenzo-p-dioxin (OCDD).

The method reporting limit (MRL) was used to quantify the concentration of dioxins/furans in sample SBA-ESI-15. If the substance concentration in a sample is quantifiable, it must also be present in the sample. This information is shown on page 31 of the HRS documentation record and in the laboratory analytical data sheets on pages 1005 to 1008 of Reference 7 of the HRS documentation record at proposal.

The Region 6 MRL is defined in Reference 52 of the HRS documentation record at proposal as:

> For the [EPA] Region 6 Houston Laboratory, our reporting limit (also known as a quantitation limit) is the lowest concentration where results are quantitatively reported as present in the sample without qualification and is above the statistical detection limit. These reporting limit values are adjusted for sample size, dilution, and matrix interference. As a rule we choose to not report below the reporting limit down to the statistical detection limit; concentrations below the reporting limit are reported as non-detects.

The analytical result for dioxins/furans in SBA-ESI-15 were flagged with "J" and "K" data qualifiers (i.e., flags). These qualifiers are listed with the associated data results in the HRS documentation record at proposal (page 31) and are shown below:

Sample Location	SBA-ESI-15		
Sample Description	Waste sample from NW corner of partially buried barge (Source 1)		
Units	**ng/kg**		
Analyte: Dioxin and Furan	**Result**	**Flag**	**MRL**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF),	26.6	KJ	16
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF),	26.2	KJ	18.6
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF),	32.2	J	22.8
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	46.8	KJ	28.9
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	52.1	J	19.4
Octachlorodibenzo-p-dioxin (OCDD)	1370	J	6.1

The overall assessment of the analytical results for the analytes indicates that the main issue with the data was the low recovery of the labeled standard used to quantify the dioxins/furans in sample SBA-ESI-15 due to apparent matrix interference. The laboratory flagged some of the results with a K qualifier and the data validator then flagged all of the results used for assessment in the HRS evaluation with a J qualifier (pages 262, 997, 998, 1005 of Reference 7 of the HRS documentation record at proposal). The data qualifiers are defined on page 998 of Reference 7 of the HRS documentation record at proposal as follows.

- J - Indicates an estimated value – used when the analyte concentration is below the method reporting limit (MRL) and above the estimated detection limit (EDL).

- K - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration (EMPC) for the associated compound.

Therefore these qualifiers indicate that the affected results are quantitatively estimated, but do not call into question the presence of the analyte.

Page 998 of Reference 7 (cited in a data table on page 31 of the HRS documentation record at proposal) includes a validation report that confirms the analytical results are usable. Related to the low standard recoveries and matrix interference, the validator explains:

> In sample SBA-ESI-15, all internal standard[40] recoveries were very low, 0 to 2 percent recovery. The laboratory stated that the sample was put through multiple clean up procedures and re-extracted. However, the second extraction resulted in even poorer labeled standard recoveries; therefore, the original extraction was reported. Because the signal-to-noise ratios were all greater than 10:1, the detected results weren't rejected. In accordance with the data validation guidance, all detected results were flagged "J" as estimated and non-detects were flagged "R" as rejected. The low labeled standard recoveries are most likely due to matrix interference.

Page 1006 of Reference 7 of the HRS documentation record at proposal confirms the labeled recovery results for the internal standard associated with sample SBA-ESI-15:

Labeled Standard Results					
Labeled Compound	**Spike concentration (pg)**	**Concentration Found (pg)**	**% Recovery**	**Q**	**Control Limit**
13C-2,3,7,8-TCDD	2000	30.54	2	Y	40-135
13C-1,2,3,7,8-PeCDD	2000	6.756	0	Y	40-135
13C-1,2,3,4,7,8-HxCDD	2000	4.155	0	K	40-135
13C-1,2,3,6,7,8-HxCDD	2000	4.135	0	Y	40-135
13C-1,2,3,4,6,7,8-HpCDD	2000	15.673	1	K	40-135
13C-OCDD	4000	78.523	2	Y	40-135
13C-2,3,7,8-TCDF	2000	4.799	0	Y	40-135
13C-1,2,3,7,8-PeCDF	2000	5.017	0	K	40-135
13C-2,3,4,7,8-PeCDF	2000	2.058	0	K	40-135
13C-1,2,3,4,7,8-HxCDF	2000	4.835	0	K	40-135
13C-1,2,3,6,7,8-HxCDF	2000	4.326	0	Y	40-135
13C-1,2,3,7,8,9-HxCDF	2000	22.191	1	Y	40-135
13C-2,3,4,6,7,8-HxCDF	2000	3.530	0	K	40-135
13C-1,2,3,4,6,7,8-HpCDF	2000	4.662	0	Y	40-135
13C-1,2,3,4,7,8,9-HpCDF	2000	12.341	1	Y	40-135
37Cl-2,3,7,8-TCDD	800	10.915	1	Y	40-135

The introduction to the data validation report on page 997 of Reference 7 of the HRS documentation record at proposal explains that the validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidance for Chlorinated Dibenzo-p-Dioxins and Chlorinated Dibenzofurans Data Review" dated September 2011. Pages 43-44 of that guidance document (available at

[40] The isotopically-labeled PCDDs/PCDFs that are added to each sample prior to extraction, and ultimately are used for analyte quantitation, are called, "labeled standards," and the labeled PCDDs/PCDFs that are added just prior to injection are called, "internal standards." (Page 1, *U.S. EPA Contract Laboratory Program National Functional Guidance for Chlorinated Dibenzo-p-Dioxins and Chlorinated Dibenzofurans Data Review*, OSWER 9240.1-53, epa-540-r-11-016, September 2011 [https://www.epa.gov/sites/production/files/2015-03/documents/dlm22nfg.pdf]).

https://www.epa.gov/clp/contract-laboratory-program-national-functional-guidelines-data-review) confirm the validator's approach. Page 44 of the data validation guidance provides recommendations with regard to recoveries of labeled compounds and it states:

> If the recoveries of the labeled compounds are not within the limits … the laboratory should have *performed a reanalysis*. . . . Low recovery of the labeled compounds and the cleanup standard suggests that losses may be due to the performance of the cleanup steps. Thus, re-extraction and reanalysis of the sample may yield better results. If the labeled compound recoveries are low (<40%), and the cleanup standard recovery is not, the recovery problems may be associated with the extraction procedures or related to a particularly difficult matrix. In this case, reanalysis may only serve to confirm a "matrix effect". If recovery of only the cleanup standard is low, the presence of interference should be investigated. Otherwise, the possibility of improper calibration of the cleanup standard or a spiking error should be considered. Qualify all results associated with non-compliant clean-up standard performance as estimated ("J" or "UJ").

As mentioned in the data validation criteria, and encountered in the analyses, recovery problems may be associated with the extraction procedures or related to a particularly difficult matrix. In this case, the re-extraction and re-analysis confirmed a matrix effect/matrix interference. But because the signal-to-noise ratios were all greater than 10:1, the detected results were not rejected (see page 998 of Reference 7 of the HRS documentation record at proposal).

The source analytical data were generated in accordance with the analytical method, and validated according to relevant guidance. As explained above, the validator did not reject the data as unusable, but rather appropriately qualified the value "J" indicating the result is estimated. The laboratory-applied qualifier of "K" for some of the Source 1 furan analytes indicates that the value is an "estimated maximum possible concentration for the associated compound." These quality control failures were identified and qualified accordingly and consistent with relevant guidance, but do not constitute a gross failure implying the data are unusable or the substance is not present (otherwise the data would have been rejected by the validator).

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.3.2 Contamination in Blank Sample Analysis

Comment: The Companies called into question the association of dioxins/furans with Source 1, commenting that a second sample from the Site reported dioxins/furans constituents in the blanks.[41]

Response: Analytical data associated with blank contamination was not used to evaluate a source at the site. That one batch of samples is associated with blank contamination does not mean that other batches of samples have the same problem. The sample associated with blank contamination referred to by the commenter is sample SBA-ESI-14, which, as described on page 73 of the HRS documentation record at proposal, was collected from the stained soil observed near the alkyne storage tank building associated with one of the other possible sources at the Site. This sample was not used to characterize a source scored for HRS purposes for the Site, and therefore has no effect on the HRS site score. Further, as stated earlier, the U.S. Court of Appeals for the D.C. Circuit has specifically ruled on the use of analytical data in the scoring of a site, noting that EPA does not face a standard of absolute perfection, and that minor deficiencies can be reviewed on 'case–by-case' basis to determine their impact on the 'usability of the data.' Therefore, analytical data used in HRS scoring need not be from absolutely perfect analyses as long as a reasoned explanation can be provided supporting the use of the data for the specific intended purpose.

[41] The Companies cited to Reference 21 of their comment document. (docket ID EPA-HQ-SFUND-2015-0576-0005).

Page 73 of the HRS documentation record at proposal states the following regarding another possible source at the site:

> Other possible sources at SBA include a buried barge/associated alkyne storage tank pump house and stained soils (Figure 2). The buried barge and associated alkyne storage tank pump house are located on the eastern portion of the property, south of the barge slip and west of the partially buried barge (Figure 2). . . .
>
> During the 2013 SI one sludge sample Location SBA-038, was collected from southwest corner of the tank area (Ref .4, pp. 34, 57, 135-139 & 1024). Again in 2014, during the ESI **another sample was collected from the stained soil observed near the alkyne storage tank building, Location SBA-ESI-14** (Ref. 7, pp. 27, 50, 94-95 & 980) . . . (Emphasis added).

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.3.3 Analytical Data Standards

Comment: The Companies asserted that data which do not meet EPA's standards should not be used for scoring. The Companies stated that "[t]his is emphasized by the provisions of the Data Quality Act, and decisions based upon invalid data would make the EPA's listing decision arbitrary and capricious."

Response: The analytical data used to associate hazardous substances with source 1, the Partially Buried Barge, were adequate for evaluating this source. The analytical data used in the HRS evaluation were properly reviewed according to documented data validation procedures and QA/QC procedures, and are of known and documented quality. The commenter has not provided any specific example showing that the data used to generate the HRS site score do not meet EPA standards or provisions of the Data Quality Act.

EPA's Superfund Contract Laboratory Program (CLP) was developed in the early 1980's to provide analytical results of known and documented quality for use in site investigations, HRS scoring, and other Superfund activities. HRS Section 1.1, Definitions, identifies the CLP program as an:

> [a]nalytical program developed for CERCLA waste site samples to fill the need for legally defensible analytical results supported by a high level of quality assurance and documentation.

All samples collected and analyzed in the CLP are collected, shipped, tracked, and analyzed using standard procedures established by EPA to ensure their quality, and the data undergo quality assurance and quality control (QA/QC) review prior to submission to the data user. Prior to sample collection, EPA develops a Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP) that are followed during the site investigation. The CLP methods identify and provide documentation regarding the accuracy and limits of detection for each substance measured by the method. The methods also specify the QA/QC samples required to be collected in the field and/or created in the laboratory. Using these samples, the analytical laboratory reviews the analytical results and documents any concerns regarding the quality of the data. Independently, EPA Regional staff or their contractors review and validate the analytical results and document any issues or concerns. When a substance's reported concentration is qualified due to an analysis issue, EPA identifies the reason the concentration was qualified. Then, based on this information, EPA determines, depending on the data use, if the reported concentration is sufficiently accurate to meet the data quality objective for which the analytical result is being used. These controls typically mean that CLP data, as represented in data summary sheets that provide the analytical results and any assigned qualifiers, when used to support an HRS scoring package, are reliable.

Page 31 of the HRS documentation record at proposal cites to the data validation report at the bottom of the table in the list of references provided to support the dioxins/furans analytical data for the partially buried barge. The data validation report for the furans and dioxins is contained on pages 997-1005 of Reference 7 of the HRS documentation record at proposal.

Page 997 of Reference 7 of the HRS documentation record at proposal explains that the data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidance for Chlorinated Dibenzo-p-Dioxins and Chlorinated Dibenzofurans Data Review" dated September 2011. Pages 43-44 of that guidance document (available at https://www.epa.gov/clp/contract-laboratory-program-national-functional-guidelines-data-review) confirm the validator's approach.

Although there were matrix interferences in the analysis of sample SBA-ESI-15, the analytical results for Sample SBA-ESI-15 correctly identifies the presence of dioxins/furans in this sample. QA/QC and data validation were performed and the documents were made available within the HRS package. The data validator applied the approach recommended by the EPA Contract Laboratory Program and therefore, the analytical data is of known and documented quality.

As described in Section 3.10.3.1, Interference in Source 1 Sample Analyses, of this support document, the data validator applied the guidance recommendations to the analytical data where appropriate. This information was available in the record at time of proposal.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.4 Association of Hazardous Substances with Source 1 – Origin of Dioxins/Furans

Comment: The Companies submitted comments related to the origin of dioxins/furans in Source 1. The Companies commented that the barge residues caught fire during the illegal metal scrapping which was reported to the National Response Center and investigated by the United States Coast Guard (USCG) (in communication with the EPA) and the LDEQ.[42] The Companies added that "burning tar and heavy oil is recognized to sometimes produce threshold concentrations of dioxins/furans as were reported for the source sample."[43] The Companies contended that "given that the cutting up of the vessel, residuals catching fire, and potential creation of dioxins/furans occurring under EPA's watch, these constituents should not be used to score the site, and moreover, the USEPA should address this material under its enforcement authorities against the individuals who conducted and/or who authorized the scrapping activities."

Response: For HRS scoring purposes, the time at which the hazardous substances were released into the source and the cause of such a release is not considered at listing. As explained in section 3.10.3.1, Interference in Source 1 Sample Analyses, of this support document, dioxins/furans were correctly associated with Source 1 waste samples and, thus, the source is eligible for inclusion in the site scoring. HRS Section 2.2.2, *Identify hazardous substances associated with a source*, simply states to consider those hazardous substances documented in a source (for example, by sampling, labels, manifests, oral or written statements) to be associated with that source. See section 3.10.2, Source 1 Eligibility and Cause of Spill, of this support document, for discussion on documenting an eligible source and hazardous substances available to migrate to the surface water migration pathway. Dioxins/furans were documented in source 1 by sample analytical results and the HRS evaluation does not require documentation of the specific process that produced the dioxins/furans in the samples. Further, regarding responsibility releases, as explained in section 3.5, Liability, of this support document, liability is not a factor used in determination of the eligibility of a source.

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[42] The Companies cited to Reference 18 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005). Reference 18 is the LDEQ Single Point of Contact; National Response Center; Incident Report No. 1028084; LDEQ File; dated October 23, 2012.

[43] The Companies cited to References 27, 28 and 29 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005). Reference 27 is Dioxins and Furans: Where They Come From; Todd Paddock, Academy of Natural Sciences, dated July 1989. http://www.newmoa.org/prevention/topichub/107/dioxins_and_furanswhere_they_come_from.htm .
Reference 28 is Dioxins and Furans Fact Sheet – Environmental Protection Agency, http://www3.epa.gov/epawaste/hazard/wastemin/minimize/factshts/dioxfura.pdf.
Reference 29 is Facts about Dioxins – EH: Minnesota Department of Health, www.health.state.mn.us/divs/eh/risk/chemhazards/dioxins.html.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.5 Association of Hazardous Substances with Source 1 – Metals Background Levels

Comment: The Companies contended that EPA has not demonstrated that metals in the source samples exceeded background levels, and hence, the metals should be deleted from the evaluation of Source 1. The Companies commented that "[t]he HRS Package describes metals to be above laboratory reporting limits. The HRS Package does not mention that the same metals in the background soil samples were also above reporting limits". [44]

Response: The association of metals with Source 1 is consistent with the HRS requirements for associating a hazardous substance with a source and demonstrating the source is eligible for inclusion in HRS scoring. The metals in question were found in source waste samples at concentrations that clearly demonstrated their presence above the related detection limit. No background levels are required to document the presence of a hazardous substance in waste. The EPA data quality objective for associating a substance with a source other than contaminated soil based on sample analytical results is that the results document the substance to be present in a sample at a concentration at or above the detection limit (in this case the results exceed the reporting limit). Hence, the analytical data need only be qualitatively accurate.

As stated previously in section 3.10.2, Source 1 Eligibility and Cause of Spill, of this support document, when associating a substance with a source, HRS Section 2.2.2, *Identify hazardous substances associated with a source,* states:

> [C]onsider those hazardous substances documented in a source (for example, by sampling, labels, manifests, oral or written statements) to be associated with that source when evaluating each pathway.

The HRS Section 1.1, *Definitions*, defines "source" in part as:

> [a]ny area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

Thus, to associate a substance with that source, it must be "document[ed]" to be in an area where it was deposited.

The HRS documentation record at proposal associated arsenic, chromium, cobalt, lead and mercury with Source 1 in waste sample SBA-040 (page 30 of the HRS documentation record at proposal). Waste sample SBA-040, collected from the west corner of buried barge, is described as an oily, asphaltic, black/saturated, and tarry material (pages 28 and 30 of the HRS documentation record at proposal; pages 29 and 1026 of Reference 4 of the HRS documentation record at proposal). The analytical data results for sample SBA-040 document metals to be above the reporting limit for that sample. As described in Reference 52 of the HRS documentation record at proposal, the reporting limit for sample SBA-040 is the lowest concentration where results are quantitatively reported as present in the sample without qualification and is above the statistical detection limit. These reporting limit values are adjusted for sample size, dilution, and matrix interference. The Companies acknowledge this in its comment, "[t]he HRS Package describes metals to be above laboratory reporting limits." Hence, the reporting limit is not in question. The data results for the metals are as follows (see page 30 of the HRS documentation record at proposal; pages 29 and 70 of Reference 4 of the HRS documentation record at proposal):

[44] The Companies cited to Reference 20 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005).

Analyte: Total Metal	Concentration	Reporting Limit
Mercury	1.46	0.074
Chromium	16.6	1.2
Cobalt	4.1	2.4
Lead	29.7	0.6
Arsenic	5.4	0.6

Based on the directions in the HRS section quoted above, any substance that can be documented in the waste material in a source can be associated with that source. For samples of waste materials, background sampling to show the substance is present in a source at a levels above background is unnecessary, since the presence of the hazardous substances in the wastes is sufficient to show that the hazardous substances have been deposited, stored, disposed, or placed in the source.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.10.6 Source 1 Description

Comment: The Companies claimed that the term "partially buried" does not accurately describe the barge. The Companies asserted that "[t]his description of the barge and the assessment of the risk it associates with the barge is gross misrepresentation of the actual conditions and potential risk to the environment." The Companies contended instead that the barge floats in a constructed pond, and that this is documented in the August 15, 2005 Interim Measures/Removal Action on page 6, where it is noted that the barge floated up approximately seven feet after removal of the contained oily fluids for off-site thermal destruction; and the barge continues to float today.[45]

Response: Source 1, the Partially Buried Barge, is correctly evaluated as a source available for migration of hazardous substances to the surface water migration pathway. It is not relevant whether or not it was partially buried (See also section 3.10.2, Source 1 Eligibility and Cause of Spill, of this support document). This source was evaluated as source type "container," and this description was not challenged by the commenter; the scoring of a container is not dependent on whether a container is floating or partially buried, and such a difference in state would not impact the amount of waste that could be in the container (i.e., its capacity). Furthermore, the source type and the description of this source as a partially buried barge are consistent with the conditions of this source during several investigations.

While the HRS does not provide a definition for a "container," HRS Table 2-5, *Hazardous Waste Quantity Evaluation Equations,* lists the various source type categories for sources considered in an HRS evaluation: landfill; surface impoundment; surface impoundment (buried/backfilled); drums; tanks and containers others than drums; contaminated soil; pile; and, other. See excerpt of HRS Table 2-5 below:

[45] The Companies cited to References 4, 19, 20 and 21 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005).

TABLE 2-5-HAZADOUS WASTE QUANTITY EVALUATION EQUATIONS

Tier	Measure	Units	Equation for assigning value[a]
C[b]	Volume (V)		V/2,500
	Landfill	yd^3……	V/2,500
	Surface impoundment	yd^3……	V/2.5
	Surface impoundment (buried/backfilled)	yd^3……	V/2.5
	Drums[c]	gallons……	V/500
	Tanks and containers other than drums	yd^3……	V/2.5
	Contaminated soil	yd^3……	V/2,500
	Pile	yd^3……	V/2.5
	Other	yd^3……	V/2.5

Of the source types listed in HRS Table 2-5, the container source type best fits the description of this source because the partially buried barge, Source 1, operated as a waste container at the site. This source description is documented in several references in the HRS package, some of which were prepared for the property owner or for the Companies. For example, in several instances, the IM/RA report prepared by the Companies and included as Reference 4 of the Companies' comment document (docket ID EPA-HQ-SFUND-2015-0576-0005)[46] refers to Source 1 as the "partially buried barge." Page 8 of the IM/RA states, "[a]pproximately 850,000 gallons of contaminated water was removed from the partially buried barge." Page 14 continues, "A total of 1.9 million gallons of a pumpable oily material was pumped from the partially buried barge . . . As it was emptied, the partially buried barge was observed to rise until the deck was approximately seven feet above local grade in early 2002." Page 24 has Figure I-2, which depicts the location of the "Partially Buried Barge." Page 53, which contains the IM/RA Photographic log prepared by Michael Pisani & Associates, Inc., for SBA, depicts the "Partially Buried Barge." Hence, the Companies refer to the source in this manner.

The source description is also documented in references in references of the HRS documentation record at proposal, some of which are prepared for the property owners or the Companies:

- Page 5 of Reference 6 of the HRS documentation record at proposal (RCRA Facility Investigation Work Plan, SBA Shipyard Site, Jennings, Louisiana, Prepared for SBA Shipyard, Inc. October 1996) states: "waste from the barge cleaning operations have been managed in a waste management area including impoundments, a land treatment unit, and storage tanks at the facility." Page 8 states, "Tank OT-4 is a converted barge, the bottom of which is set in ground."
- Page 8 of Reference 5 of the HRS documentation record at proposal (Interim Measures/Removal Action Completion Report, SBA Shipyards Site, Jennings, Louisiana, prepared by Michael Pisani and Associates Inc., August 15, 2005) states: "After pumpable oily material has been removed from the partially buried barge, it was used to store contaminated storm water prior to treatment and discharge to the emptied former water pit." Page 44 states: "water will be stored in either the partially buried barge or onsite tanks." Page 53 shows the location of the "Partially Buried Barge" in a March 2003 photograph.
- Page 11 of Reference 9 of the HRS documentation record at proposal (Preliminary Assessment (PA) Report for SBA Shipyard, Jennings, Jefferson Davis Parish, Louisiana. Prepared for U.S. EPA Region 6. June 3, 2013) states: "Source No. 1 is a partially buried barge. The barge is approximately 250 feet (ft.) by 50 ft. The steel barge is located on the southeast portion of the property, north of a designated wetland area. Waste oil and fluids from the barge are being released into the aforementioned wetlands."

[46] The IM/RA report is also included as Reference 5 of the HRS documentation record at proposal: [Michael Pisani and Associates Inc. Interim Measures/Removal Action Completion Report. SBA Shipyards Site, Jennings, Louisiana. August 15, 2005. Total Pages: 629

- Pages 53, 54, and 55 of Reference 9 of the HRS documentation record at proposal, the PA report noted above, contain pictures taken on 12/11/12 and show a partially buried barge depending on which section of the barge is being viewed.

That the partially buried barge rose up after removal of 6,493,528 pounds of pumpable material (estimated pumpable oily material inventory on page 47 of Reference 5 of the HRS documentation record at proposal) is not questioned. The source has consistently been described as partially buried and an evaluation of its buoyancy is not required for HRS evaluation of a container source.

Further, inasmuch as this comment calls into question the HRS source type assigned for Source 1, the Companies have not shown how evaluation of the partially buried barge as a different source type would affect the HRS evaluation of this source. However, even if a different source type was selected, the only other eligible source type in HRS Table 2-5 that would be reasonable to use is source type "other." Both source type "container" and "other" are subject to the same HRS Table 2-5 equation and would result in the same source hazardous waste quantity. That is, on page 34 of the HRS documentation record at proposal, the Source 1 hazardous waste quantity assigned was based on the one-time volume capacity of the partially buried barge as a source type container. The data used to determine this value is presented in section 3.9, Pathway Hazardous Waste Quantity – Removal Actions, of this support document and pages 33-34 of the HRS documentation record at proposal.

If the partially buried barge were evaluated as a source type "Other", the same calculations would be used to determine the source hazardous waste quantity because in HRS Table 2-5, the units and the equation for assigning the source hazardous waste quantity using Tier C, *Volume*, are the same for both "container" and "other" source types. Hence, the resulting source hazardous waste quantity assigned value would be the same, 1,827.79, as shown above and on page 34 of the HRS documentation record at proposal.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.11 Source 2 Sample Locations, Availability to Surface Water Migration Pathway, and Removal Actions

Comment: The Companies asserted that Source 2, the Former Oil Pit, should be deleted from the HRS package. The Companies made several specific arguments to support this, including:

- The samples associating hazardous substances with Source 2 were incorrectly located.
- A qualified removal action was performed.
- The Former Oil Pit is closed and cannot be a contributor to the surface water migration pathway.

Response: After consideration of comments questioning the location of samples associated with Source 2 and whether they are appropriate for use in characterizing the Former Oil Pit, EPA has determined that sample SBA-003 may not be conclusively representative of the Former Oil Pit, and that accurately characterizing the Former Oil Pit may require further data collection. Because removing Source 2 from scoring does not affect the Site score, EPA has decided not to pursue further data collection at this time, and to instead remove Source 2 as a scored source in the HRS evaluation of the Site. Source 2, the Former Oil Pit, is instead included in the HRS documentation record at promulgation as an "other possible source."

As Source 2 is no longer scored for the overland/flood migration component, the Source 2 source hazardous waste quantity value, and the hazardous substances available to migrate from the Former Oil Pit to surface water via the overland/flood component are no longer considered in the calculation of the waste characteristics factor category values for the drinking water threat or human food chain threat. See section 3.17, Waste Characteristics, of this support document, and its subsections, for an explanation of the effects on the pathway waste quantity factor value. As explained in that section, there is no change to the pathway hazardous waste quantity factor values or the waste characteristics factor category values for either the human food chain threat or the environmental threat;

and thus the removal of Source 2 as a scored source results in no change to the Site score or the decision to place the Site on the NPL.

3.12 Source 3 Eligibility and Consideration of Removal Actions

Comment: On Source 3, Former Water Pit 1, the Companies commented that EPA had not appropriately considered the removal actions performed in the HRS scoring of this source. The Companies also commented that the Former Water Pit 1 was not considered a hazardous principal threat waste in the Statement of Work for the RCRA IM/RA. Based on these considerations, the Companies questioned the resulting eligibility of Source 3 for scoring as part of the surface water migration pathway.

The Companies commented that Source 3, Former Water Pit 1, closed by SBA, was not considered a hazardous/principal threat waste and, therefore, was not included in the Statement of Work for the RCRA IM/RA. The Companies added that "EPA's Preliminary Assessment documents that the area where the pit previously existed no longer is discernable."[47]

The Companies asserted that "[t]he surface water pathway is described in USEPA guidance for the HRS as the (1) potential-to-release by overland flow and flooding, (2) contaminant in a source area in contact with surface water through flooding, and (3) leachate flowing from a source into surface water."[48] The Companies argued that "[a] former pit covered with grass cannot meet any of these three criteria."

The Companies further commented that there are no surface soil data to show Source 3 can contribute contamination to the surface water migration pathway as described in the HRS Guidance Manual. The Companies asserted that all of the data presented for this source were collected from sample locations 2 to 16 feet below ground surface, so the impact is at depth, and "not part of [the] surface water pathway."

In discussing the asserted lack of a threat from Source 3, the Companies added that the presence of oil in a monitoring well adjacent to the closed pit was known in the 1990s but was not included in the IM/RA activities, per approval of EPA, because the investigation and response [of the monitoring well] were deferred to non-participating companies under RCRA enforcement action.[49] The Companies commented that the data [associated with the monitoring well] are not appropriate for scoring the surface water migration pathway because contaminated ground water does not present any risk to surface water. In summary, the Companies requested that the monitoring well data be removed from the scoring of the surface water migration pathway.

Response: Source 3, Former Water Pit 1, was correctly included in the HRS scoring of the site as an eligible source consistent with the HRS. Hazardous substances are associated with the Source 3, Former Water Pit 1, Source 3 is within the same watershed as the surface water body scored, and Source 3 is not contained relative to that surface water body according to the HRS criteria. Although some portion of the Source 3 contamination was removed and backfilled with clean soil, contamination remains as evidenced by the samples used to show hazardous substances are associated with the source. And, this removal action did not address Former Water Pit 1-related contamination that may have migrated to surface water during the timeframe between Former Water Pit 1 operation and removal activities. The Companies' summary of the HRS Guidance Manual is incomplete and

[47] The Companies cited to Reference 19 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005). Reference 19 is Preliminary Assessment Report for SBA Shipyards; Jennings, Jefferson Davis Parish, Louisiana; dated June 3, 2013.

[48] The Companies cited to Reference 26 of their comment document in which the Companies provided the cover sheet and the Table of Contents of the HRS Guidance (docket ID EPA-HQ-SFUND-2015-0576-0005).

[49] The Companies cited to Reference 3 of their comment document (docket ID EPA-HQ-SFUND-2015-0576-0005). Reference 3 is Order and Agreement ("Agreement") for Interim Measures/Removal Action ("IM/RA") of Hazardous/Principal Threat Wastes at SBA Shipyards, Inc., Jennings, LA, EPA ID No. LAD008434185 ("SBA"), pursuant to Section 3008 (h) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6928 (h). Docket No. RCRA-6-2002-0908, December 9, 2002; Transmitted December 12, 2002.

focused mainly on the HRS topics of observed release and potential to release. Finally, the HRS scoring of Source 3 does not include the presence of oil in a monitoring well adjacent to Source 3.

The eligibility of Source 3 in the surface water migration pathway is explained in the following subsections of this response:

- Hazardous Substances are Associated with Source 3
- Source 3 is Available to the Watershed
- Removal Actions at Source 3
- HRS Guidance Manual Description of Surface Water Migration Pathway
- Monitoring Well 2

Hazardous Substances are Associated with Source 3

The following HRS sections are applicable in identifying a source eligible for evaluation as part of the surface water migration pathway:

In HRS Section 1.1, Definitions, the HRS defines source as:

> *Source*: Any area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

HRS Section 2.2.1, *Identify sources*, outlines the requirements to be followed when identifying sources at a site. It states:

> For the three migration pathways, identify the sources at the site that contain hazardous substances. Identify the migration pathway(s) to which each source applies.

HRS Section 2.2.2, *Identify hazardous substances associated with a source*, discusses the HRS requirement used to identify the hazardous substances associated with a source. It states:

> For each of the three migration pathways, consider those hazardous substances documented in a source (for example, by sampling, labels, manifests, oral or written statements) to be associated with that source when evaluating each pathway.

On the subject of eligibility of Source 3, as explained on page 44 -49 of the HRS documentation record at proposal, source sample location SBA-004 was collected from the Former Water Pit 1 during the August 2013 EPA SI. The sample was collected along the approximate former east end of the Former Water Pit 1 where remaining solidified/stabilized sludge was piled. Hazardous substances associated with Source 3 in sample SBA-004 are on pages 47 and 48 of the HRS documentation record at proposal. The samples collected at sample location SBA-004 identified a contaminated soil sample mixed with waste. This is evident in the sample descriptions presented on pages 30, 871 and 984 of Reference 4 of the HRS documentation record at proposal which describe the sample consisting of a heavy chemical odor, black staining with sheen, high concentration/saturated with hydrocarbons, oil material. This sample location is along the approximate former east end of the Former Water Pit 1 where remaining solidified/stabilized sludge was piled. This sample is within the source boundaries depicted. The latitude/longitude coordinates are 30.1604685/ -92.61269131 according to page 984 of Reference 4 of the HRS documentation record at proposal. Interpolation of this sample on historical maps locate this sample within historical boundaries of this source.

Source 3 is Available to the Watershed

In considering the availability of Source 3 to the surface water migration pathway, HRS Section 2.2.3, *Identify hazardous substances available to a pathway*, states:

> In evaluating each migration pathway, consider the following hazardous substances available to migrate from the sources at the site to the pathway:
>
> Surface water migration – overland/flood component.
>
> -Hazardous substances that meet the criteria for an observed release to surface water in the watershed being evaluated.
> -All hazardous substances associated with a source with a surface water containment factor value greater than 0 for the watershed (see sections 4.1.2.1.2.1.1 and 4.1.2.1.2.2.1).

HRS Section 4.1.1.1 *Definition of hazardous substance migration path for overland/flood migration component*, describes identification of the overland migration route from a source to surface water and when to consider that multiple watersheds are involved:

> The hazardous substance migration path includes both the overland segment and the in-water segment that hazardous substances would take as they migrate away from sources at the site:
> - Begin the overland segment at a source and proceed downgradient to the probable point of entry to surface water.
> - Begin the in-water segment at this probable point of entry.
>
> . . .
> Consider a site to be in two or more watersheds for this component if two or more hazardous substance migration paths from the sources at the site do not reach a common point within the target distance limit. If the site is in more than one watershed, define a separate hazardous substance migration path for each watershed.

HRS Section 4.1.2.1.2.1.1, *Containment*, directs the scorer that:

> If none of the sources is located in surface water in the watershed, assign a containment factor value from Table 4-2 to each source at the site that can potentially release hazardous substances to the hazardous substance migration path for this watershed.

For a Source 3, HRS Table 4-2, *Containment Factor Values for Surface Water Migration Pathway*, includes the following containment features/factor values:

Source	Assigned value
All Sources (Except Surface Impoundments, Land Treatment, Containers, and Tanks)	
Evidence of hazardous substance migration from source area (i.e., source area includes source and any associated containment structures).	10
No evidence of hazardous substance migration from source area and: **(a) Neither of the following present: (1) maintained engineered cover, or (2) functioning and maintained run-on control system and runoff management System** [Emphasis added]	10
(b) Any one of the two items in (a) present	9
(c) Any two of the following present: (1) maintained engineered cover, or (2) functioning and maintained run-on control system and runoff management system, or (3) liner with functioning leachate collection and removal system immediately above liner	7

(d) All items in (c) present	5
(e) All items in (c) present, plus no bulk or non-containerized liquids nor materials containing free liquids deposited in source area.	3
No evidence of hazardous substance migration from source area, double liner with functioning leachate collection and removal system above and between liners, and: (f) Only one of the following deficiencies present in containment: (1) bulk or noncontainerized liquids or materials containing free liquids deposited in source area, or (2) no or nonfunctioning or nonmaintained run-on control system and runoff management system, or (3) no or nonmaintained engineered cover	3
(g) None of the deficiencies in (f) present. Source area inside or under maintained intact structure that provides protection from precipitation so that neither runoff nor leachate is generated, liquids or materials containing free liquids not deposited in source area, and functioning and maintained runon control present.	0

The HRS documentation record at proposal establishes that Source 3, Former Water Pit 1, is in the same watershed as the scored surface water body, and there is an overland flow path from the source to surface water. Regarding the overland migration path, page 75 of the HRS documentation record at proposal states in relevant part that:

> Four probable points of entries (PPEs) have been identified:
> . . .
> - PPE 3 is a segment along where the partially buried barge and former water pit 3 (Sources No.1 & 6), have been reported to have discharged into the adjacent wetlands along a perennial drainage ditch which runs on the property from the northwest, through the wetlands and drains to the Mermentau River (Ref. 6, p. 13; Ref. 20, pp. 4 & 5; Ref. 24, pp. 5, 10 & 128; Figure 4). Surface run-off from Sources No. 2, 3, & 4 eventually flow into a segment of PPE-3, the depressed area of the drainage ditch that flows through the wetland that drains to the Mermentau River (Ref. 24, p. 5,107 & 128; Ref. 20, pp. 4-5; Figure 5).

On the overland flow path, the table entry for Source 3 on page 76 of the HRS documentation record at proposal further notes related to Source 3: "Former Water Pit 1 located on the southeast portion of the property, northwest of a designated wetland area. Distance to the PPE is approximately 122 feet (Ref. 24, p. 12; Figure 2 & 4)," and that PPE 3 is "[a] segment of the drainage ditch that flows through the Palustrine Forested Wetlands contiguous with Mermentau River." Figure 4 of the HRS documentation record at proposal shows the overland flow direction from Source 3 toward the drainage ditch, and the drainage ditch flow path toward the wetlands.

Regarding the Source 3 source containment factor value, the HRS documentation record at proposal states on page 49:

> Release via overland migration: There is no evidence to indicate the former source was lined since the Former Water Pit 1 consisted of a clay bottom (Ref. 24, p. 107). There is no evidence that the Former Water Pit had any containment features when in operation. The containment factor value for Source No. 3 is 10 (Ref. 1, Table 4-2).

Source 3 was found to be uncontained as it pertained to preventing hazardous substance migration from the source to surface water. Source 3 was categorized as a surface impoundment (buried/backfilled) source type, which was evaluated under the "All Sources (Except Surface Impoundments, Land Treatment, Containers, and Tanks)" in HRS Table 4-2, cited above. A containment factor value of 10 was assigned to Source 3 using the criteria specified in HRS Table 4-2, *Containment Factor Values for Surface Water Migration Pathway*, under the "All

Sources" category because Source 3 did not have a maintained engineered cover or functioning and maintained run-on control system and runoff management system. The Source 3 containment factor value is listed on pages 49 and 73 of the HRS documentation record at proposal. And, during August 2016 flooding affecting the area, the Site was at least partially inundated by water—further indication of the risk of hazardous substances migrating from Site sources to surface water.

Additionally, Source 3 existed without containment features for many years (1968-1991) prior to an oil/water tank separator unit being installed at the (page 10 of Reference 6 of the HRS documentation record at proposal; pages 2-5 of Reference 16 of the HRS documentation record at proposal; page 8 of Reference 24 of the HRS documentation record at proposal). In the August 2013 site inspection, the field log book notes did not identify any source containment features at Sample location SBA-004 that would have prevented the migration of hazardous substances at that location to surface water (page 149 of Reference 4 of the HRS documentation record at proposal). Contrary to the Companies' belief, the HRS does not have a maximum depth a sample from an uncontained source can be considered. The HRS only requires that a hazardous substance be associated with a source and the source has a containment factor value greater than zero.

Removal Action at Source 3

Source 3 existed without containment features for many years which may have contributed to the contamination identified in surface water sediments at the Site. Although some portion of Source 3 was removed, this removal action did not address Former Water Pit 1-related contamination that may have migrated to surface water during several years between the initiation of Water Pit 1 operation in 1968 and removal activities in 1991 (Reference 6 page 10; Reference 16 pages 2-5; Reference 24 page 8; pages 44-46 of the HRS documentation record at proposal).

Regarding removal actions at Source 3, as explained in section 3.9, Pathway Hazardous Waste Quantity – Removal Actions, of this support document, the HRS addresses removal actions as they affect the HRS hazardous waste quantity factor value assigned for the pathway being scored. The hazardous waste quantity area measure evaluated for the Source 3 Former Water Pit 1 is not affected by the related removal actions because, although there is information regarding the amount of the source material removed prior to backfill with clean soil, there is not adequate information on the full extent of the depth of the contamination at each source prior to removals. That the source has had some waste removed is not in question; but the removal activity did not address all contamination and release from the source and the Site and, hence, threat to the environment is still present.

HRS Guidance Manual Description of Surface Water Migration Pathway

Regarding the Companies' summary of the HRS Guidance Manual information related to the surface water migration pathway, their summary is only a partial description of the facets of the pathway, mainly focused on observed release/potential to release. Additionally, EPA could not locate this information in the HRS Guidance Manual—framing the surface water migration pathway based on the three characteristics named by the Companies in the manner that they presented it is not part of the HRS Guidance Manual. (The Companies cited to Reference 26 of their comment document [docket ID EPA-HQ-SFUND-2015-0576-0005] in which the Companies provided the cover sheet and the Table of Contents of the HRS Guidance Manual, but did not cite the specific location that they obtained this information from). See section 3.16, Likelihood of Release, of this support document, for further discussion.

As stated previously, the HRS documentation record at proposal considered HRS Section 1.1, Definitions, HRS Section 2.2.1, *Identify sources*, HRS Section 2.2.2, *Identify hazardous substances associated with a source*, HRS Section 2.2.3, *Identify hazardous substances available to a pathway*, HRS Section 4.1.2.1.2.1.1, *Containment*, as required to document Source 3 as an eligible source at the Site.

Monitoring Well Contamination

Regarding the presence of oil in a monitoring well near Source 3, EPA did not evaluate this contamination as part of HRS scoring elements related to Source 3 or the Site. It is not clear exactly which monitoring well is being referred to by the commenters. However, related to ground water contamination, the HRS documentation record at proposal states on the cover sheet:

> Pathways, Components, or Threats Not Scored
> 1) Ground Water Pathway: The ground water migration pathway has not been scored. Ground water monitoring wells located on SBA Shipyard have shown elevated levels of polycyclic aromatic hydrocarbons (PAHs) (Ref. 4, p.48). Based on information available at this time, further evaluation of the ground water migration pathway would not significantly affect the listing decision (Ref. 1, Sec. 2.2.3).
>
> ….

The related reference citation material discusses PAH contamination detected in monitoring well MW-2. While contaminated ground water is present in monitoring well 2 located on SBA Shipyard, the threat potentially posed by this contamination was not evaluated in the HRS scoring of Source 3 or the Site. At a later stage of the Superfund process (the remedial investigation/feasibility study) further on-site testing may take place to assess the nature and extent of environmental risks associated with the Site, including ground water contamination, and to determine what CERCLA-funded remedial actions, if any, may be needed to address this potential threat.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.13 Source 4

Comment: The Companies asserted that Source 4, the Former Land Treatment Unit (LTU), should be deleted from the evaluation of the surface water migration pathway. The Companies made several arguments related to Source 4, including:

- A removal action has been performed.
- Samples associating hazardous substances with Source 4 are too deep to pose a threat to surface water.
- The location of Source 4 shown in figures of the HRS documentation record at proposal is incorrect.

Response: Source 4 was accurately characterized as an HRS source in the HRS documentation at proposal, eligible for evaluation in the surface water overland/flood migration component of the surface water migration pathway.

The following subsections address specific comments related to Source 4:

- 3.13.1 Source 4 Eligibility and Consideration of Removal Actions
- 3.13.2 Source 4 Location

3.13.1 Source 4 Eligibility and Consideration of Removal Actions

Comment: The Companies submitted comments related to removal actions conducted at Source 4, the Former Land Treatment Unit, and questioning whether the remaining contamination is at a depth that can pose a risk to surface water.

The Companies commented that a removal action has been conducted at Source 4, in which the top 18 inches of soil was excavated and transported to an off-site RCRA Subtitle D disposal facility. Clean soil was used to backfill this area. The Companies stated that "[the removal action] was performed under the direction, oversight,

and approval of the USEPA," and that the work "meets all three required elements of a qualified removal action."[50]

The Companies summarized their interpretation of the HRS Guidance Manual description of the surface water migration pathway, asserting that:

> [t]he surface water pathway is described in USEPA guidance for the HRS as the (1) potential-to-release by overland flow and flooding, (2) contaminant in a source area in contact with surface water through flooding, and (3) leachate flowing from a source into surface water.

The Companies asserted that this "backfilled area cannot contribute hazardous constituents to the surface water pathway as described from HRS guidance." The Companies further explained that the two samples used to associate hazardous substances with Source 4 were collected from intervals of 8-10 feet bgs and 10-12 feet bgs; the Companies argued that these samples "do not represent a source area or surface water pathway issue" and that "[t]hese data therefore should not be considered in the scoring of the surface water pathway." The Companies concluded that "[d]ue to performance of a qualified removal action, backfill with clean soil, and the lack of any surface soil data from this area, the LTU [Source 4] should be removed from the HRS Package."

Response: Source 4, the Former Land Treatment Unit (LTU), was correctly included in the HRS scoring of the site as an eligible source consistent with the HRS. Hazardous substances are associated with Source 4, it is within the same watershed as the surface water body scored, and is not contained relative to that surface water body according to the HRS criteria. Although some portion of the Source 4 contamination was removed and backfilled with clean soil, contamination remains as evidenced by the samples used to show hazardous substances are associated with the source. Furthermore, this removal action did not address LTU-related contamination that may have migrated to surface water during the timeframe between LTU operation and removal activities. Finally, the Companies' summary of the HRS Guidance Manual is incomplete and focused mainly on the HRS topics of observed release and potential to release.

The eligibility of Source 4 in the surface water migration pathway is explained in the following subsections of this response:

- Hazardous Substances are Associated with Source 4
- Source 4 is Available to the Watershed
- Removal Actions at Source 4
- HRS Guidance Manual Description of Surface Water Migration Pathway

Hazardous Substances are Associated with Source 4

The following HRS sections are applicable in identifying a source eligible for evaluation as part of the surface water migration pathway:

In HRS Section 1.1, *Definitions*, the HRS defines *source* as:

> Any area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

[50] The Companies cite References 3 and 4 of their comment document, docket ID EPA-HQ-SFUND-2015-0576-0005. Reference 3 is the December 9, 2002 EPA *Order and Agreement ("Agreement") for Interim Measures/Removal Action ("IM/RA") of Hazardous/Principal Threat Wastes at SBA Shipyards, Inc., Jennings, LA, EPA ID No. LAD008434185 ("SBA"), pursuant to Section 3008 (h) of the Resource Conservation and Recovery Act ("RCRA"),42 U.S.C. §6928 (h). Docket No. RCRA-6-2002-0908.* Reference 4 is the August 15, 2005 document by Michael Pisani & Associates, *Interim Measures/Removal Action Completion Report re SBA Shipyard Site, Jennings, LA.*

HRS Section 2.2.1, *Identify sources*, outlines the requirements to be followed when identifying sources at a site. It states:

> For the three migration pathways, identify the sources at the site that contain hazardous substances. Identify the migration pathway(s) to which each source applies.

On the subject of eligibility of the source in the surface water migration pathway, first, HRS Section 2.2.2, *Identify hazardous substances associated with a source*, specifies associating hazardous substances with a source, stating in relevant part:

> For each of the three migration pathways, consider those hazardous substances documented in a source (for example, by sampling, labels, manifests, oral or written statements) to be associated with that source when evaluating each pathway.

Pages 53-54 of the HRS documentation record at proposal present analytical results of two Source 4 soil samples documenting the presence of various PAHs, metals and VOCs. The presence of these hazardous substances is not disputed by the commenter.

Source 4 is Available to the Watershed

HRS Section 2.2.3, *Identify hazardous substances available to a pathway*, describes which hazardous substances are considered in a given pathway, stating:

> In evaluating each migration pathway, consider the following hazardous substances available to migrate from the sources at the site to the pathway:
>
> . . .
>
> - Surface water migration—overland/flood component.
>   - Hazardous substances that meet the criteria for an observed release to surface water in the watershed being evaluated.
>   - **All hazardous substances associated with a source with a surface water containment factor value greater than 0 for the watershed** (see sections 4.1.2.1.2.1.1 and 4.1.2.1.2.2.1). [emphasis added]

HRS Section 4.1.1.1 *Definition of hazardous substance migration path for overland/flood migration component*, describes identification of the overland migration route from a source to surface water and when to consider that multiple watersheds are involved:

> The hazardous substance migration path includes both the overland segment and the in-water segment that hazardous substances would take as they migrate away from sources at the site:
> - Begin the overland segment at a source and proceed downgradient to the probable point of entry to surface water.
> - Begin the in-water segment at this probable point of entry.
>
> . . .
> Consider a site to be in two or more watersheds for this component if two or more hazardous substance migration paths from the sources at the site do not reach a common point within the target distance limit. If the site is in more than one watershed, define a separate hazardous substance migration path for each watershed.

HRS section 4.1.2.1.2.1.1, *Containment*, (containment as evaluated under the potential to release by overland flow) describes the selection of a source containment factor value with regard to the potential to release by overland flow, stating in relevant part:

> Determine the containment factor value for the watershed as follows:
> - If one or more sources is located in surface water in the watershed (for example, intact sealed drums in surface water), assign the containment factor a value of 10 for the watershed. Enter this value in table 4–1.
> - If none of the sources is located in surface water in the watershed, assign a containment factor value from table 4–2 to each source at the site that can potentially release hazardous substances to the hazardous substance migration path for this watershed.

For a land treatment source, HRS Table 4-2, *Containment Factor Values for Surface Water Migration Pathway*, includes the following containment features/factor values:

Source	Assigned value
. . .	
Land Treatment	
Evidence of hazardous substance migration from land treatment zone	10
No functioning and maintained run-on control and runoff management system	10
No evidence of hazardous substance migration from land treatment zone and:	
(a) Functioning and maintained run-on control and runoff management system	7
(b) Functioning and maintained run-on control and runoff management system, and vegetative cover established over entire land treatment area	5
(c) Land treatment area maintained in compliance with 40 CFR 264.280	0

The HRS documentation record at proposal establishes that Source 4 is in the same watershed as the scored surface water body (the Companies did not directly challenge this), and there is an overland flow path from the source to surface water. Regarding the overland migration path, page 75 of the HRS documentation record at proposal states in relevant part that:

> Four probable points of entries (PPEs) have been identified:
> . . .
> - PPE 3 is a segment along where the partially buried barge and former water pit 3 (Sources No.1 & 6), have been reported to have discharged into the adjacent wetlands along a perennial drainage ditch which runs on the property from the northwest, through the wetlands and drains to the Mermentau River (Ref. 6, p. 13; Ref. 20, pp. 4 & 5; Ref. 24, pp. 5, 10 & 128; Figure 4). Surface run-off from Sources No. 2, 3, & 4 eventually flow into a segment of PPE-3, the depressed area of the drainage ditch that flows through the wetland that drains to the Mermentau River (Ref. 24, p. 5,107 & 128; Ref. 20, pp. 4-5; Figure 5).

On the overland flow path, the table entry for Source 4 on page 76 of the HRS documentation record at proposal further notes related to Source 4: "A former LTU located west of Source No. 3 on the southeast portion of the property, northwest of a designated wetland. Distance to the PPE is approximately 261 feet (Ref. 24, p. 12; Figure 2 & 4)," and that PPE 3 is "[a] segment of the drainage ditch that flows through the Palustrine Forested Wetlands contiguous with Mermentau River." Figure 4 of the HRS documentation record at proposal shows the overland flow direction from Source 4 toward the drainage ditch, and the drainage ditch flow path toward the wetlands.

The HRS documentation record at proposal shows that Source 4 has a containment factor value greater than zero and that it is therefore eligible for scoring as part of the surface water migration pathway, consistent with the HRS. Regarding the containment factor value for Source 4, page 55 of the HRS documentation record at proposal states that there is

> no functioning or maintained run-on or runoff management system (Ref. 24, p. 15). Surface water runoff from the LTU forms small puddles in the grass north of the unit (Ref. 24, p. 15). Runoff water flows into a drainage ditch that empties into the Mermentau River (Ref. 24, p. 107). The containment factor value for Source No. 4 is 10 (Ref. 1, Table 4-2).

The HRS documentation record at proposal continues to explain that because containment for this source is greater than zero, the hazardous substances associated with the source can migrate via the surface water migration pathway. While the samples showing Source 4 hazardous substances are between 8 and 12 feet deep, the contamination is present and the source does not have containment features that would result in an HRS containment factor value of 0, and is thus uncontained for HRS purposes. Additionally, page 52 of the HRS documentation record at proposal explains that, historically "[t]he LTU had dimensions of approximately 190 feet x 93 feet x 3 feet and was estimated to contain approximately 2,000 cubic yards of solidified sludge (Ref. 6, p. 8)." Furthermore, although the approximate depth was 3 feet, only an approximate 18 inches of depth were planned to be removed, with excavation based on only visual observations of soil staining, according to the Statement of Work for the IM/RA[51]. Therefore, it is possible that additional contamination exists below the excavated depth and above the 8-feet and 12-feet deep samples. And, during August 2016 flooding affecting the area, the Site was at least partially inundated by water—further indication of the risk of hazardous substances migrating from Site sources to surface water.

Removal Actions at Source 4

Further, Source 4, the Former LTU, existed for many years with uncontained contamination at the surface, which may have contributed to the contamination identified in surface water sediments at the Site. Although some portion of soil contamination associated with Source 4 was removed, this removal action did not address LTU-related contamination that may have migrated to surface water during several years between the initiation of LTU operation in 1992 and removal activities in 2003[52].

Regarding removal actions at Source 4, as explained in section 3.9, Pathway Hazardous Waste Quantity – Removal Actions, of this support document, the HRS addresses removal actions as they affect the HRS hazardous waste quantity factor value assigned for the pathway being scored. And, the hazardous waste quantity area measure evaluated for the Source 4 LTU is not affected by the related removal actions because, although there is information regarding the amount of the source material removed prior to backfill with clean soil, there is not adequate information on the full extent of the depth of the contamination at each source prior to removals. It is therefore not clear how each removal would affect the areal footprint of the remaining post-removal contamination.

HRS Guidance Manual Description of Surface Water Migration Pathway

On the subject of the HRS Guidance Manual, the EPA complies with the HRS and uses the HRS Guidance Manual as just that—guidance to determine how best to perform the HRS evaluation based on the facts or circumstances presented at each site. Additionally, the Companies' summary of the HRS Guidance Manual information related to the surface water migration pathway is only a partial summary description of the facets of the pathway, mainly focused on observed release/potential to release. Also, EPA could not locate this information

[51] See page 43 of Reference 5 of the HRS documentation record at proposal.
[52] According to page 15 of Reference 5 of the HRS documentation record at proposal (the IM/RA Completion Report), stained and oily soils were scraped from the LTU in 2003.

in the HRS Guidance Manual—framing the surface water migration pathway based on the three characteristics named by the Companies in the manner that they presented it is not part of the HRS Guidance Manual. (The Companies cited to Reference 26 of their comment document [docket ID EPA-HQ-SFUND-2015-0576-0005] in which the Companies provided the cover sheet and the Table of Contents of the HRS Guidance Manual, but did not cite the specific location that they obtained this information from). See section 3.16, Likelihood of Release, of this support document, for further discussion.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.13.2 Source 4 Location

Comment: The Companies commented that Figures 2, 3, and 4 of the HRS documentation record at proposal are incorrect with respect to Source 4, asserting that there is "no factual basis for depicting the location of the landfarm."

Response: The approximate location and dimensions of the Source 4, the Former Land Treatment Unit (LTU), are supported by cited references in the HRS documentation record at proposal. And, even if the location displayed on these figures is imprecise, Source 4 still qualifies as a source and is correctly included in the site scoring.[53] The Companies' assertions regarding the location of Source 4 portrayed on figures of the HRS documentation record at proposal have not been shown by the Companies to have an impact on HRS scoring. And the commenter did not provide any more specific information to document a different location of the Former LTU.

On page 8 of the HRS documentation record at proposal, Figure 2 of the HRS documentation record at proposal provides the approximate locations of scored sources and other components relevant to the Site. Page 5 of the HRS documentation record at proposal details the references supporting the elements of the HRS documentation record figures. It states in relevant part:

> Figure 2:
> Base Map Source* Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
>
> *Map annotated by EPA START-3 on 6/25/2015 (Ref. 5, p. 24, Ref. 16, p. 2; Ref. 24, p. 10; Ref. 29, p.1)

Cited Reference 16 of the HRS documentation record at proposal contains the figures for the October 1996 RCRA Facility Investigation Work Plan, prepared for SBA Shipyards, Inc. by Woodward-Clyde Consultants (included as Reference 6 of the HRS documentation record at proposal). Page 2 of Reference 16 is a figure showing the location of the Former LTU as well as other components of the facility at the time. A cropped version of that page is shown in Figure 1 below:

[53] See section 3.13.1, Source 4 Eligibility and Consideration of Removal Actions, of this support document for further explanation on the HRS scoring eligibility of Source 4.

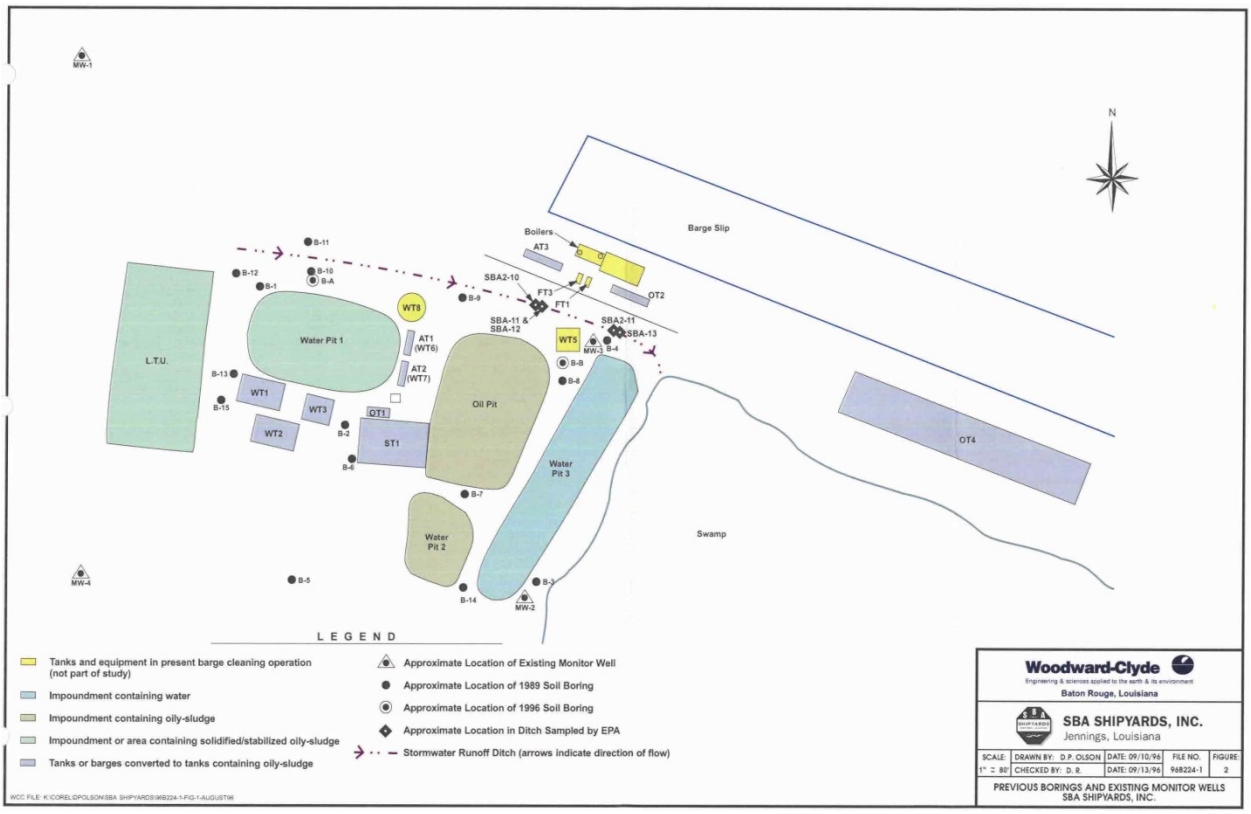

Figure 1: Approximate Source 4, the Former LTU, location as shown on page 2 of Reference 16 of the HRS documentation record at proposal.

Cited page 10 of Reference 24 of the HRS documentation record at proposal (the 1994 Compliance Evaluation and Sampling Inspection At SBA Shipyards, Inc., Jennings, Louisiana, LAD008434185) also contains a figure showing the approximate location of the LTU. During the 1994 compliance evaluation inspection a site reconnaissance was conducted, during which SBA Shipyards owner Mr. Smailhall was present.

Page 52 of the HRS documentation record at proposal notes that:

> The LTU was located approximately 200 feet northwest of Water Pit 1 and had approximate dimensions of 100 feet wide and 200 feet long (Ref. 24, pp. 15 & 107).

These approximate location and dimensions are confirmed by the cited pages from the 1994 Compliance Evaluation and Sampling Inspection: page 15 of Reference 24 states "[t]he land treatment unit, which is located about 200 feet northwest of water pit 1, is about 100 feet wide and 200 feet long" and page 107 again confirms the same approximate dimensions.

In addition to these dimensions, in evaluating the HRS area measure of the Former LTU for hazardous waste quantity purposes, page 56 of the HRS documentation record at proposal states that "[i]n 1996 it was noted that the LTU had approximate surface dimensions of 190 feet x 93 feet (Ref. 6, p. 8)." Reference 6 of the HRS documentation record at proposal (again, the October 1996 RCRA Facility Investigation Work Plan, prepared for SBA Shipyards, Inc. by Woodward-Clyde Consultants) states that "[t]he LTU has approximate surface dimensions of 190' x 93'." (The HRS documentation record at proposal notes that a minimum estimate of area based on the latter dimensions is used in scoring.)

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.14 Source 5

Comment: The Companies asserted that Source 5, the Dry Dock, should be deleted from the evaluation of the surface water migration pathway. The Companies made specific arguments related to Source 5, including:

- The Source 5 Dry Dock does not qualify as a surface impoundment.
- The Source 5 Dry Dock gate has been closed for many years and does not allow communication between the source and the river.

Response: Source 5 was accurately characterized as an HRS surface impoundment source, eligible for evaluation in the surface water overland/flood migration component.

The following subsections address specific comments related to Source 5:

- 3.14.1 Source 5 Source Type
- 3.14.2 Source 5 Containment

3.14.1 Source 5 Source Type

Comment: The Companies contested the source type assigned to the Source 5 Dry Dock in the HRS evaluation. [76, 116] The Companies stated that:

> The HRS Guidance document provides extensive examples and descriptions of surface impoundments/ponds and non-surface impoundments/ponds. The Graving Dock is designed and was operated to provide a safe, clean, and dry area for men to lie on their backs to repair and maintain the bottoms of very large barge vessels. This repair and maintenance for a barge would span months. There could be no intentional disposal of waste into this area.

The Companies also commented that the Source 5 Dry dock is not a closed system when the gate is open, it could not be used for waste management, was never modified to do so, and could still be used for its intended purpose. The Companies concluded that "[p]er the HRS guidance [the November 1992 Interim Final Hazard Ranking System Guidance Manual], this unit cannot be scored as a surface impoundment and should be removed from the HRS Package."

Response: Source 5 was correctly classified as a surface impoundment for HRS purposes. Although the Source 5 Dry Dock may not have been intended by design to be a surface impoundment, it currently and at the time of HRS scoring acts as a surface impoundment in that it holds hazardous substances accumulated from operations, held in place by earthen berms and a gate.

In identifying sources, HRS Section 2.2.2, *Identify hazardous substances associated with a source*, specifies associating hazardous substances with a source, stating in relevant part:

> For each of the three migration pathways, consider those hazardous substances documented in a source (for example, by sampling, labels, manifests, oral or written statements) to be associated with that source when evaluating each pathway.

Pages 59-61 of the HRS documentation record at proposal present analytical results of two Source 5 sediment samples documenting the presence of various PAHs, metals and PCBs. The presence of these hazardous substances is not disputed by the commenter. The HRS does not require that deposition of hazardous substances at a source be intentional.

Those hazardous substances were likely deposited there as a result of barge building/repair activities carried out at the Dry Dock. Page 58 of the HRS documentation record at proposal identifies that "[t]he graving dock was used

for the building of new offshore and inland tank barges, and the repair and or conversion of tank barges and tug boats (Ref. 55, p. 1)." Page 30 of Reference 33 of the HRS documentation record at proposal (a 1990 Solid Waste Closure Plan for SBA Shipyards, Inc.) describes that "[t]he facility maintains a graving dock for barge and ship repair and a barge cleaning facility for gas freeing barges." Page 65 of Reference 36 of the HRS documentation record at proposal (a 1997 Water Permit Application for SBA Shipyards, Inc.) notes that a "portion of the site was leased to Leevac Inc. to construct and repair gambling riverboats and other barges." In discussing hazardous substances associated with Source 5, page 59 of the HRS documentation record at proposal notes that "[t]he constituents detected in the dry dock sediment samples are the same or similar to those detected in the waste sample collected from the Partially Buried Barge (Source 1) used in the barge cleaning process (Ref. 4, p. 34 & 389-404; Table 1)."

The HRS recognizes different source types in its evaluation of source hazardous waste quantity and containment factor values. HRS Table 2-5, *Hazardous Waste Quantity Evaluation Equations*, includes source type-specific divisors used in calculating values for the HRS hazardous waste quantity volume and area measures; the source type of surface impoundment is recognized in this table. For the surface water migration pathway, source types are also recognized in the assignment of containment factor values; HRS Table 4-2 *Containment Factor Values for Surface Water Migration Pathway*, includes specific criteria for the assignment of an overland/flood migration component containment factor value. The HRS does not provide specific definitions for each source type. However, EPA generally considers a surface impoundment to be a topographic depression, excavation, or diked area, primarily formed from earthen materials (lined or unlined) and designed to hold accumulated liquid wastes, wastes containing free liquids, or sludges that were not backfilled or otherwise covered during periods of deposition. Such a depression may be dry if deposited liquid has evaporated, volatilized or leached, or wet with exposed liquid. EPA includes structures that may be more specifically described as lagoon, pond, aeration pit, settling pond, tailings pond, sludge pit, or a surface impoundment that has been covered with soil after the final deposition of waste materials (i.e., buried or backfilled). But there is no requirement that a structure functioning as a surface impoundment was planned, constructed, or brought into operation for this purpose.

The Dry Dock was not originally designed to contain and manage wastes. However, regardless of its original intended use, it currently and at the time of HRS scoring acts as a surface impoundment in that it holds hazardous substances accumulated from operations, deposited there—albeit possibly unintentionally—and held in place by earthen berms and a gate (even though, as previously discussed, the gates may be leaky). The HRS does not require that a source be *intended* to hold waste, only that hazardous substances are associated with the source.

Regarding the Companies' assertions that Source 5 was classified as source type surface impoundment inconsistently with the HRS Guidance Manual, in performing an HRS evaluating of a site, the EPA complies with the HRS and uses the HRS Guidance Manual as just that—guidance to determine how best to perform the HRS evaluation based on the facts or circumstances presented at each site.

Even if Source 5 were not specifically assessed as a surface impoundment (a hypothetical scenario with which EPA does not agree), of the remaining source types listed by HRS Table 2-5, *Hazardous Waste Quantity Evaluation Equations*, Source 5 would instead be classified as HRS source type "other." In this case the HRS site score would remain 50.00—the same as that at proposal:

- Source 5 would receive a hazardous waste quantity volume measure of >0. The HRS hazardous waste quantity measure of area is not scored for HRS source type "other" per HRS Table 2-5, *Hazardous Waste Quantity Evaluation Equations.* Also, as discussed on page 63 of the HRS documentation record at proposal, although an area may be documented with the source, the depth of contamination is not known throughout the source.
- Assuming scoring of all other Site sources remains as described in the HRS documentation record at proposal, the total of the source hazardous waste quantity values for the human food chain threat shown on page 90 of the HRS documentation record at proposal less the value for Source 5 would be 5390 rounded to the nearest integer. The assigned hazardous waste quantity factor value would be 100 per HRS Table 2-6, *Hazardous Waste Quantity Factor Values*. The same hazardous waste quantity factor value of

100 would apply to the environmental threat (based on the calculations shown on page 99 of the HRS documentation record at proposal less the value for Source 5 yielding a source hazardous waste quantity values total of 5390 rounded to the nearest integer).

- The human food chain threat waste characteristics factor category value assigned would be 320. (Similar to calculations shown on page 91 of the HRS documentation record at proposal, per HRS section 4.1.3.2.3, *Calculation of human food chain threat-waste characteristics factor category value,* a toxicity/persistence factor value of 10,000 multiplied by a hazardous waste quantity factor value of 100 yields 1 x 10^6. This product would then be multiplied by the bioaccumulation potential factor value 50,000 for a product of 5 x 10^{10}. Per HRS Table 2-7, *Waste Characteristics Factor Category Values*, a value of 320 would be assigned.)
- The environmental threat waste characteristics factor category value assigned would also be 320. (Similar to calculations shown on page 100 of the HRS documentation record at proposal, per HRS section 4.1.4.2.3, *Calculation of environmental threat-waste characteristics factor category value*, an ecosystem toxicity/persistence factor value of 10,000 multiplied by a hazardous waste quantity factor value of 100 yields 1 x 10^6. This product would then be multiplied by the ecosystem bioaccumulation potential factor value 50,000 for a product of 5 x 10^{10}. Per HRS Table 2-7, *Waste Characteristics Factor Category Values*, a value of 320 would be assigned.)
- Using the waste characteristics factor category value of 320 for each threat instead of 1,000 in the calculations shown in the HRS score sheets shown on pages 13-16 of the HRS documentation record at proposal yields a human food chain threat score of 96.06, an environmental threat score of 53.47, and a surface water overland/flood migration watershed and component score of 100.00. This value is the same as that assigned at proposal, and therefore would result in the same HRS site score of 50.00 assigned at proposal.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.14.2 Source 5 Containment

Comment: The Companies submitted comments related to the containment of Source 5. As part of an argument that Source 5, the Dry Dock, should be removed from the HRS evaluation, the Companies noted that the probable point of entry (PPE) identified related to Source 5 is located at the gate of the Dry Dock. The Companies stated that the gate "has not been moved in over eleven years and is probably not moveable today." The Companies pointed to imagery in Figures 3-5 of the HRS documentation record at proposal, noting the difference in color of the water in the Dry Dock as compared to the water in the Mermentau River. The Companies asserted that this color difference shows a lack of communication between the Dry Dock and river.

Response: The Source 5 Dry Dock was correctly evaluated as an eligible source for the surface water overland/flood migration component. The Source 5 Dry Dock was correctly assigned an HRS containment factor of greater than 0 (indicating it is not contained to surface water) based on evidence of hazardous substance migration from the source (in the form of contaminants found downstream of the gate that likely escaped due to seepage around the gate or opening of the gate) and the lack of a liner. The Dry Dock is also within a Flood Insurance Rate Map flood zone "AE" and considered a Special Flood Hazard Area. Finally, hazardous substances are associated with the source, and the dry dock gates were open in the past.

HRS section 4.1.2.1.2.1.1, *Containment*, (containment as evaluated under the potential to release by overland flow) describes the selection of a source containment factor value with regard to the potential to release by overland flow, stating in relevant part:

Determine the containment factor value for the watershed as follows:

- If one or more sources is located in surface water in the watershed (for example, intact sealed drums in surface water), assign the containment factor a value of 10 for the watershed. Enter this value in table 4–1.

- If none of the sources is located in surface water in the watershed, assign a containment factor value from table 4–2 to each source at the site that can potentially release hazardous substances to the hazardous substance migration path for this watershed.

For a surface impoundment source, HRS Table 4-2, *Containment Factor Values for Surface Water Migration Pathway*, includes the following containment features/factor values:

Source	Assigned value
. . .	
Surface Impoundment	
Evidence of hazardous substance migration from surface impoundment	10
Free liquids present with either no diking, unsound diking, or diking that is not regularly inspected and maintained	10
No evidence of hazardous substance migration from surface impoundment, free liquids present, sound diking that is regularly inspected and maintained, adequate freeboard, and:	
(a) No liner	9
(b) Liner	7
(c) Liner with functioning leachate collection and removal system below liner	5
(d) Double liner with functioning leachate collection and removal system between liners	3
No evidence of hazardous substance migration from surface impoundment and all free liquids eliminated at closure (either by removal of liquids or solidification of remaining wastes and waste residues)	Evaluate using **All Sources** criteria (with no bulk or free liquids deposited).

The HRS documentation record at proposal shows that Source 5 has a containment factor value greater than zero and that it is therefore eligible for scoring as part of the surface water migration pathway, consistent with the HRS. Regarding the containment factor value for Source 5, page 62 of the HRS documentation record at proposal states:

> **Release via overland migration**: There is no evidence that the Dry Dock had a liner. The Dry Dock appears to be an earthen berm enclosure reinforced with metal sheeting and bound with a 76 foot gate along the Mermentau River (Ref. 4, p.114; Ref. 7, p. 110; Ref. 54, p. 3). Contaminants were detected down gradient of the Dry Dock in the Mermentau River, due to seepage around or underneath the 76 ft gate in place or when the gate was opened. Also, Source No. 5 is designated by the Flood Insurance Rate Map (FIRM) as flood zones AE, and considered a Special Flood Hazard Area (SFHA). The SFHA is an area that would be inundated by flooding having a one (1) percent chance of being equaled or exceeded base flood level in any given year (Ref. 26, pp. 1-2). The containment factor value of 10 is assigned to Source No. 5 (Ref. 1, Table 4-2 & Table 4-9).

Related to contaminants detected downgradient of Source 5 mentioned above, there are releases that may be associated with Source 5. Pages 78-80 of the HRS documentation record at proposal note that:

> Two sediment samples were collected from two separate locations in the vicinity of the Dry Dock (PPE 1) (Figure 5). Location SBA-029, Sample SBA-029SD from the north of the dry dock , and Location SBA-ESI-04, Sample SBA-ESI-04SD down gradient of the dry dock (Ref. 4, p. 41: Ref. 7, p. 33).
>
> In the release sediment samples from the Dry Dock, chrysene, fluoranthene, fluorene, phenanthrene, and pyrene were detected and met observed release criteria (Ref. 4, pp. 260-267; Ref. 7, pp. 210-212; Tables 11 & 12).

These same hazardous substances were found in Source 5 samples (as shown on pages 59-61 of the HRS documentation record at proposal) indicating migration of hazardous substances from the source.

Additionally, as noted in the HRS documentation record at proposal page 62 language quoted above, an additional risk to containment is posed by its location in a FIRM flood zone AE designated Special Flood Hazard Area. Although the HRS flood containment factor was not scored, Source 5 would receive a flood containment factor value of 10. HRS Table 4-8 provides the criteria for assigning flood containment factor values, stating that unless there is "[d]ocumentation that containment at the source is designed, constructed, operated, and maintained to prevent a washout of hazardous substances by the flood being evaluated" a flood containment factor value of 10 is assigned. And, during August 2016 flooding affecting the area, the Site—including the Source 5 Dry Dock—was at least partially inundated by water (further indication of the risk of hazardous substances migrating from Site sources to surface water).
Furthermore, hazardous substances may have been released during normal historical operation of the Source 5 Dry Dock. Pages 59-61 of the HRS documentation record at proposal present analytical results of two Source 5 sediment samples documenting the presence of various PAHs, metals and PCBs. The presence of these hazardous substances is not disputed by the commenter. And, the dry dock gates were opened in the past during ship entry (and dry dock water was pumped out once ships were in place[54]), clearly breaching any containment of hazardous substances deposited by Dry Dock operations at the time.
This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.15 Source 6 Location

Comment: The Companies asserted that Figures 2, 3, and 4 of the HRS documentation record at proposal are incorrect with respect to Source 6, the Former Water Pit 3. The Companies stated that "[a]s a result, USEPA has made incorrect assumptions and incorrectly interpreted data, thus it incorrectly scored the potential impacts from the Site." Specifically, the Companies commented that "[t]he shape of Water Pit 3 is not over the water pit (clearly seen on underlying photo) but is shifted approximately 25 feet to the northwest."

Response: Although the approximate location of Source 6, the Former Water Pit 3, may not be absolutely aligned with the physical pit as shown on the underlying satellite image, the Companies' assertions regarding the location of Source 6 portrayed on figures of the HRS documentation record at proposal have not been shown by the Companies to have an impact on HRS scoring—regardless of the precise location, the Former Water Pit 3 still qualifies as a source for HRS purposes.

The approximate location of Source 6 is supported by the HRS documentation record at proposal. On page 8 of the HRS documentation record at proposal, Figure 2 of the HRS documentation record at proposal provides the approximate locations of scored sources and other components relevant to the Site. Page 5 of the HRS documentation record at proposal details the references supporting the elements of the HRS documentation record figures. It states in relevant part:

> Figure 2:
> Base Map Source* Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
>
> *Map annotated by EPA START-3 on 6/25/2015 (Ref. 5, p. 24, Ref. 16, p. 2; Ref. 24, p. 10; Ref. 29, p.1)

Cited Reference 16 of the HRS documentation record at proposal contains the figures for the October 1996 RCRA Facility Investigation Work Plan, prepared for SBA Shipyards, Inc. by Woodward-Clyde Consultants (included as

[54] As noted on page 58 of the HRS documentation at proposal and cited page 1 of Reference 53 of the HRS documentation record at proposal.

Reference 6 of the HRS documentation record at proposal). Page 2 of Reference 16 is a figure showing the location of the LTU as well as other components of the facility at the time. A cropped version of that page is shown in Figure 1 of this support document (in section 3.13.2, Source 4 Location, of this support document).

Cited page 24 of Reference 5 of the HRS documentation record at proposal (the 2005 Interim Measures/Removal Action Completion Report) and cited page 10 of Reference 24 of the HRS documentation record at proposal (the 1994 Compliance Evaluation and Sampling Inspection At SBA Shipyards, Inc., Jennings, Louisiana, LAD008434185) also contains a figure showing the approximate location of the Water Pit 3.

The Companies do not dispute any specific aspects of scoring related to the location/size of Source 6 (e.g., the HRS hazardous waste quantity volume measure). That the overlay of approximate Source 6 boundaries does not precisely align with the visible pit in satellite imagery included in figures of the HRS documentation record at proposal has no effect on the HRS score.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.16 Likelihood of Release

Comment: The Companies submitted several comments questioning the observed release established at the Site. These included that:

- The Site would not have achieved an NPL-qualifying HRS score if it were not for the contamination release associated with the illegal scrapping of Source 1, the Partially Buried Barge, while the Site was under EPA authority.
- The release related to Source 6, Former Water Pit 3 was due to an EPA-authorized cut in the southern berm, connecting the pit to surface water.
- The samples used to establish an observed release by direct observation at Source 6 are pit bottom samples and not wetland samples.

Response: The observed releases by direct observation and chemical analysis were correctly established, consistent with the HRS.

The following subsections address specific comments related to the observed releases:

- 3.16.1 Releases from Source 1 Barge and Source 5
- 3.16.2 Release from Source 6 Former Water Pit 3 and EPA-approved Actions
- 3.16.3 Observed Release by Direct Observation – Wetland Samples

3.16.1 Releases from Source 1 and Source 5

Comment: The Companies called into question the eligibility of an observed release scored for the Site as it relates to Source 1 and Source 5, stating:

> [a]bsent the scrapping and release of pollutants that occurred while the Site was under USEPA's authority and recognizing that the Leevac Shipyards, Inc. is a discrete operating entity with separate ownership and control . . . the Site would not have scored for inclusion on the proposed NPL.

Response: Inasmuch as this comment calls into question the observed release by chemical analysis documented for the Site, the observed release by chemical analysis is appropriately established in the HRS documentation record at proposal as due to a release from the site, which correctly includes sources 1 and 5. It is not relevant for HRS evaluation purposes that the spill from Source 1 occurred during the scrapping activities or that Source 5 is on Leevac property. Furthermore, the HRS does not require identifying particular sources at a site from which the

release originated or identifying the cause of the release; for observed releases by chemical analysis, the HRS only requires that at least part of the significant increase in the contamination concentration is attributable to the Site. Regarding Source 5 and the Leevac Shipyards area, as discussed in section 3.3, Extent of Site, of this support document, Source 5 (and all releases from this source) is part of the Site, regardless of who is responsible or when releases occurred.

The significant increases in hazardous substance concentrations documented in surface water sediments and the attribution of those significant increases to the Site (including Site sources) establish an observed release, consistent with the HRS. In establishing an observed release for the surface water overland/flood migration component, HRS Section 4.1.2.1.1, *Observed release,* states in relevant part:

> Establish an observed release to surface water for a watershed by demonstrating that the site has released a hazardous substance to the surface water in the watershed. Base this demonstration on either:
>
> - Chemical analysis:
>   - Analysis of surface water, benthic, or sediment samples indicates that the concentration of hazardous substance(s) has increased significantly above the background concentration for the site for that type of sample (see section 2.3).
>   - Limit comparisons to similar types of samples and background concentrations—for example, compare surface water samples to surface water background concentrations.
>   - For benthic samples, limit comparisons to essentially sessile organisms.
>   - **Some portion of the significant increase must be attributable to the site** to establish the observed release, except: when the site itself consists of contaminated sediments with no identified source, no separate attribution is required. [emphasis added]

HRS Section 2.3, *Likelihood of release,* contains similar language noting that some portion of the release must be attributable to the site.

Thus, in establishing observed release by chemical analysis, the HRS requires establishment of observed releases for which the significant attributable to the site (not any particular source) and does not consider the causes of those releases. (Such topics are related to liability, which as explained in section 3.5, Liability, of this support document, is not considered in evaluating a site under the HRS—the assignment of liability to a specific entity is not completed at the listing stage of the Superfund process.)

Pages 78-83 of the HRS documentation record at proposal establish an observed release by chemical analysis evidenced by several release sediment samples, some of which are upgradient of the Source 1 Partially Buried Barge. That these samples meet HRS observed release criteria is not challenged by the commenter.

Pages 84-86 of the HRS documentation record at proposal document that the attribution of the significant increase in hazardous substances in surface water sediments to the Site. This discussion of attribution does not solely rely on Source 1 or imply that Source 1 is the sole origin of the significant increase in hazardous substances, but rather provides explanation involving operations conducted at the site (and related hazardous substances) as well as discussion on all six sources. On the latter subject page 85 of the HRS documentation record at proposal states:

> Two sediment samples were collected from two separate locations in the vicinity of the Dry Dock (PPE 1) (Figure 5). Location SBA-029, Sample SBA-029SD from the north of the dry dock , and Location SBA-ESI-04, Sample SBA-ESI-04SD down gradient of the dry dock (Ref. 4, p. 41: Ref. 7, p. 33).

In the release sediment samples from the Dry Dock, chrysene, fluoranthene, fluorene, phenanthrene, and pyrene were detected and met observed release criteria (Ref. 4, pp. 260-267; Ref. 7, pp. 210-212; Tables 11 & 12).

Five (5) sediment samples (SBA-024SD, SBA-025SD, SBA-030SD, SBA-ESI-05SD, SBA-ESI-06SD) were collected from within the barge slip from four separate locations upstream and at PPE 2 to determine the migration of contamination in the surface water pathway from former SBA operations (Figure 5). The samples had the same constituents as the other sediment samples collected from the Partially Buried Barge scored as Source 1, and which receives drainage from Source 1(Ref. 4, pp. 228-243 & 268-275; Ref. 7, pp. 183-188; Tables 11 & 12).

Three (3) sediment samples (Sample SBA-33, Sample SBA-39 and SBA-ESI-11SD) were collected from the wetland located south and northeast of SBA former operations to identify and assess the migration of contamination in the surface water pathway from the partially buried barge (Source 1) and former surface impoundments (Sources No. 2, 3, 4 and 6) and associated with PPE 3 (Figure 5). The wetland sediment samples had the same constituents as the other samples collected from the Partially Buried Barge (Source 1), the two former surface impoundments (Sources 2 and 3), LTU (Source 4) and surface impoundment that is now part of the wetland (Source 6) (Tables 11 & 12). The wetland located south and northeast of former SBA operation receives drainage from all site sources (Figures 4 & 5).

Two (2) wetland sediment samples (SBA-032 and SBA-ESI-10) were collected from the location of Former Water Pit 3 that is currently a part of the wetland and document an observed release by direct observation associated with PPE 4 (Figure 5). The wetland sediment samples had the same constituents as the other samples collected from the Partially Buried Barge (Source No. 1), the two former surface impoundments (Sources No. 2 and 3) and the LTU (Source 4) (Tables 11 & 12). Former Water Pit 3, that is presently part of the wetlands and PPE 4, is along the surface water migration pathway and receives drainage from the Former Oil Pit (Source No. 2), Former Water Pit 1 (Source No. 3) and the former LTU (Source No. 4)

As presented throughout this support document, the commenter has not shown the characterization of Site sources or observed releases attributed to them to be inconsistent with the HRS. Thus, the resulting observed release factor category score of 550 is not solely dependent on the release associated with the scrapping of Source 1, the Partially Buried Barge, or with Source 5, the Dry Dock.

Regarding the inclusion of Source 5 located at the current Leevac Shipyards, Inc. facility, see 3.3, Extent of Site, of this support document, which explains that SBA Shipyard site consists of a single release originating from SBA Shipyard operations conducted on what are now two separately owned, but contiguous, plots of land as described in the HRS documentation record at proposal. The discussion of the parcels of real property, such as the ownership of Dry Dock by Leevac Shipyards, and facility boundaries do not define the extent of the Site for listing purposes.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.16.2 Release from Source 6 Former Water Pit 3 and EPA-approved Actions

Comment: The Companies called into question the establishment of the observed release by direct observation related to Source 6, Former Water Pit 3. The Companies stated that

> Per the authorization and approval of the USEPA, a six-foot wide cut was placed in the south berm of the pit to allow wetland water to freely exchange with the pit and allow the ongoing propagation of the frogs, turtles, grasses and other wetland elements[55].

The Companies stated that "[t]he USEPA now characterizes this USEPA-authorized activity (south berm six foot wide cut) as an 'observed release' . . . which maximizes the HRS."

Response: Inasmuch as these comments call into question the establishment of an observed release by direct observation based on samples at Source 6, Former Water Pit 3, the HRS does not evaluate an observed release or determine its eligibility for inclusion in the scoring of a site based on the cause of the release; the HRS only considers whether the release is part of the site being evaluated. The HRS simply recognizes that a release to a surface water body has occurred. In this case, the surface water body is in contact with hazardous substances.

HRS Section 4.1.2.1.1, *Observed release*, states in relevant part:

> Establish an observed release to surface water for a watershed by demonstrating that the site has released a hazardous substance to the surface water in the watershed. Base this demonstration on either:
>
> - Direct observation:
>   - A material that contains one or more hazardous substances has been seen entering surface water through migration or is known to have entered surface water through direct deposition, or
>   - A source area has been flooded at a time that hazardous substances were present, and one or more hazardous substances were in contact with the flood waters, or
>   - When evidence supports the inference of a release of a material that contains one or more hazardous substances by the site to surface water, demonstrated adverse effects associated with that release may also be used to establish an observed release.

An observed release by direct observation is established for the Site based on Source 6 samples (SBA-032SD and SBA-ESI-10SD) establishment of hazardous substances in Source 6 and the direct contact of Source 6 with the surface water body. Pages 77-78 of the HRS documentation record document this observed release by direct observation:

> Two (2) sediment samples were collected, one during the August 2013 SI and the other during the September 2014 ESI, to identify and assess the migration and observed release by direct observation of contamination in the surface water pathway from Former Water Pit 3 (Source No. 6) and associated with PPE 4 (Figures 3 & 4). Former Water Pit 3 was closed according to the December 2002 IM/RA by using a hydraulic excavator to break a wide gap in the earthen berm separating it from the Mermentau River bottomland directly east of the water pit (Ref. 5, pp. 8 & 21). Upon removal of the segment of the earthen berm, water from the Mermentau River flowed into Former Water Pit 3 (former water pit), raising the level of water in the pit to approximately four (4) feet deep (Ref. 5, pp. 8, 21 & 24). Thus, making Former Water Pit 3 combined with the

[55] The Companies cite references 8 and 9 of its comment document, docket ID EPA-HQ-SFUND-2015-0576-0005. Reference 8 is the letter from G. Keeper, EPA, to Michael Pisani & Associates Re: Completion Report on Order and Agreement ("Agreement") for Interim Measures/Removal Action ("IM/RA") of Hazardous /Principal Threat Wastes at SBA Shipyards, Inc., Jennings, LA, EPA ID No. LAD008434185 ("SBA") pursuant to Section 3008 (h) of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6928 (h). Docket No. RCRA-6-2002-0908, February 24, 2006. Reference 9 is the email from S. McDonald, EPA to M. Chernekoff, Re: EPA Approval for SBA Shipyards IM/RA Completion Report with Cost Addendum, March 13, 2006.

> designated wetland area to the immediate west and being designated not only as a source but an observed release by direct observation to the wetlands based on prior documentation of contamination in Water Pit 3 (Ref. 4, pp. 642-644). The following samples were collected:
>
> - Sample SBA-032SD –oily matrix; glades of oil; light gray; clayey; collected at 2 to 3 inches below ground surface (Ref. 4, pp. 117-118 & 1018). See Table 11 for observed release sample concentrations.
> - Sample SBA-ESI-10SD – noticeable hydrocarbon odor; contained a sizeable amount of organic debris (Ref. 7, pp. 135-136, 164 & 976). See Table 12 for observed release sample concentrations.
>
> The release sediment samples along PPE 4 contained concentrations of PAHs that met observed release by direct observation criteria (Ref. 1, Table 2-3) were: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene,

(See further discussion in section 3.16.3, Observed Release by Direct Observation – Wetland Samples, of this support document.)

Further, the subject of the *cause* of a release is related to liability, which as explained in section 3.5, Liability, of this support document, is not considered in evaluating a site under the HRS—the assignment of liability to a specific entity is not completed at the listing stage of the Superfund process.

Finally, even if the observed release by direct observation associated with Source 6 were not scored, the likelihood of release factor category value of 550 would remain the same based on the observed release by chemical analysis established for the Site.[56]

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.16.3 Observed Release by Direct Observation – Wetland Samples

Comment: The Companies questioned the identification of Source 6 samples used to establish an observed release by direct observation from Source 6, Former Water Pit 3, as wetland sediment, and the use of the samples to establish contamination in a wetland. The Companies stated the Source 6 area should not be scored in the surface water migration pathway.

The Companies acknowledged that the boundaries of Former Water Pit 3 are still visible based on the remaining berms, but that the pit currently contains water and wetland grasses. However, the Companies stated that:

> The USEPA further confuses this source by referring to samples from the pit bottoms as "wetland sediment" (SBA-32SD) and "wetland sediment SE of Former Water Pit 3" (SBA-ESI-10).[57] . . . The sample location pictures clearly show that both of these samples were from the pit bottom/footprint and not from the adjacent wetland. The text of the HRS also confirms this but the presentation in the HRS Package is confusing and misleading.

[56] Consistent with HRS Section 4.1.2.1.1, *Observed release*, a likelihood of release factor category value of 550 was assigned in the HRS documentation record at proposal in part based on the observed release by chemical analysis (see pages 78-86 of the HRS documentation record at proposal).

[57] The Companies cite References 20 and 21 of its comment document, docket ID EPA-HQ-SFUND-2015-0576-0005. Reference 20 is the 2014 Site Inspection report (Reference 4 of the HRS documentation record at proposal). Reference 21 is the 2015 Expanded Site Inspection report (Reference 7 of the HRS documentation record at proposal).

The Companies noted that a sample (SBA-ESI-08) located in the wetland to the east of Source 6 did not contain any similar hazardous substances. The Companies also noted that Site-related contaminants were not detected in the monitoring well south and adjacent to Source 6 (the "unknown" monitor well sampled during the 2014 ESI). The Companies asserted that such evidence shows "there is no leachate potential from this potential source" and that there is no impact to surface water or ground water.

The Companies concluded that:

> extensive water testing on Source No. 6, the lack of any impact on an adjacent monitor well, and the absence of any constituents in the actual wetland outside the limits of the pit footprint demonstrate there is no "observed release" and the pit bottoms are not having an impact beyond the berms/boundary of the pit. Thus, this area should not be included in the scoring of the surface water pathway.

Response: An observed release by direct observation was correctly established using Source 6 samples to show that the surface water body was observed to be in contact with hazardous substances in Source 6, consistent with the HRS. EPA agrees that Source 6 samples SBA-32SD and SBA-ESI-10 are themselves inherently source samples; these samples were simply labeled "wetland" sediments as an appropriate locational description because they were collected from the Former Water Pit 3 which is now connected to, and part of, the pre-existing wetland to the east. Regarding the absence of contaminants in sediment sample SBA-ESI-08, the HRS does not require that continuous contamination be present to establish an observed release by direct observation. Regarding the monitoring well, the HRS documentation record at proposal notes that the ground water migration pathway is not being scored but that there are detections of Site-related PAHs at other monitoring wells.

As shown in section 3.16.2, Release from Source 6 Former Water Pit 3 and EPA-approved Actions, of this support document, pages 77-78 of the HRS documentation record at proposal document this observed release by direct observation consistent with the direction of HRS section 4.1.2.1.1, *Observed release*.

EPA agrees that Source 6 samples SBA-32SD and SBA-ESI-10 are themselves inherently source samples. The range of hazardous substances found in the samples is representative of the wastes that were historically stored in Water Pit 3, and as stated on page 67 of the HRS documentation record at proposal, these constituents are also detected in other sources on Site (and therefore consistent with the contaminants associated with facility operations):

> Analysis of the sediments from Former Water Pit 3 detected numerous PAHs such as: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene (Ref. 4, pp. 640-647; Ref. 7, pp. 213-215; Tables 9 and 10). Metals such as beryllium and cobalt were also detected (Ref. 4, pp. 646-647). These constituents are also detected in other sources on site including the Dry Dock and Partially Buried Barge (Sources 5 and 1 respectively).

Pages 79-80 of the HRS documentation record at proposal note that 1994 samples from the Former Water Pit 3 contained several VOCs, PAHs, and metals. Additionally, page 433 of Reference 5 of the HRS documentation record at proposal shows the analytical results of the final batch of water ("batch 3") placed in the water pit prior to the pit's eventual opening to wetlands in December 2004 (the last batch of treated barge water). Although the concentrations detected may have met discharge permitting requirements[58], they still show some detections of some of the same hazardous substances (e.g., acenaphthene, anthracene, fluoranthene, fluorine, phenanthrene, pyrene) found in source samples SBA-32SD and SBA-ESI-10.

[58] It should be noted that, as discussed in section 3.7, Permitted Releases, of this support document, releases within permitted levels are not excluded from HRS scoring.

Pages 65-66 of the HRS documentation record at proposal note that the Source 6 Former Water Pit 3 is now part of the wetland area to the east, and that Source 6 samples associating hazardous substances with the source (and establishing an observed release by direct observation) were collected from the visually contaminated locations of the pit bottom:

> Upon removal of the segment of the earthen berm, water from the Mermentau River flowed into the Former Water Pit 3 (former water pit), raising the level of the water in the pit to approximately four (4) feet deep (Ref. 5, pp. 8, 21). Thus, linking Former Water Pit 3 with the designated wetland area to the immediate west (Figure 2).
>
> Two (2) wetland sediment grab samples were collected from the Former Water Pit 3 area, which is now part of the wetlands to the east (Figure 3). During the SI of August 2013 one (1) sediment sample, SBA-032D, was collected using a benthic dredge, and during the ESI of September 2014 one (1) wetland sediment sample, SBA-ESA-10 was collected using a metal retrieval pole with a beaker attachment to a depth of 1-6 inches bgs (Ref. 4, pp. 117-118 & 1018; Ref. 7, p. 35-36 & 135-136).
>
> Grab wetland sediment samples were collected from locations of visual contamination (Ref. 4, pp. 31 & 117-118; Ref. 7, pp. 36, 135-136 & 164).
>
> Wetland sediment sample SBA-32SD was collected from the southwest corner of Former Water Pit 3 that is presently part of the wetland area, and sediment sample SBA-ESI-10SD was collected from approximately the southwest corner of Former Water Pit 3 that is currently part of the wetland area (Ref. 4, pp. 57, 117-118 & 1018; Ref. 7, pp. 50 & 135-136).

Page 66 of the HRS documentation record at proposal provides observational indications of the contamination, stating:

- Sample SBA-032SD –oily matrix; glades of oil; light gray; clayey; collected at 2 to 3 inches below ground surface (Ref. 4, pp. 117-118 & 1018).
- Sample SBA-ESI-10SD – noticeable hydrocarbon odor; contained a sizeable amount of organic debris; collected in the wetland near source 6 (Ref. 7, pp. 135-136, 164 & 976).

Pictures on pages 117-118 of Reference 4 of the HRS documentation record at proposal show the sample location for SBA-32SD. Pictures on pages 135-136 of Reference 7 of the HRS documentation record at proposal show the sample location for SBA-ESI-10 and the sample itself with a description of a "visible sheen." Thus, EPA agrees with the Companies that these are source samples.

Regarding the naming of Source 6 samples, samples SBA-32SD and SBA-ESI-10 were simply labeled "wetland" sediments as an appropriate locational description because they were collected from the Former Water Pit 3 which is now connected to and part of the pre-existing wetland to the east (even though the Former Water Pit 3 itself is not scored for HRS purposes as wetlands). As the commenter noted, the pit currently contains wetland grasses. However, the residual wastes remaining in the sediments evidenced by the hazardous substances detected confirm that these are samples of source material.

Regarding the absence of contaminants in sediment sample SBA-ESI-08, the HRS does not require that continuous contamination in all parts of a source be present to establish an observed release by direct observation, only that

> [a] material that contains one or more hazardous substances has been seen entering surface water through migration or is known to have entered surface water through direct deposition," or that "a source area has been flooded at a time that hazardous substances were present, and one or more

> hazardous substances were in contact with the flood waters . . . [see HRS Section 4.1.2.1.1, *Observed release*]

The cutting of the berm and connection of the surface water body with hazardous substance-containing source materials meets this requirement. There is no HRS requirement to show evidence of migration to establish an observed release by direct observation.

Regarding the lack of site related contaminants in a sample from the monitoring well noted by the commenter, the HRS documentation record at proposal notes that the ground water migration pathway is not being scored but that there are detections of Site-related PAHs at other monitoring wells. The cover page of the HRS documentation record at proposal states that "[g]round water monitoring wells located on SBA Shipyard have shown elevated levels of polycyclic aromatic hydrocarbons (PAHs) (Ref. 4, p.48)." Page 48 of Reference 4 of the HRS documentation record at proposal notes that "[g]roundwater samples from SBA-015 (MW-2) and the non-aqueous layer from SBA-015 contained some of the same PAHs detected in the sources."

3.17 Waste Characteristics

As described in section 3.11, Source 2 Sample Locations, Availability to Surface Water Migration Pathway, and Removal Actions, of this support document, EPA has removed Source 2 as a scored source in the HRS evaluation of the Site; the Source 2 Former Oil Pit is instead included in the HRS documentation record at promulgation as an "other possible source." The effects of this change on the waste characteristics factor category values are explained in the following subsections:

- 3.17.1 Human Food Chain Threat Waste Characteristics
- 3.17.2 Environmental Threat Waste Characteristics

As explained in these subsections, there is no change to the waste characteristics factor category values for either the human food chain threat or the environmental threat; and thus the removal of Source 2 as a scored source results in no change to the Site score or the decision to place the Site on the NPL.

3.17.1 Human Food Chain Threat Waste Characteristics

As described in section 3.11, Source 2 Sample Locations, Availability to Surface Water Migration Pathway, and Removal Actions, of this support document, Source 2 has been removed as a scored source in the HRS evaluation of the Site in the HRS documentation record at promulgation. Therefore, the Source 2 source hazardous waste quantity value and hazardous substances available to migrate from Source 2 to surface water via the overland/flood component are no longer considered in the calculation of the waste characteristics factor category value for the human food chain threat.

However, as detailed below, these changes result in no effect on the human food chain threat waste characteristics factor category value.

HRS Section 4.1.3.2, *Human food chain threat-waste characteristics*, states to "[e]valuate the waste characteristics factor category for each watershed based on two factors: toxicity/persistence/bioaccumulation and hazardous waste quantity." HRS Section 4.1.3.2.1, *Toxicity/persistence/bioaccumulation*, then specifies to "[e]valuate all those hazardous substances eligible to be evaluated for toxicity/persistence in the drinking water threat for the watershed (see section 4.1.2.2)."

On determining the toxicity/persistence/bioaccumulation factor value, HRS Section 4.1.3.2.1.4 *Calculation of toxicity/persistence/bioaccumulation factor value*, states:

> Assign each hazardous substance a toxicity/persistence factor value from table 4–12, based on the values assigned to the hazardous substance for the toxicity and persistence factors. Then assign

> each hazardous substance a toxicity/persistence/bioaccumulation factor value from table 4–16, based on the values assigned for the toxicity/persistence and bioaccumulation potential factors. Use the hazardous substance with the highest toxicity/persistence/bioaccumulation factor value for the watershed to assign the value to this factor.

As shown on pages 88-89 of the HRS documentation record at proposal (in Table 13 – Human Food Chain Threat - Toxicity/Persistence/Bioaccumulation Summary), none of the hazardous substances evaluated for toxicity/persistence/bioaccumulation were found solely in Source 2; therefore the same hazardous substances are included in the evaluation in the HRS documentation record at promulgation (see pages 82-83 of the HRS documentation record at promulgation). The toxicity/persistence/bioaccumulation factor value of 500,000 assigned at promulgation is the same as that at proposal.

HRS Section 4.1.3.2.2, *Hazardous waste quantity*, instructs to "[a]ssign the same factor value for hazardous waste quantity for the watershed as would be assigned in section 4.1.2.2.2 for the drinking water threat." On determining hazardous waste quantity for the overland/flood migration component, HRS Section 4.1.2.2.2, *Hazardous waste quantity*, states to "[a]ssign a hazardous waste quantity factor value for the watershed as specified in section 2.4.2." HRS Section 2.4.2.1, *Source hazardous waste quantity*, states in relevant part "[f]or each of the three migration pathways, assign a source hazardous waste quantity value to each source (including the unallocated source) having a containment factor value greater than 0 for the pathway being evaluated."

As shown on pages 35, 43, 49, 56, and 64 of the HRS documentation record at promulgation, the assigned source hazardous waste quantity values for Sources 1, 3, 4, 5, and 6 are the same as at proposal.

HRS Section 2.4.2.2, *Calculation of hazardous waste quantity factor value*, then states to:

> Sum the source hazardous waste quantity values assigned to all sources (including the unallocated source) or areas of observed contamination for the pathway being evaluated and round this sum to the nearest integer, except: if the sum is greater than 0, but less than 1, round it to 1. Based on this value, select a hazardous waste quantity factor value for the pathway from Table 2–6.

Table 2–6—Hazardous Waste Quantity Factor Values

Hazardous waste quantity value	Assigned value
0	0
1[a] to 100	1[b]
Greater than 100 to 10,000	100
Greater than 10,000 to 1,000,000	10,000
Greater than 1,000,000	1,000,000

[a]If the hazardous waste quantity value is greater than 0, but less than 1, round it to 1 as specified in text.
[b]For the pathway, if hazardous constituent quantity is not adequately determined, assign a value as specified in the text; do not assign the value of 1.

> For a migration pathway, if the hazardous constituent quantity is adequately determined (see section 2.4.2.1.1) for all sources (or all portions of sources and releases remaining after a removal action), assign the value from Table 2–6 as the hazardous waste quantity factor value for the pathway. If the hazardous constituent quantity is not adequately determined for one or more sources (or one or more portions of sources or releases remaining after a removal action) assign a factor value as follows:
>
> - If any target for that migration pathway is subject to Level I or Level II concentrations (see section 2.5), assign either the value from Table 2–6 or a value of 100, whichever is greater, as the hazardous waste quantity factor value for that pathway.
> - If none of the targets for that pathway is subject to Level I or Level II concentrations, assign a factor value as follows:

- If there has been no removal action, assign either the value from Table 2–6 or a value of 10, whichever is greater, as the hazardous waste quantity factor value for that pathway.
- If there has been a removal action:
  - Determine values from Table 2–6 with and without consideration of the removal action.
  - If the value that would be assigned from Table 2–6 without consideration of the removal action would be 100 or greater, assign either the value from Table 2–6 with consideration of the removal action or a value of 100, whichever is greater, as the hazardous waste quantity factor value for the pathway.
  - If the value that would be assigned from Table 2–6 without consideration of the removal action would be less than 100, assign a value of 10 as the hazardous waste quantity factor value for the pathway.

As shown on pages 65 and 84 of the HRS documentation record at promulgation, the sum of source hazardous waste quantity values for the remaining scored sources is 13,774.86:

Source Number	**Source Hazardous Waste Quantity Value (Section 2.4.2.1.5)**	**Is Source Hazardous Constituent Quantity Data Complete? (yes/no)**
1	1,827.79	No
3	882.69	No
4	65.44	No
5	9,615.38	No
6	1,383.56	No
TOTAL	13,774.86	

This sum results in the assignment of a hazardous waste quantity factor value of 10,000, per HRS Table 2–6, *Hazardous Waste Quantity Factor Values*, the same as that at proposal.

On determining the waste characteristics factor category value, HRS Section 4.1.3.2.3, *Calculation of human food chain threat-waste characteristics factor category value*, states:

> For the hazardous substance selected for the watershed in section 4.1.3.2.1.4, use its toxicity/persistence factor value and bioaccumulation potential factor value as follows to assign a value to the waste characteristics factor category. First, multiply the toxicity/persistence factor value and the hazardous waste quantity factor value for the watershed, subject to a maximum product of 1×10^{8}. Then multiply this product by the bioaccumulation potential factor value for this hazardous substance, subject to a maximum product of 1×10^{12}. Based on this second product, assign a value from Table 2–7 (section 2.4.3.1) to the human food chain threat-waste characteristics factor category for the watershed.

Because the toxicity/persistence/bioaccumulation factor value and the hazardous waste quantity factor value assigned at promulgation are the same as those at proposal, the resulting waste characteristics factor category value for the human food chain threat of 1,000 remains the same as well. (See page 85 of the HRS documentation record at promulgation.)

Therefore, the removal of Source 2 from scoring results in no change to the human food chain threat waste characteristics factor category value and no change to the Site score or the decision to place the Site on the NPL.

3.17.2 Environmental Threat Waste Characteristics

As described in section 3.11, Source 2 Sample Locations, Availability to Surface Water Migration Pathway, and Removal Actions, of this support document, Source 2 has been removed as a scored source in the HRS evaluation of the Site in the HRS documentation record at promulgation. Therefore, the Source 2 source hazardous waste quantity value and hazardous substances available to migrate from Source 2 to surface water via the overland/flood component are no longer considered in the calculation of the waste characteristics factor category value for the environmental threat.

However, as detailed below, these changes result in no effect on the environmental threat waste characteristics factor category value or the site score.

HRS Section 4.1.4.2, *Environment threat-waste characteristics*, states to "[e]valuate the waste characteristics factor category for each watershed based on two factors: ecosystem toxicity/persistence/bioaccumulation and hazardous waste quantity." HRS Section 4.1.4.2.1, Ecosystem t*oxicity/persistence/bioaccumulation*, then specifies to "[e]valuate all those hazardous substances eligible to be evaluated for toxicity/persistence in the drinking water threat for the watershed (see section 4.1.2.2)."

On determining the toxicity/persistence/bioaccumulation factor value, HRS Section 4.1.4.2.1.4 *Calculation of ecotoxicity/persistence/bioaccumulation factor value*, states:

> Assign each hazardous substance an ecosystem toxicity/persistence factor value from table 4–20, based on the values assigned to the hazardous substance for the ecosystem toxicity and persistence factors. Then assign each hazardous substance an ecosystem toxicity/persistence/bioaccumulation factor value from table 4–21, based on the values assigned for the ecosystem toxicity/persistence and ecosystem bioaccumulation potential factors. Select the hazardous substance with the highest ecosystem toxicity/ persistence/bioaccumulation factor value for the watershed and use it to assign the value to this factor.

As shown on pages 97-98 of the HRS documentation record at proposal (in Table 15 – Ecosystem Toxicity/Persistence/EcoBioaccumulation Summary), none of the hazardous substances evaluated for ecosystem toxicity/persistence/bioaccumulation were found solely in Source 2; therefore the same hazardous substances are included in the evaluation in the HRS documentation record at promulgation (see pages 91 - 92 of the HRS documentation record at promulgation). The ecosystem toxicity/persistence/bioaccumulation factor value of 500,000 assigned at promulgation is the same as that at proposal.

HRS Section 4.1.4.2.2, *Hazardous waste quantity*, instructs to "[a]ssign the same factor value for hazardous waste quantity for the watershed as would be assigned in section 4.1.2.2.2 for the drinking water threat." On determining hazardous waste quantity for the overland/flood migration component, HRS Section 4.1.2.2.2, *Hazardous waste quantity*, states to "[a]ssign a hazardous waste quantity factor value for the watershed as specified in section 2.4.2." HRS Section 2.4.2.1, *Source hazardous waste quantity*, states in relevant part "[f]or each of the three migration pathways, assign a source hazardous waste quantity value to each source (including the unallocated source) having a containment factor value greater than 0 for the pathway being evaluated."

As shown on pages 35, 43, 49, 56, and 64 of the HRS documentation record at promulgation, the assigned source hazardous waste quantity values for Sources 1, 3, 4, 5, and 6 are the same as at proposal.

HRS Section 2.4.2.2, *Calculation of hazardous waste quantity factor value*, then states to:

> Sum the source hazardous waste quantity values assigned to all sources (including the unallocated source) or areas of observed contamination for the pathway being evaluated and round this sum to the nearest integer, except: if the sum is greater than 0, but less than 1, round it to 1. Based on this value, select a hazardous waste quantity factor value for the pathway from Table 2–6.

Table 2–6—Hazardous Waste Quantity Factor Values

Hazardous waste quantity value	Assigned value
0	0
1[a] to 100	1[b]
Greater than 100 to 10,000	100
Greater than 10,000 to 1,000,000	10,000
Greater than 1,000,000	1,000,000

[a]If the hazardous waste quantity value is greater than 0, but less than 1, round it to 1 as specified in text.
[b]For the pathway, if hazardous constituent quantity is not adequately determined, assign a value as specified in the text; do not assign the value of 1.

For a migration pathway, if the hazardous constituent quantity is adequately determined (see section 2.4.2.1.1) for all sources (or all portions of sources and releases remaining after a removal action), assign the value from Table 2–6 as the hazardous waste quantity factor value for the pathway. If the hazardous constituent quantity is not adequately determined for one or more sources (or one or more portions of sources or releases remaining after a removal action) assign a factor value as follows:

- If any target for that migration pathway is subject to Level I or Level II concentrations (see section 2.5), assign either the value from Table 2–6 or a value of 100, whichever is greater, as the hazardous waste quantity factor value for that pathway.
- If none of the targets for that pathway is subject to Level I or Level II concentrations, assign a factor value as follows:
  - If there has been no removal action, assign either the value from Table 2–6 or a value of 10, whichever is greater, as the hazardous waste quantity factor value for that pathway.
  - If there has been a removal action:
    - Determine values from Table 2–6 with and without consideration of the removal action.
    - If the value that would be assigned from Table 2–6 without consideration of the removal action would be 100 or greater, assign either the value from Table 2–6 with consideration of the removal action or a value of 100, whichever is greater, as the hazardous waste quantity factor value for the pathway.
    - If the value that would be assigned from Table 2–6 without consideration of the removal action would be less than 100, assign a value of 10 as the hazardous waste quantity factor value for the pathway.

As shown on pages 65 and 93 of the HRS documentation record at promulgation, the sum of source hazardous waste quantity values for the remaining scored sources is 13,774.86:

Source Number	**Source Hazardous Waste Quantity Value (Section 2.4.2.1.5)**	**Is Source Hazardous Constituent Quantity Data Complete? (yes/no)**
1	1,827.79	No
3	882.69	No
4	65.44	No
5	9,615.38	No
6	1,383.56	No
TOTAL	13,774.86	

This sum results in the assignment of a hazardous waste quantity factor value of 10,000, per HRS Table 2–6, *Hazardous Waste Quantity Factor Values*, the same as that at proposal.

On determining the waste characteristics factor category value, HRS Section 4.1.4.2.3, *Calculation of environmental threat-waste characteristics factor category value*, states:

> For the hazardous substance selected for the watershed in section 4.1.4.2.1.4, use its ecosystem toxicity/persistence factor value and ecosystem bioaccumulation potential factor value as follows to assign a value to the waste characteristics factor category. First, multiply the ecosystem toxicity/persistence factor value and the hazardous waste quantity factor value for the watershed, subject to a maximum product of 1×10^{8} . Then multiply this product by the ecosystem bioaccumulation potential factor value for this hazardous substance, subject to a maximum product of 1×10^{12}. Based on this second product, assign a value from Table 2–7 (section 2.4.3.1) to the environmental threat-waste characteristics factor category for the watershed.

Because the ecosystem toxicity/persistence/bioaccumulation factor value and the hazardous waste quantity factor value assigned at promulgation are the same as those at proposal, the resulting waste characteristics factor category value for the human food chain threat of 1,000 remains the same as well. (See page 94 of the HRS documentation record at promulgation.)

Therefore, the removal of Source 2 from scoring results in no change to the environmental threat waste characteristics factor category value and no change to the Site score or the decision to place the Site on the NPL.

4. Conclusion

The original HRS score for this site was 50.00. Based on the above responses to public comments, the score remains unchanged. The final scores for the SBA Shipyard site are:

Ground Water:	NS
Surface Water:	100.00
Soil Exposure:	NS
Air Pathway:	NS
HRS Score:	50.00

Attachment 1

October, 25, 2012 Email from LDEQ to EPA

From: Billy Eakin <Billy.Eakin@LA.GOV>
To: Susan Webster/R6/USEPA/US@EPA, Brenda Cook/R6/USEPA/US@EPA, Tommy Doran <Tommy.Doran@LA.GOV>,
Cc: Robert Kingham <Robert.Kingham@LA.GOV>, Danny Chapman <Danny.Chapman@LA.GOV>, Scott Wilkinson <Scott.Wilkinson@LA.GOV>, Tom Harris <Tom.Harris@LA.GOV>, Tom Killeen <Tom.Killeen@LA.GOV>, Chris Piehler <Chris.Piehler@LA.GOV>, "travis.hutton@uscg.mil" <travis.hutton@uscg.mil>
Date: 10/25/2012 03:19 PM
Subject: FW: SBA Shipyard (AI #1478)

Ms. Webster,

As discussed, here are some photos resulting from our investigation into NRC incident #1028084 (anonymous complaint). The complainant reported a discharge of crude oil from a barge that is being cut up, while allowing oil to spill onto the ground and then burning the oil.

Our responder (Danny Chapman) met two USCG responders at the site and confirmed that an old barge was leaking an oily type waste into the area immediately surrounding the barge. There was nothing burning at the time of his visit. It appeared that the barge was being scrapped / salvaged for the metal.

As noted in the photos, extensive cutting of the vessel has left the residual material in the barge exposed to the elements…a barge slip connecting directly to the Mermentau River is less than 30 feet away. There is also obvious soil contamination.

I spoke to Chief Hutton with the USCG (Marine Safety Unit - Lake Charles) and he informed me that he was able to make contact with the subcontractor that had been hired for this aspect of the environmental cleanup. It appears they are now aware that contents of the barge must be properly handled prior to resuming scrapping operations and have reportedly began efforts to do so.

This e-mail is intended to make you aware of the situation, since we (LDEQ) recently made a formal request for EPA's Removal Team to consider CERCLA action for this site. Please let me know if you need additional information.

Thanks,

Billy J. Eakin, Manager
LDEQ - Southwest Regional Office
1301 Gadwall St.
Lake Charles, LA 70615
(337) 491-2667
billy.eakin@la.gov

(See attached file: IMG_0579.JPG)(See attached file: IMG_0580.JPG)(See attached file: IMG_0583.JPG)(See attached file: IMG_0584.JPG)(See attached file: IMG_0586.JPG)(See attached file: 2012102395124033.jpg)(See attached file: 2012102395123651.jpg)(See attached file: 2012102395123734.jpg)


10/23/2012


10/23/2012


10/23/2012


10/23/2012


10/23/2012

Attachment 2

May 9, 2014 Draft NRG Agreement

This attachment has been redacted by EPA.

From: Tim Burgess < >
Sent: Monday, September 8, 2014 4:10 PM
To: Cook, Brenda
Cc: Owez Nanjee
Subject: SBA

Brenda, attached is the working draft of the contract with the NRG, the scappers. It is still a work in progress (as indicated by the markups) and the markups reflect changes under discussion. By copy to Owez Nanjee of NRG, I'm informing him.

AGREEMENT

This Agreement is made effective the date of the last signature below, by and between **NANJEE RAINES GROUP, L.L.C.** ("NRG"), **TURNER M. RAINES** ("Raines") and **OWEZ NANJEE** (jointly and severally, hereinafter "Contractor"), 1914 Skillman St., Suite 110-104, Dallas, TX 75206, and **SBA SHIPYARDS, INC.** ("SBA") and **SUZANNE SMAIHALL CORNELIUS** ("Cornelius"), 6430 Buffalo Speedway, Houston, Texas 77005. SBA and Cornelius are jointly and severally hereinafter called the "Owner." Contractor and Owner are sometimes hereinafter individually referred to as a "Party", and collectively as the "Parties."

WITNESSTH THAT:

WHEREAS Owner owns about 63 acres more or less of certain real property on the west bank of the Mermentau River located at the end of Louisiana Hwy 3166 (Castex Landing Road), approximately four miles southwest of Jennings, Jefferson Davis Parish, Louisiana (the "Premises"), of which about about 30 cleared acres (the "Site") was used by SBA for a barge cleaning operation adjacent an included roughly ¼ mile long by 150 ft wide improved barge slip (the "Slip") opening to the Mermentau River, and of which about 33 acres are wooded bottomland;

WHEREAS in cooperation with the U.S. Environmental Protection Agency ("USEPA") and the Louisiana Department of Environmental Quality ("LDEQ"), the Site underwent an interim measures/removal action of hazardous/principal threat wastes, receiving a completion report approval February 24, 2006 from the USEPA;

WHEREAS business operations are no longer conducted on the Site and there remained at the Site, before Owner entered a contract with Two Moore Services, L.L.C. and Tina Moore, as described below, large amounts of salvage materials in the form of metal buildings, machinery, equipment, tools, winches, cables, chains, hoists, rigging, ladders, barrels, hoses, pipes, metal fences, a crane mounted on a crawler threaded vehicle, cherry picker, tanker truck, dump truck, hoist truck, trailer, grader, compressor station, motors, pumps, intact and partially dismantled storage tanks, one intact above ground sealed tank containing solidified asphaltic material, and two intact barges ashore on the Site, one double skinned barge above ground floating or resting in an impoundment, containing sludge residues and also having asphaltic materials in above deck compartments (such barge hereinafter being called "Barge #1"), and the other barge being buried to deck level and having an above ground superstructure housing a boiler, pumps, motors and other equipment, such superstructure having asbestos insulation material (such barge hereinafter being called "Barge #2"), Barge #2 containing hydrocarbon liquids in underground compartments and water in other underground areas, all such items and other materials on the Site whether metal or not—*exclusive of the underground structure of Barge #2, metals supporting or lining the Slip, metal bridges spanning a ditch on the Premises and water monitoring equipment located on the Premises*, but inclusive of said asphaltic materials, other hydrocarbons and water—hereinafter being individually and collectively called the "Scrap";

WHEREAS Owner in July 2012 contracted with Two Moore Services, L.L.C. and Tina Moore to remove all the Scrap from the Site at no cost to Owner paying Owner $[redacted] per long ton (2,240 pounds

U.S.), Two Moore Services, L.L.C. and Tina Moore receiving as sole compensation the remaining proceeds from sale of Scrap removed from the Premises;

WHEREAS, upon information and belief, Two Moore Services, L.L.C. and Tina Moore removed about 38.35 long tons of Scrap from the Site and sold it to Southern Recycling, L.L.C., Baton Rouge, LA. ("Southern"), but paid Owner nothing, and on about October 9, 2012, subcontracted the contracted Work to Raines and Joseph W. Martin, subject to the same requirements of payment to Owner;

WHEREAS, Raines and Martin formed Circle M Metals, L.L.C. and removed about 103.36 long tons of Scrap from the Site and sold it to Southern for which they owed Owner $[redacted] and did pay Owner $[redacted] but stopped work on or about October 25, 2012 upon being given a Notice of Federal Interest by a member of the U.S. Coast Guard as a result of cutting work creating smoke, and neither Circle M, Raines or Martin has not paid Owner the remaining $[redacted] owing to Owner, asserting that Southern has refused to pay them alleging Moore owes Southern for moneys advanced to Moore by Southern in excess of the moneys owed to Circle M by Southern;

WHEREAS Raines has with Owez Nanjee formed NRG and they as Contractor wish to replace Circle M Metals, L.L.C. (and Raines on behalf of Circle M Metals L.L.C agrees to this substitution) and resume the removal of all of the Scrap from the Site in an environmentally legal and proper manner and are willing to supply all labor, supplies, materials and equipment to remove all the Scrap, all at no cost to Owners, in compliance with all applicable laws and regulations, receiving as sole compensation part of the proceeds from sale of Scrap removed from the Premises after resumption of the Work;

WHEREAS Owner is willing to allow Contractor onto the Premises to perform removal of the Scrap from the Site in accordance with the terms and conditions hereinafter set forth, on condition that Contractor assumes the entire risk of the Premises, including any environmental risk caused by Contractor's operations, even if the Premises is already hazardous or dangerous in any way, and on condition that Contractor will defend, hold harmless and indemnify Owner Group, and have and maintain insurance against, any bodily injury to any person and damage to any property, arising out of the Premises or Contractor's operations under this Agreement, as provided hereinafter;

WHEREAS, Contractor is willing to assume all risks of the Premises and to defend, hold harmless and indemnify Owner Group, and have and maintain insurance against, any bodily injury to any person and damage to any property, arising out of the Premises or Contractor's operations under this Agreement, as provided hereinafter;

NOW THEREFORE, in consideration of the premises, the terms and conditions contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

ARTICLE 1 - CONTRACTOR'S SERVICES; COMPENSATION

1.1 Services.

(a) Contractor shall commence performance of the work under the following paragraphs in this Section 1.1 (the "Work") after receiving the approval of the U.S. Coast Guard, the LDEQ and if required the USEPA and after providing the certificates of insurance according the Section 4.4 and shall prosecute the Work expeditiously and without delay or interruption not caused by rain or storm, and shall complete the performance of the Work not later than March 31, 2015.

(b) Contractor and any subcontractor, such as Cuff's Industrial, LLC, 1312B Underwood Road, Deer Park, Texas 77536, that Contractor engages to remove and dispose of any solids, liquids and sludge waste on the Site shall prepare a written Statement of Work ("SOW") for Owner's review and for submittal to the U.S. Coast Guard and LDEQ and if necessary or appropriate also to the USEPA (the "Governmental Authorities").

(c) Upon receipt of approvals of the SOW by the Owner and the Governmental Authorities, Contractor and any such subcontractor shall carry out such SOW and removal of all Scrap in conformance with the approved SOW. It is understood that this will involve demolition and cutting of some of the Scrap. There is believed to be some asbestos in the Barge #1 superstructure. Contractor represents and warrants to Owner that Contractor is skilled in properly removing and disposing of asbestos, and that Contractor shall properly and legally remove and dispose of all asbestos it encounters on Barge #1. Contractor shall remove and dispose of the solidified asphalt in one of the tanks and the hydrocarbons and water in Barges #1 and #2 and the asbestos in Barge #1 according to environmentally sound methods and procedures using USEPA or LDEQ licensed or permitted Subcontractors, facilities or landfills. After hydrocarbons are removed, the area inside the barges where hydrocarbons were contained shall be cleaned with detergents and the cleaning water shall be removed and disposed of at a USEPA or LDEQ licensed facility. After removal of all hydrocarbons and water including cleaning water from Barges #1 and removal of Barge #1, any hydrocarbon contaminated land in the area where Barge #1 resided shall be scraped, removed and disposed of at a USEPA or LDEQ licensed facility. After removal of all hydrocarbons and water including cleaning water from Barge #2, contaminated earth on and around the deck of Barge #2 shall be scraped, removed and disposed of at a USEPA or LDEQ licensed facility. After waste management operations are completed for Barge #2, Contractor shall completely fill the buried structure of Barge #2 with sand to the level of the deck of the barge, and cover the deck of the barge with additional earth so the deck is buried with clean earth.

(d) With the exception of scraping and removal of earth as provided in Section 1.1(b), Contractor shall not dig, trench, excavate, or otherwise disturb the soil on the Premises without the prior written authorization of Owner and unless pursuant to methods and procedures approved by Owner, and if applicable, the USEPA, the LDEQ, and the U.S. Corp of Engineers.

(e) Contractor shall leave the area of the Premises where it has traveled and performed the Work and Services in a clean, orderly, mowable condition free of metallic or other detritus, scraps, fragments, debris, trash, litter, garbage, rubbish, waste or other leavings upon completion of the Work and Services.

1.2 Compensation and Payments; Records

(a) Raines will enter a separate agreement with Owner simultaneously with execution of this Agreement to pay Owner the amount owing to Owner by Contractor ($[redacted]) for the original 103.36

long tons of Scrap removed from the Site by Circle M Metals, LLC, Raines and Martin under subcontract by Two Moore Services, L.L.C. and Tina Moore conditioned on recovery of funds from Southern Scrap and/or Moore .

(b) As compensation to its Work and Services, subject to Section 1.2(d), Contractor shall be entitled to retain all other proceeds derived from sale of Scrap removed from the Site under this Agreement.

(c) Contractor shall maintain a complete paper trail and correct set of records pertaining to all aspects of this Agreement, including the performance hereof by Contractor Group. Without limitation, these records shall include any transport manifests, and as respects any hydrocarbon and other waste material removed from the Site, shall include any analytical results of such materials and volumetric or weight records from facilities receiving such materials, and as respects metals sourced from the Scrap, shall include weightbridge or other weight scale and sales receipts from scrap yards receiving the metals. Owner shall have the right to inspect and copy those records of Contractor pertaining to this Agreement at any time during the term of this Agreement and within a period of three (3) years from the date of expiration or if applicable, earlier termination, of this Agreement.

(d) If Contractor shall fail to fully perform the Work and Services as set forth in Section 1.1 in complete accordance with the terms and conditions of this Agreement, Contractor, in additional to payment of the sum owing under Section 1.2(a), shall pay to Owner, a sum equal to $[redacted] per long ton sold as Scrap removed from the Site under this Agreement less all documented charges by Contractor's waste disposal subcontractor.

ARTICLE 2 - CONTRACTOR'S EQUIPMENT AND PERSONNEL

2.1 Personnel and Equipment

(a) Contractor shall furnish, at its own expense and risk, all labor, supplies, material, equipment and other items necessary or incident to the provision of the Services and Contractor's obligations under this Agreement. Contractor agrees to pay all Claims for equipment, labor, materials, and supplies to be furnished by Contractor hereunder and agrees to allow no lien or charge resulting from such Claims to be fixed upon the Premises or any other property of Owner or, in the event a lien or charge is fixed upon the Premises or such other property of Owner, to remove and satisfy the same immediately. Contractor on request of Owner shall furnish Owner with proof that all Claims against Contractor by its suppliers and Subcontractors for labor, goods, equipment and goods and/or Services of any kind furnished in connection with Contractor's obligations under this Agreement have been fully paid and satisfied, and proof that all liens, Claims and privileges of Contractor's suppliers and Subcontractors, and Claims not covered by insurance, arising out of goods and/or Services furnished in connection with Contractor's obligations under this Agreement, have been fully released or satisfied.

(b) Contractor, at its expense, shall obtain all permits, licenses, certificates or other administrative authorizations as may be required by governmental authority from time to time or as may be necessary or incident to Contractor's provision of the Services and its obligations under this Agreement.

2.2 Independent Contractor. Owner and Contractor expressly acknowledge and agree that Contractor is an independent contractor with respect to the performance of its obligations under this Agreement. Contractor has the authority to control and direct the performance of the details of the Services to be provided hereunder and Owner is interested only in the result obtained by Contractor. Owner has the general right of inspection, consultation and supervision provided herein in order to secure the satisfactory completion of any of the Services provided hereunder. Neither Contractor nor any member of Contractor Group shall be deemed an employee or act as agent or employee of Owner, and neither Owner nor any member of Owner Group shall be deemed an employee or act as agent or employee of Contractor.

2.3 Subcontractors. Contractor shall remain responsible for all obligations and liabilities in connection with any Subcontractor hired or engaged by Contractor, including acts or omissions of a Subcontractor. Any Services provided by a Subcontractor shall be deemed part of the Services hereunder and shall be subject to the terms and conditions of this Agreement, and Contractor shall be fully responsible for all such labor and Services. Contractor shall ensure that all Subcontractors comply with this Agreement and all applicable statutes, rules, regulations, and any health, safety and environmental guidelines required by law, including all EEOC, U.S. Dept. of Labor, USEPA, LDEQ and OSHA regulations.

ARTICLE 3 - CONTRACTOR'S ASSURANCES & WARRANTIES

3.1 Compliance with Health, Safety & Environmental Standards

(a) Contractor shall prevent pollution of the Premises, adjacent land, the Mermentau River and places between the Premises and the destination of Scrap removed from the Premises in conduct of the Work and providing the Services hereunder.

(b) Contractor, at its sole expense and risk, may place a camper, trailer or self powered recreational vehicle on the Premises for housing of any security personnel who remain on the Premises overnight to guard against loss or damage to Contractor's supplies, materials, equipment and other items necessary or incident to the provision of the Contractor's Work and Services under this Agreement. Any such camper, trailer or self powered recreational vehicle shall be removed from the Premises by the sooner of completion of the Work or the expiration of this Agreement, or if earlier, a termination of this agreement in accordance with its terms.

(c) Contractor acknowledges and agrees that no alcohol, drugs, controlled substances, firearms or other weapons are allowed on the Premises and assures that every member of the Contractor Group is informed of such policy in writing countersigned by such member. Contractor shall comply with all applicable local, state and federal laws and regulations applicable to it with respect to the possession or use of, and testing for, drugs and alcohol.

3.2 Contractor's Warranties. In addition to all other representations and warranties made herein, Contractor warrants, represents and agrees with Owner as follows:

(a) Contractor possesses skilled personnel and the proper tools and equipment for the provision of the Services and Work required hereby, as well as the technical competence, financial capability and management skills for the performance of Contractor's obligations hereunder.

(b) Contractor shall provide the Services and Work required hereunder with due diligence and in a safe, competent and workmanlike manner, in strict conformity with this Agreement and the requirements of all statutes, rules and regulations of any agency or other governmental authority having jurisdiction.

(c) Contractor has adopted or shall adopt reasonable safety policies and guidelines and shall cause its employees and Subcontractors to comply with such policies and guidelines.

(d) At all reasonable times, Contractor shall ensure a member or delegatee of Owner Group has the right and ability to inspect, examine and witness the Services and Work hereunder. Any review, inspection, examination or witnessing of Services and Work that such member may undertake does not relieve Contractor of its responsibilities under this Agreement. If, as a result of such member's review, inspection, examination, or witnessing of Services and Work, Owner is not satisfied that the Services or Work will comply in all respects with this Agreement, and Owner informs Contractor in writing of Owner's dissatisfaction, Contractor shall take immediately such steps as are necessary to ensure compliance with this Agreement within thirty (30) calendar days.

ARTICLE 4 - INSURANCE

4.1 Insurance Required. Contractor shall not commence the provision of Services under this Agreement until it has obtained all insurance required by this Article 4. Further, Contractor shall not allow any Subcontractor to commence the provision of equipment, goods and/or Services until insurance required for the Subcontractor has been obtained

4.2 Minimum Limits. Contractor shall maintain at its own cost and expense insurance of the types and in the amounts described hereinbelow from an insurer with a minimum financial rating by AM Best of A VII or equivalent that is qualified to do business in Louisiana. Contractor shall provide the following insurance with the minimum limits of coverage as indicated:

(a) Workmans Compensation insurance endorsed with Longshore and Harbor Workers' Compensation coverage and including Employers' Liability Insurance of not less than $[redacted] per accident, including coverage for occupational disease.

(b) Commercial General Liability Insurance on an occurrence form covering bodily injury and property damage, including products and completed operations coverage for a minimum of two years, with a combined single limit of not less than $[redacted] per occurrence and not less than a $[redacted] annual aggregate limit.

(c) Commercial Automobile Liability insurance covering all owned, hired and non-owned vehicles with a minimum combined single limit of not less than $[redacted] per occurrence.

(d) Umbrella Liability Insurance providing coverage in excess of the coverage's to be provided by Contractor in 4.2 (b) and (c) above, which shall provide coverage at least as broad as the underlying policies. The minimum limits for such umbrella liability insurance shall be USD $[redacted] per occurrence.

4.3 Coverage and Endorsements. All of Contractor's policies of insurance shall, with respect to the risks and liabilities assumed by Contractor under this Agreement:

(a) Name all members of Owner Group as additional insureds under such policies, except for Workers' Compensation and Employer's Liability Insurance coverage, on a broad form basis (with such additional insured coverage including coverage for the sole or concurrent negligence of the additional insured and not being restricted to (i) "ongoing operations," (ii) coverage for vicarious liability, or (iii) circumstances in which the named insured is partially negligent;

(b) Contain provisions stating that the policies affording coverage shall apply as primary insurance without right of contribution via counterclaim, offset or otherwise from Owner Group or any other policies available to Owner Group providing any coverage to any members of Owner Group; and

(c) Contain provisions stating that the insurers waive all rights of subrogation against the members of Owner Group.

4.4 Certificates of Insurance. Contractor shall, prior to performing any Services hereunder, furnish Owner with certificates of insurance in accordance with the coverage's here prescribed, which insurance shall provide for thirty (30) days prior written notice to Owner of non-renewal or cancellation of any coverage.

4.5 Failure to Provide Certificates of Insurance. Failure of Owner to object to any defect in such certificates, or to the failure to secure such endorsements on the policies as may be necessary to carry out the provisions of this Agreement, shall not be deemed a waiver of Contractor's obligation to furnish the insurance coverage's as prescribed herein nor relieve Contractor from any of its obligations under this Agreement. Deductibles shall be the sole responsibility of Contractor with respect to liabilities undertaken by Contractor hereunder. If Contractor shall fail to provide and maintain the insurance required by this Agreement, Owner shall have the right to terminate this Agreement forthwith. In the event that liability for any loss or damage is denied by the underwriter(s) of Contractor, in whole or in part, for any reason, or if Contractor fails to maintain any of the required insurance, Contractor shall become an insurer to the extent of any such failure and shall, in addition, indemnify and hold harmless Owner Group against all Claims which would otherwise be covered by said insurance. Contractor shall require all its Subcontractors to obtain, maintain and keep in force adequate insurance coverage during the time in which they are engaged in the provision of any Goods and/or Services hereunder.

4.6 Insurance and Indemnification Separate; Notice of Claim. The obligations of Contractor with respect to the provision of insurance under this Agreement are separate and apart from Contractor's indemnification obligations under this Agreement. Failure to fulfill the indemnity obligations does not

alter or eliminate the insurance obligations, and failure to fulfill the insurance obligations does not alter or eliminate the indemnity obligations. Contractor's indemnification obligations shall not be limited in amount or in scope to coverage's provided by insurance required by this Agreement. If any event occurs that may give rise to a Claim involving any member of Owner Group under any policy of insurance to be taken out by Contractor under this Article, then Contractor must notify Owner within fourteen (14) days of when that event becomes known to Contractor, and ensure that Owner is kept fully informed of any subsequent actions and developments concerning the relevant claim.

ARTICLE 5 - LIABILITY AND INDEMNITY

5.1 Indemnities for Personal Injury and Property Damage. CONTRACTOR SHALL PROTECT, DEFEND, INDEMNIFY, RELEASE AND HOLD HARMLESS OWNER GROUP FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF THE PREMISES OR CONTRACTOR GROUP'S OPERATIONS UNDER THIS AGREEMENT, ***EVEN IF OWNER OR ANY MEMBER OF OWNER GROUP IS NEGLIGENT IN WHOLE OR PART***.

5.2 Contractor Indemnity for Taxes and Employment-Related Matters. Contractor shall protect, defend, indemnify, release, and hold harmless Owner from and against any and all Claims, whether brought by any Person or Third Party arising out of, resulting from or in connection with (a) any incorrect payment or failure to pay any Taxes, or (b) any incorrect payment, failure to pay or failure to provide any unemployment insurance, workers compensation insurance, in either case of (a) or (b), with respect to any member of Contractor Group.

5.3 Contractor's Personnel. Contractor shall be solely responsible for the payment of all workers' compensation and medical benefits to personnel covered by the Federal Longshore and Harbor Worker's Compensation Act, 33 U.S.C § 901 et seq. and as applicable according to law the Louisiana Workers' Compensation Act, La. R.S. 23:1021 et seq. and/or the Texas Workers' Compensation Act, Texas Labor Code, Title 5 (to include any direct, borrowed, special or statutory employees of Contractor or its Subcontractors of any tier), and shall not be entitled to seek contribution for any such payments from Owner. Contractor further agrees that it will protect, defend, indemnify, release and hold harmless Owner from and against any such payments and any and all Claims relating to or asserted by such Personnel for injury, death, illness or property damage or loss, even if any such personnel claim, assert or are also held to be an employee (whether a direct, statutory, special or borrowed employee, or otherwise) of Owner.

5.4 Indemnification Procedure. Owner shall give Contractor notice in writing of any Claim made for which a member of Owner Group claims to be entitled to indemnification under this Agreement. Thereafter, Contractor shall confer with Owner concerning the defense of any such Claim, but, subject to the remainder of this Section 5.4, Contractor or its insurer shall retain control of the conduct of such defense, including, without limitation, the selection and management of counsel. Contractor shall not effect settlement or compromise of any such Claim without having obtained the prior written consent of the Owner, but if the Owner does not consent to a settlement which the Contractor is willing to accept and such settlement would not have an adverse impact or effect on the Premises or Owner's finances, then the Contractor's liability under the indemnity shall be limited to the amount for which the Claim in question could have been settled.

5.5 Application of Certain Laws. The indemnities in this Article shall be effective to the maximum extent permitted by the applicable law, it being the intent of the Parties that the indemnification and insurance obligations created in this Agreement shall be fully enforceable. If it is judicially determined that any law currently enacted or enacted in the future limits in any way the extent to which indemnification may be provided to Owner Group and such law is applicable to this Agreement, then this Agreement shall be deemed automatically amended to provide that the indemnification obligations provided hereunder shall extend only to the maximum extent permitted by such applicable law, but shall extend fully to such maximum extent. However, such amendment shall not in any way modify, reduce or limit the Contractor's insurance obligations in any respect except to the extent mandated otherwise by applicable law, and, except to the extent otherwise mandated by applicable law, the Contractor's insurance obligations shall include all risks and liabilities allocated to Contractor prior to any such amendment.

ARTICLE 6-TERM AND TERMINATION

6.1 Term. This Agreement shall expire March 31, 2015.

6.2 Termination Upon Default. Either Party may terminate this Agreement in the event that the other party materially breaches or defaults in performing any obligation under this Agreement and such breach or default continues un-remedied for a period of 30 days following written notice of default.

6.3 Termination Upon Insolvency. This Agreement shall terminate, effective upon delivery of written notice by a Party upon the filing of an application for bankruptcy, insolvency, corporate reorganization, or any other proceedings for the settlement of debts of the other Party.

6.4 Continuing Obligations. Termination of this Agreement, including expiration, does not relieve a Party of its obligations and liabilities existing at or accruing to the date of termination. Provisions of this Agreement which by their nature should survive termination or expiration of this Agreement shall so survive. For the avoidance of doubt, the Parties expressly acknowledge that the Parties' obligations contained in Sections 1.2 and 6.4, and Articles 3, 4, 5 and 7 of this Agreement shall survive the termination of the Agreement.

ARTICLE 7 – DISPUTE RESOLTION

If the Parties have a dispute or disagreement arising under this Agreement, the Parties shall try to resolve it by talking with each other. A Party must give written notice of the dispute ("Notice of Dispute") to the other Party requesting that the Parties promptly meet in person in a good faith attempt to resolve the dispute. If after thirty (30) days following the Notice of Dispute, the dispute is unresolved by written settlement, either Party shall be free to seek judicial redress. To the fullest extent permitted by law, this Agreement and any disputes arising out of or relating to it will be governed by the laws of the state of Texas as though all acts or omissions hereunder had occurred in such state without regard to its conflict of law principles. Any action or proceeding arising from or relating to this Agreement may be brought in a

District Court in Harris County, Texas, and each party irrevocably submits to the jurisdiction and venue of any such court in any such action or proceeding.

ARTICLE 8– ADDITIONAL DEFINITIONS

In addition to the definitions contained in the body of this Agreement elsewhere than in this Article and indicated by words with initial capitalizations contained within quotation marks and enclosed in parentheses, the following additional definitions apply in this Agreement:

"Claims" means all claims, losses, damages, demands, causes of action, suits, proceedings, fines, penalties, taxes, judgments, liens, costs, obligations and liabilities of every kind and character, including, without limitation, all expenses of investigation, defense and litigation, court costs, attorneys' and experts' fees, and all obligations to indemnify another.

"Contractor Group" means the following entities and Persons individually and collectively: (a) Contractor and any co-venturers, partners or joint-venturers with Contractor, (b) Contractor's contractors (including without limitation sole proprietor independent contractors) and Subcontractors of any tier; and (c) the agents, representatives, servants, directors, officers, assigns, managers, members, shareholders, owners, employees, and invitees of all of the foregoing.

"Owner Group" means the following entities and Persons individually and collectively: (a) Owner and (b) the agents, representatives, directors, officers, assigns, shareholders, employees, contractors of Owner other than members of the Contractor Group, and invitees of Owner.

"Person" shall mean any individual or entity, including, without limitation, any corporation, limited liability company, partnership (general or limited), joint venture, association, joint stock company, trust, unincorporated organization or government (including any board, political subdivision or other body thereof.

"Services" means all services provided by Contractor Group to Owner relating to this Agreement including without limitation all services and Work listed in Section 1.1, and all obligations and duties not expressly defined but which are necessary and customarily provided in connection therewith.

"Subcontract" means any contract of any tier entered into between Contractor and a Subcontractor (or by a Subcontractor with another Subcontractor) in connection with the Services.

"Subcontractor" means any Person of any tier that has entered into a Subcontract with Contractor or another Subcontractor of any tier in connection with the Services.

"Third Parties" means all Persons which are not included in the definition of either Owner Group or Contractor Group.

ARTICLE 9 - MISCELLANEOUS

9.1 **Notice.** Any notice required to be given hereunder shall be deemed to be effective upon receipt. Either Party may, at any time, change its address for notice purposes by giving written notice of such change to the other Party, and if its place of business moves to a different address than set forth below, shall give notice of the new address to the other Party. All notices and communications to be given or provided under this Agreement shall be in writing and shall be sent to:

OWNER	CONTRACTOR
SBA SHIPYARD, INC.	NANJEE RAINES GROUP, L.L.C.,
SUZANNE SMAIHALL CORNELIUS	TURNER M. RAINES, and OWEZ NANJEE
6430 Buffalo Speedway	4447 North Central Expressway, Suite 110-214
Houston, Texas 77005	Dallas, TX 75205

9.2 **Review.** Each Party acknowledges that it has reviewed this Agreement with counsel or has been afforded the opportunity to do so, and any rules of construction relating to interpretation against the drafter shall not apply to this Agreement and are expressly waived.

9.3 **Entire Agreement**. This Agreement constitutes the entire agreement between the parties regarding the subject matter hereof, and supersedes all prior discussions or agreements related to the same

9.4 **Execution**. This Agreement may by executed in multiple counterparts each of which shall be deemed an original and all of which taken together shall constitute one instrument; provided, however, that this Agreement shall be effective as to each Party upon its execution hereof whether all counterparts are executed by a Party or not.

CONTRACTOR AND OWNER EXPRESSLY ACKNOWLEDGE AND REPRESENT THAT THEY HAVE READ AND UNDERSTAND ALL OF THE PROVISIONS CONTAINED IN THIS AGREEMENT, AND AGREE TO ALL SUCH PROVISIONS, AS INDICATED BY THEIR SIGNATURE.

[End of Page]

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate effective as of the day and year of the last dated signature.

CONTRACTOR:	**OWNER:**
NANJEE RAINES GROUP, L.L.C.	SBA SHIPYARDS, INC.
By: _____ Turner M. Raines, Manager	By: _____ Suzanne Smaihall Cornelius, its President
_____ Date	_____ Date
_____ TURNER M. RAINES	_____ SUZANNE SMAIHALL CORNELIUS
_____ Date	_____ Date
_____ OWEZ NANJEE	
_____ Date	

Attachment 3

November 7, 2013 Site Inspection Photographs


11/07/2013 12:27


11/07/2013 12:27


11/07/2013 12:27


11/07/2013 12:27


11/07/2013 12:27


11/07/2013 12:28

11/07/2013 12:28

Attachment 4

February 25, 2016 OPA Removal Report for SBA Shipyard

OIL POLLUTION ACT (OPA) REMOVAL REPORT
For
SBA SHIPYARD
9040 CASTEX LANDING ROAD
JENNINGS, JEFFERSON DAVIS PARISH, LOUISIANA

CERCLIS Identification Number: LAD008434185

Prepared for
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, Texas 75202

Date Prepared:

February 25, 2016

Prepared by
CSS-Dynamac
1323 Columbia Drive, Suite 307
Richardson, Texas 75081
(214) 575-3344

OIL POLLUTION ACT (OPA) REMOVAL REPORT
For
SBA Shipyard

9040 CASTEX LANDING ROAD
JENNINGS, JEFFERSON DAVIS PARISH, LOUISIANA

Date Prepared:

February 25, 2016

Reference Numbers

Contract No.:	EP-W-06-077
TDD No.:	10/Dynamac-077-15-001
CERCLIS No.:	LAD008434185
SSID No.:	V6QM
FPN:	E15608
EPA OSC:	Mark Hayes
START-3 PjM:	Karen Berecz

Prepared by:

Karen Berecz
CSS-Dynamac START-3 Project Manager **Date:** 02/25/2016

Approved by:

Steve Cowan
CSS-Dynamac START-3 Program Manager **Date:** 02/25/2016

☒ The EPA Task Monitor provided final approval of this report

☐ The EPA Task Monitor did not provide final approval of this report prior to the completion date of the Technical Direction Document.

EXECUTIVE SUMMARY

CSS-Dynamac (Dynamac), the Superfund Technical Assessment and Response Team (START-3) contractor, was tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response Branch (PRB), under Contract Number EP-W-06-077, Technical Direction Document (TDD) Number 10/Dynamac-077-015-001 (Appendix A), to perform removal oversight and to provide technical assistance during the Oil Pollution Act (OPA) removal action at the SBA Shipyard (SBA) located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana. The OPA removal action was conducted by the EPA Emergency and Rapid Response Services (ERRS) contractor, Environmental Quality Management (EQM), Bandera Resources Inc. (Bandera) and Environmental Restoration LLC (ER). Dynamac START-3 conducted on-site air monitoring, provided technical assistance, and performed written and photographic documentation of removal activities from 25 May 2015 to 29 May 2015, 08 June 2015 to 12 June 2015, and from 05 October 2015 to 06 October 2015. During this time, the following oily liquid wastes and waste solids were transported and disposed off-site:

Transported and Disposed Off-Site

- Approximately 105,858 gallons of non-hazardous, non-Department of Transportation (DOT) regulated oily liquid.
- Approximately 20 tons of non-Resource Conservation and Recovery Act (RCRA) regulated solids.

OIL POLLUTION ACT (OPA) REMOVAL REPORT
For
SBA SHIPYARD
9040 Castex Landing Lane
Jennings, Jefferson Davis Parish, Louisiana

CERCLIS Number: LAD008434185

TABLE OF CONTENTS

APPENDICES

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ABBREVIATIONS AND ACRONYMS

BANDERA	Bandera Resources Inc.
BGS	Below Ground Surface
CDD	Chlorinated Dibenzo-p-Dioxins
CDF	Chlorinated Dibenzofurans
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CHEMTEX	Chemtex Environmental & Industrial Hygiene Service
DOT	Department of Transportation
DRO	Diesel Range Organic
EPA	U.S. Environmental Protection Agency
EQM	Environmental Quality Management
ER	Environmental Restoration LLC
ERRS	Emergency and Rapid Response Services
ERS	Environmental Response Services
ESI	Expanded Site Inspection
FOSC	Federal On-Scene Coordinator
GCAL	Gulf Coast Analytical Laboratory
GPS	Global Positioning System
GRO	Gasoline Range Organics
HASP	Health and Safety Plan
HWD	Hazardous Waste Division
LDEQ	Louisiana Department of Environmental Quality
LEL	Lower Explosive Limits
LTU	Land Treatment Unit
NRC	National Response Center
OPA	Oil Pollution Act
ORO	Oil Range Organics
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PDF	Portable Document Format

PjM	Project Manager
RCRA	Resource Conservation and Recovery Act
RCI	Reactivity, Corrosivity and Ignitibility
RFI	RCRA Facility Investigation
RM	Response Manager
RPB	Response and Prevention Branch
SARA	Superfund Amendments and Reauthorization Act
SAM	Site Assessment Manager
SBA	SBA Shipyard
SI	Site Inspection
SWD	Solid Waste Division
START-3	Superfund Technical Assessment and Response Team
SVOC	Semi-Volatile Organic Compounds
T&D	Transportation and Disposal
TCLP	Toxicity Characteristic Leaching Procedure
TDD	Technical Direction Document
TPH	Total Petroleum Hydrocarbons
USCG	United States Coast Guard
USGS	United States Geological Survey
VOC	Volatile Organic Compounds

1 INTRODUCTION

CSS-Dynamac (Dynamac), the Superfund Technical Assessment and Response Team (START-3) contractor, was tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Response and Prevention Branch (RPB), under Contract Number EP-W-06-077, Technical Direction Document (TDD) Number 10/Dynamac-077-15-001 to perform removal oversight and technical assistance during the Oil Pollution Act (OPA) removal actions conducted at the SBA Shipyard (SBA) site located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana.

The SBA site is an inactive and abandoned shipyard facility whose entrance is located at Latitude 30.16415º North and Longitude 92.61588º West, as determined by a Trimble Geo Explorer 3 Global Positioning System (GPS) unit. SBA is situated on approximately 98 acres of land located in a rural-industrial area. The site is bordered by residential properties to the north, south by wetlands, west by rural land and wetlands, and east by the Mermentau River. The site is located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana, at the end of State Highway 3166 and adjacent to the west bank of the Mermentau River. Access to the property is restricted by a locked gate and wire fencing.

A Site Location Map is provided as Figure 1, and a Site Aerial Map is provided as Figure 2. All figures and appendices are provided as separate portable document format (PDF) files. Dynamac START-3 provided technical assistance during activities conducted from 25 May 2015 to 29 May 2015, 08 June 2015 to 12 June 2015, and from 05 October 2015 to 06 October 2015. Dynamac START-3 has prepared this document to describe the technical activities conducted under the TDD.

2 PURPOSE AND SCOPE

The purpose of the OPA removal action at the SBA site was to remove hazards that released, or had a substantial threat of release of oil, into or upon navigable waters (surface water) of the United States or adjoining shorelines in accordance with the Oil Pollution Act (OPA) and consistent with *40 Code of Federal Regulations (CFR) Part 300*. The removal at SBA would involve the removal of oily liquid contents and solid waste from a buried barge and associated

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alkyne storage pump house, as identified during removal assessment activities conducted in October 2014, and transport the waste materials to a regulator-approved disposal facility.

The scope of work defined in the TDD (Appendix A) included written and photographic documentation and technical assistance. Dynamac START-3 was specifically tasked (1) to review the completeness of disposal documentation such as manifests, waste profile data, and other information; (2) to provide air monitoring; and (3) to develop a site-specific health and safety plan (HASP).

The EPA Federal On-scene Coordinator (FOSC) for the site is Mark Hayes, and the Dynamac START-3 Project Manager (PjM) is Karen Berecz.

3 SITE BACKGROUND

Information regarding site location, background information, and site description is presented in the following subsections.

3.1 Site Location and Description

The SBA site is situated on approximately 98 acres of land in a rural-industrial area located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana. The geographic coordinates at the abandoned office and site entrance are Latitude 30.16415° North and Longitude 92.61588° West. The property is located in Jefferson Davis Parish and is referenced on the Mermentau Quadrangle Louisiana, U.S. Geological Survey (USGS) 7.5 minute quadrangle.

The SBA site is inactive and abandoned. The SBA site was historically used as an industrial location for waste and fuel storage associated with barge cleaning operations. The SBA site was used for construction, repair, retrofitting, and cleaning of barges from the mid 1960's to 1999. In 1993, SBA Shipyard leased approximately 30 acres of the site to Leevac Marine. Since that time, Leevac Marine has purchased the northern portion of the site that was used for construction and repair of barges and other vessels. The southern portion of the site is currently owned by Louis and Suzanne Smailhall (Figure 3). Three barge slips and a dry dock are located on the Mermentau River. The slips were used to dock barges during cleaning and/or repair activities. Except for portions of the property potentially used for livestock grazing, there

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are no known industrial uses for SBA prior to operations beginning in the mid 1960's. Barges serviced at SBA typically held diesel, coal tar, crude oil, gasoline and/or asphalt.

Wastes from the barge cleaning operations were managed in a waste management area that included four impoundments, a land treatment unit (LTU) and storage tanks. The resulting waste from the barge cleaning operation consisted of various hydrocarbons and water. The hydrocarbons were separated from the water into surface impoundments that were known as Oil Pit, Water Pit 1, Water Pit 2 and Water Pit 3. Water was recycled and reused during subsequent barge cleaning activities, and some of the water was converted to steam for cleaning operations. Aboveground oil/water separators and storage tanks eventually replaced the surface impoundments.

The SBA site is located at the end of State Highway 3166 and adjacent to the west bank of the Mermentau River (Figure 1). The site is bordered by residential properties to the north, south by wetlands, west by rural land and wetlands, and east by the Mermentau River. An Aerial Location Map is provided as Figure 2. Access to the property is restricted by a locked gate and wire fencing.

3.2 Background Information

Information regarding the SBA site has been obtained through previous investigations by the Louisiana Department of Environmental Quality (LDEQ), United States Coast Guard (USCG), EPA Site Assessment Manager (SAM) and START-3 site inspections conducted under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), and EPA Federal On-Scene Coordinator (FOSC) and START-3 Removal Assessment activities.

In 1980, SBA submitted a RCRA Part A Application to EPA indicating that SBA did not treat, store or dispose of hazardous waste. In late 1989, SBA began remediation activities on the four impoundments that were in service since 1968. Visual indications of the possible presence of contamination were observed during subsurface investigations conducted from November 1989 to February 1990 by SBA contractors. In addition, four monitoring wells were also installed at the time. In 1990, SBA submitted a notification to LDEQ indicating it was a generator of hazardous waste. Subsurface contamination was observed at the SBA site by LDEQ on

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February 1990. In August 1990, the LDEQ, Solid Waste Division (SWD) issued an Order (OC-159) to SBA to close the waste management units. A memo was written in July 1994 that indicated either LDEQ Hazardous Waste Division (HWD) or EPA would handle closure activities for the SBA site. In 1994, the EPA Region 6 RCRA Enforcement Branch assumed the role for regulatory authority for the site and SBA hired a contractor to conduct a RCRA Facility Investigation (RFI). SBA submitted an RFI work plan in 1996. In December 2002, EPA issued an Order and Agreement for Interim Measures/Removal Action (IM/RA) of Hazardous/Principal Threat Wastes at SBA Shipyards, pursuant to the Resource Conservation and Recovery Act (RCRA), Section 3008(h).

During October 2012, Dan Chapman, LDEQ and MSTC Hutton and MST2 Swindle of USCG received notification via the National Response Center (NRC) that a barge located at the SBA site was being scrapped, and oil was observed to be leaking from the breached hull onto the surrounding soil. It was also noted that the personnel scraping the barge were setting fire to the discharge oil in place, and that this had been occurring for a couple of weeks (NRC Report # 1028084). Once on scene, LDEQ and USCG noted no work was being conducted, but there was evidence of previous work having been done, specifically scrapping of a barge. During a subsequent visit to the SBA site, it was evident that a barge was being scrapped. During conversations held during the site visit, it was determined that operations would cease until all free-floating oil and waste water was removed. In late October 2012, LDEQ, USCG and EPA FOSC Roberto Bernier met on-scene to discuss the agreed upon course of action to monitor the responsible party led contractor operations for removal of oil and waste water.

In December 2012, START-3 conducted a site reconnaissance inspection at the SBA site. Brenda Nixon Cook, EPA SAM, Mark Miller and Tommy Doran, LDEQ representatives accompanied START-3 on the inspection. During the inspection, a tar-like material was observed in soils up to a depth of three (3) to four (4) feet below ground surface (bgs) near the on-site ditches. Evidence of the former pits and former land treatment unit were not observed during the reconnaissance. Four (4) monitoring wells were observed to be present on the western portion of the property. A partially buried barge, an asphalt tank, and partially scrapped metal from a former 10,000 barrel tank remained onsite.

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During an August 2013 Site Inspection (SI) at SBA Shipyard conducted by START-3 and Brenda Nixon Cook the EPA SAM, soil samples were collected to 16 feet bgs, and ground water, surface water and sediment samples were also collected to assess the migration of contamination at SBA. A waste sample of exposed waste was collected along the western edge of the partially buried barge, and characterized as asphaltic, tarry and oily. A second waste sample was collected from an oily matrix observed to be leaking from the southwest corner of the alkyne storage pump house associated with the buried barge. The waste samples from the partially buried barge, and alkyne storage pump house associated with the buried barge were collected to identify the source material and contamination at SBA. The polycyclic aromatic hydrocarbons (PAHs) acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, phenol, and pyrene were detected in waste samples from the partially buried barge and the alkyne storage pump house associated with the buried barge, as well as in soils collected from the former waste impoundments, and sediment from the barge slips.

In September 2014 EPA SAM, Brenda Nixon Cook, and START-3 conducted an Expanded Site Inspection (ESI). River sediment samples from the Mermentau River and wetland sediment samples were collected to identify and assess the migration of contamination at SBA in the surface water pathway. Additional ground water samples were also collected on-site to assess the migration of contamination to the groundwater pathway. Waste samples were collected from the northwestern edge of the partially buried barge and characterized as hard and oily with a hydrocarbon odor, and from an area of stained soil near the old boiler near the southwest corner of the alkyne storage pump house associated with the buried barge. Analytical data from the sediment and wetland samples contained PAHs that exceeded observed release criteria. The waste sample collected near the southwest corner of the alkyne storage pump house, and from the northwestern edge of the partially buried barge contained elevated levels of Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) to include: 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin, octachlorodibenzo-p-dioxin, 1,2,3,4,7,8-hexachlorodibenzofuran, 1,2,3,6,7,8-hexachlorodibenzofuran, 2,3,4,6,7,8-hexachlorodibenzofuran and 2,3,4,7,8-pentachlorodibenzofuran.

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In October 2014 EPA FOSC Mark Hayes and START-3 mobilized to the SBA site to assess the potential for removal of oily liquid from the buried barge and associated alkyne storage tank pump house under the Oil Pollution Act (OPA). START-3 collected two waste samples from the alkyne storage tank pump house visible on the buried barge, and one on-site liquid sample from the overhead horizontal saddle tank located 50 feet north of the pump house structure (Figure 4). START-3 determined the approximate measurements of the buried barge associated with the alkyne storage tank pump house based on visible portions of the buried barge:

- 50 feet (length) x 20 feet (width) x 7.6 feet (depth). Depth of the buried barge was measured from a hatch opening on the east side of the alkyne storage tank pump house.

Analytical results indicated that fluid and sludge media samples collected from the alkyne storage tank pump house associated with the buried barge contained elevated concentrations of Polycyclic Aromatic Hydrocarbons (PAH), and Total Petroleum Hydrocarbons (TPH) in the form of diesel range organics (DRO) and motor oil range organics (ORO).

4 REMOVAL ACTIVITIES

The following sections provide a summary of the OPA removal activities conducted at the SBA site from 25 May 2015 to 29 May 2015, 08 June 2015 to 12 June 2015 and from 05 October 2015 to 06 October 2015.

4.1 Introduction

The OPA removal action activities were initiated under the direction of EPA FOSC Mark Hayes. The ERRS contractor was EQM under the supervision of Response Manager (RM) James Beavis. Transportation and Disposal (T&D) was supervised by Don Edgington with Bandera, using subcontractors from ER. This team was responsible for conducting the OPA removal activities at the site. Removal activities included the complete removal and off-site disposal of oily liquid waste from within the buried barge and associated alkyne storage tank pump house, and power washing of the oil stained walls and floors of the alkyne storage tank pump house structure, and collecting the residual liquids and wastes for removal and off-site disposal.

In preparation for the OPA removal activities, a site-specific HASP was prepared and approved by the CSS-Dynamac Health and Safety Manager. During the OPA removal activities, CSS-

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Dynamac START-3 personnel documented field activities using a site-dedicated field logbook, digital photographs and PolReps, provided as Appendices C, B, and F respectively.

4.2 Chronology of Removal Action

Removal Action – 25 May 2015 to 30 May 2015

On 25 May 2015, EPA FOSC Mark Hayes activated START-3 and ERRS contractors to conduct an OPA removal activity beginning the morning of 26 May 2015.

On 26 May 2015, EPA OSC Mark Hayes, along with the START-3 and ERRS contractors arrived at the SBA site to perform removal activities. START-3 provided technical support, performed air monitoring, and conducted written and photographic documentation of the removal action. ERRS utilized a heavy duty suction hose attached to a vacuum truck and transferred non-hazardous oily liquid waste from within the buried barge to the staged vacuum truck. The suction hose attached to the staged vacuum truck was placed inside the east side compartment of the buried barge via an opened hatch. All oily liquid waste removed from the buried barge was accessed from seven hatch openings and a stairwell leading into the buried barge. The openings on the buried barge, seven hatches and a stairwell, were situated at approximately ground level.

After each vacuum truck was loaded for transport, manifests were generated by the truck driver, verified by the T&D coordinator, and signed by the EPA FOSC. Vacuum trucks transported the non-hazardous oily liquid to the permitted Clean Harbor facility in White Castle, Louisiana. The oily liquid waste from the buried barge was transported by Clean Harbor Environmental or Sprint Removal vacuum trucks and taken to the Clean Harbor Wastewater Treatment Facility located at 52735 Clarke Road in White Castle, Louisiana.

On 27 May 2015 ERRS continued removal activities of the oily liquid waste from the stairwell leading into the buried barge, and began removal of oily liquid waste from inside the alkyne storage tank pump house into vacuum trucks for transportation and final off-site disposal. In addition, ERRS began construction of a sand/gravel road on site for vacuum trucks to access the buried barge and associated alkyne storage tank pump house.

On 28 May 2015 ERRS began power washing the oil stained walls and floors inside the alkyne storage tank pump house. Oily liquid waste generated from power washing activities inside the

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structure was collected and removed by vacuum truck for off-site disposal. Oil contaminated solid waste inside the alkyne storage tank pump house was bagged and staged in a pile near the entrance of the structure for subsequent off-site disposal. ERRS also continued removal of the oily liquid waste from the south perimeter of the buried barge, and the south side compartments of the buried barge via two opened hatches into vacuum trucks for transportation and off-site disposal. In addition, ERRS continued construction and improvements of the sand/gravel road on site for vacuum trucks to access areas adjacent to the buried barge and associated alkyne storage tank pump house during removal activities.

On 29 May 2015 ERRS continued to remove and bag solid waste from inside the alkyne storage tank pump house and stage it in a pile near the entrance of the structure for later off-site disposal. ERRS also checked the contents of a horizontal saddle tank located 50 feet north of the buried barge by opening a valve on the bottom of the tank and collecting the liquid in a 5-gallon bucket. ERRS used pH paper to determine that the liquid in the horizontal saddle tank was comparatively neutral. Additionally, ERRS completed removal activities of the oily liquid from the stairwell leading into the buried barge, two south side compartments via opened hatches, and from a 55-gallon drum staged on the east side of the alkyne storage tank pump house into vacuum trucks for transportation and off-site disposal.

A composite sample of oil was collected from the three north compartments on the buried barge via opened hatches, and a composite sample of oily sludge and debris was collected from inside the alkyne storage tank pump house by ERRS and delivered to Gulf Coast Analytical Laboratory (GCAL) in Baton Rouge, Louisiana for analysis. Also, composite samples were collected from the three north compartments on the buried barge via opened hatches, and a composite sample was collected from the two south compartments of the buried barge via opened hatches by Environmental Response Services (ERS) for laboratory analysis and characterization by Chemtex Environmental & Industrial Hygiene Services (Chemtex) in Sulphur, Louisiana for analysis. Environmental Response Services (ERS), an oil recycling facility located in Lake Charles, Louisiana, was contacted to potentially remove, transport and recycle the remaining oily liquid contents waste from the buried barge and alkyne storage tank pump house pending analytical results.

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Prior to departing the site ERRS constructed an earthen berm, covered in poly sheeting and anchored, around the southeast perimeter of the buried barge to prevent any run-off from the buried barge and associated alkyne storage tank pump house to surrounding regions. ERRS also secured the piled bags of waste inside the alkyne storage tank pump house, staged all empty drums on the east side of the alkyne storage tank pump house, closed and secured all hatches on the buried barge, covered and secured the stairwell leading into the buried barge with poly sheeting and caution tape, and secured all openings of the building with caution tape.

On 30 May 2015 START-3 and ERRS demobilized from site.

Removal Action – 8 June 2015 to 12 June 2015

On 8 June 2015, EPA FOSC Mark Hayes reactivated the START-3 and ERRS contractors to continue the OPA removal activities beginning the morning of 9 June 2015.

On 9 June 2015 EPA FOSC Hayes, along with START-3 and ERRS contractors arrived at the SBA site to continue removal actions. START-3 provided technical support, performed air monitoring, and conducted written and photographic documentation of removal actions. ERRS utilized a heavy duty suction hose attached to a vacuum truck and transferred non-hazardous oily liquid waste from within the buried barge to the staged vacuum truck. The suction hose attached to the staged vacuum truck was initially placed inside the west side compartment and later the three north side compartments of the buried barge via opened hatches.

After each vacuum truck was loaded for transport manifests were generated by the truck driver, verified by the T&D coordinator, and signed by the EPA FOSC. Vacuum trucks then transported the non-hazardous oily liquid to the permitted ERS facility in Lake Charles, Louisiana. The oily liquid contents waste from the buried barge was transported by Environmental Response Services vacuum trucks and taken to their recycling facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana.

ERRS also removed the bags of waste and any non-regulated material from inside the alkyne storage tank pump house into a staged lined roll off delivered by Chemical Waste Management of Sulphur, Louisiana.

On 10 June 2015 ERRS continued to remove bagged waste and solid waste from inside the alkyne storage tank pump house into the staged lined roll off for disposal. Remaining oily liquid

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in the alkyne storage tank pump house and around the perimeter of the buried barge was addressed by ERRS with an oil solidifier. The waste generated from the oil solidifier in the alkyne storage tank pump house and perimeter of the buried barge was manually removed and placed into the lined roll off for disposal. Liquid waste in the horizontal saddle tank 50 feet north of the buried barge was emptied into 5-gallon buckets and dumped into a north compartment on the buried barge via an opened hatch. Approximately 55 gallons of liquid waste from the horizontal saddle tank was removed and dumped into the buried barge for subsequent off-site disposal. ERRS completed removal activities of the oily liquid waste from the west side compartment and the three north side compartments of the buried barge, and from a diesel tank located inside the alkyne storage tank pump house into vacuum trucks for transportation and off-site disposal. Additionally, ERRS began removal of the sand/gravel road constructed during the previous removal activities.

After complete removal of the oily liquid, an oily sludge remained in the bottom of the three north side compartments, the west side compartment and the two south side compartments of the buried barge, and in the diesel tank located inside the alkyne storage tank pump house. EPA FOSC Hayes opted to have samples collected from the compartments on the buried barge that contained oily sludge via opened hatches, and from the diesel tank located inside the alkyne storage tank pump house for laboratory analysis and characterization of contents. Removal activities on the north compartments, the east compartment and the south compartments of the buried barge, and the diesel tank located inside the alkyne storage tank pump house were postponed until sample characterization was completed.

On 11 June 2015 ERRS completed the removal of bagged waste and solid waste from inside the alkyne storage tank pump house into the staged lined roll off for off-site disposal. Two solid waste roll offs were transported by Chemical Waste Management to their facility located at 7170 John Brannon Road in Sulphur, Louisiana for disposal.

A composite sample of oily sludge was collected from the three north compartments on the buried barge via opened hatches, and a grab sample of sludge was collected from the diesel tank inside the alkyne storage tank pump house by ERRS. ERRS delivered the collected samples to a GCAL courier in Jennings, Louisiana, for transport to their laboratory in Baton Rouge, Louisiana for analysis and characterization of contents. The diesel tank located in the

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alkyne storage tank pump house was deemed Resource Conservation and Recovery Act (RCRA) empty by ERRS after collection of the oily sludge sample for analysis.

Prior to departing the site, the earthen berm covered with poly sheeting and anchored, around the southeast perimeter of the buried barge and associated alkyne storage tank pump house was extended by ERRS to surround the north, east and south perimeter of the buried barge and associated alkyne storage tank pump house.

On 12 June 2015 START-3 and ERRS demobilized from site.

Removal Action – 5 October 2015 to 6 October 2015

On 5 October 2015, EPA FOSC Mark Hayes reactivated the START-3 and ERRS contractors to continue the OPA removal activities beginning the morning of 6 October 2015. Based on analytical results of samples collected from within the buried barge in September 2015, the oily liquid waste remaining in the buried barge contained elevated concentrations of PAHs, and TPH in the form of gasoline range organics (GRO) and diesel range organics (DRO), and thus deemed regulated under OPA (Appendix D).

On 6 October 2015, START-3 along with the ERRS contractors arrived at the SBA site to continue with the OPA removal action. START-3 provided technical support, performed air monitoring, and conducted written and photographic documentation of removal actions. ERRS utilized a heavy duty suction hose attached to a vacuum truck and transferred non-hazardous oily liquid waste from within the buried barge to the staged vacuum truck. The suction hose attached to the staged vacuum truck was initially placed inside the south side compartment located within the alkyne storage building located on the buried barge, and later the north compartment located in the locker room of the alkyne storage building on the buried barge via opened hatches.

After each vacuum truck was loaded for transport manifests were generated by the truck driver, verified by the T&D coordinator, and signed by the EPA FOSC. Vacuum trucks then transported the non-hazardous oily liquid to the permitted Environmental Response Services facility in Lake Charles, Louisiana. The oily liquid waste from the buried barge was transported by Environmental Response Services vacuum trucks and taken to their recycling facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana.

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Prior to departure from site, START-3 and the ERRS RM gauged the remaining oily liquid waste in the buried barge from opened hatches on all compartments. The measurements of the remaining potential quantity of oily liquid waste in the buried barge compartments are as follows:

- Port A (furthest west hatch on north side) = Depth of waste: 4 inches of sludge; Top of tank to top of waste: 8 feet 1 inch
- Port B (center hatch on north side) = Depth of waste: 5 inches of sludge; Top of tank to top of waste: 8 feet 1 inch
- Port C (furthest east hatch on north side) = Depth of waste: 3 feet 5 inches (8.5 inches of sludge and 2 feet 4 inches of water); Top of tank to top of waste: 5 feet 6 inches
- Starboard A (furthest west hatch on south side) = Depth of waste: 10 inches of oily water; Top of tank to top of waste: 7 feet 8 inches
- Starboard B (furthest west hatch on south side) = Depth of waste: 11.5 inches of sludge and oily water; Top of tank to top of waste: 7 feet 6 inches
- Starboard C (furthest west hatch on south side) = Depth of waste: 2 feet 10 inches of sludge; Top of tank to top of waste: 2 feet 6 inches
- Locker Room (two hatches in the locker room) = Depth of waste: 1 inch of sludge; Top of tank to top of waste: 3 feet 4 inches
- Stern Hold (not inside the building) = Depth of waste: 35 inches of oily water; Top of tank to top of waste: 5 feet.

On 06 October 2015 START-3 and ERRS demobilized from site.

4.3 Chronology of Oily Liquid and Solid Waste Removed

Waste Removed – 25 May 2015 to 29 May 2015

During the week of 25 May 2015 to 29 May 2015 an OPA removal was performed at SBA on the buried barge and associated alkyne storage tank pump house. A total of 51,524 gallons of oily liquid was removed from the buried barge and associated alkyne storage tank pump house.

On 26 May 2015 Clean Harbor Environmental and Sprint Removal vacuum trucks removed and transported 13,549 gallons of oily liquid waste to the Clean Harbor Wastewater Treatment

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Facility located at 52735 Clarke Road in White Castle, Louisiana, for disposal (US EPA ID Number: LAD982549636). A copy of the associated waste manifests is included in Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

On 27 May 2015 Clean Harbor Environmental vacuum trucks removed and transported 7,294 gallons of oily liquid waste to the Clean Harbor Wastewater Treatment Facility located at 52735 Clarke Road in White Castle, Louisiana, for disposal (US EPA ID Number: LAD982549636). A copy of the waste manifests has been included as Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

On 28 May 2015 Clean Harbor Environmental vacuum trucks removed and transported 18,942 gallons of oily liquid waste to the Clean Harbor Wastewater Treatment Facility located at 52735 Clarke Road in White Castle, Louisiana, for disposal (US EPA ID Number: LAD982549636). A copy of the waste manifests has been included as Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

On 29 May 2015 Clean Harbor Environmental and Sprint Removal vacuum trucks removed and transported 11,739 gallons of oily liquid waste to the Clean Harbor Wastewater Treatment Facility located at 52735 Clarke Road in White Castle, Louisiana, for disposal (US EPA ID Number: LAD982549636). A copy of the waste manifests has been included as Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

Waste Removed – 8 June 2015 to 12 June 2015

During the week of 8 June 2015 to 12 June 2015 the OPA removal action resumed at SBA on the buried barge and associated alkyne storage tank pump house. A total of 36,126 gallons of oily liquid was removed from the buried barge and associated alkyne storage tank pump house, and 20 tons of solid waste was removed from the alkyne storage tank pump house and surrounding area for disposal.

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On 9 June 2015 Environmental Response Services vacuum trucks removed and transported 14,291 gallons of oily liquid waste to their facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana, for disposal (US EPA ID Number: LAR000026534). A copy of the waste manifests has been included as Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

On 10 June 2015 Environmental Response Services vacuum trucks removed and transported 19,240 gallons of oily liquid waste to their facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana, for disposal (US EPA ID Number: LAR000026534). A copy of the waste manifests has been included as Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

On 11 June 2015 a Chemical Waste Management roll off truck removed and transported approximately 35 cubic yards of solid waste to their facility located at 7170 John Brannon Road in Sulphur, Louisiana, for disposal (US EPA ID Number: LAD000777201). A copy of the waste manifests has been included as Appendix E. The total solid waste volume disposed of by Chemical Waste Management in Sulphur, Louisiana was 20 tons. Per Bandera, after communications with the waste management representative in Lake Charles, Louisiana, the two roll off boxes received from SBA prior to solidification contained an approximate 9 tons and an approximate 6 tons respectively. Contents of both roll off boxes were solidified prior to burial, thus generating a total of 20 tons of solid waste.

On an unknown date in June 2015 an Environmental Response Services vacuum truck disposed of 2,595 gallons of rinsate at their facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana. A copy of the volume of rinsate disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

Waste Removed – 6 October 2015

On 6 October 2015 Environmental Response Services vacuum trucks removed and transported 18,204 gallons of oily liquid waste to their facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana, for disposal (US EPA ID Number: LAR000026534). A copy of the waste

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manifests has been included as Appendix E. A copy of the volume of oily liquid waste transported and disposed of as reconciled by Bandera from invoices and provided in a spreadsheet has been included as Appendix G.

4.4 Sampling and Analysis

On 29 May 2015 a composite sample of oil was collected from the three north compartments on the buried barge via opened hatches, and a composite sample of oily sludge and debris was collected from inside the alkyne storage tank pump house by ERRS and delivered to GCAL in Baton Rouge, Louisiana for laboratory analysis.

The composite oil sample collected from the north compartments of the buried barge was labelled Oil, and analyzed by GCAL for Toxicity Characteristic Leaching Procedure (TCLP) Metals, TCLP Volatile Organic Compounds (VOCs), TCLP Semi-Volatile Organic Compounds (SVOCs), Reactivity, Corrosivity and Ignitibility (RCI), Semi-Volatile Organic Compounds (SVOCs), Polychlorinated Biphenyls (PCBs), Toxicity, British Thermal Units (BTUs), Total Cyanide and Sulfides, Paint Filter and Total Metals The composite sample of oily sludge and debris collected from inside the alkyne storage tank pump house was labelled Oil w/Sludge & Debris, and analyzed by GCAL for TCLP Metals, TCLP VOCs, TCLP SVOCs, RCI, SVOCs, PCBs, Toxicity, BTUs, Total Cyanide and Sulfides, Paint Filter and Total Metals. A copy of the laboratory results has been included as Appendix D.

Laboratory results from GCAL indicated that TCLP results from both the Oil, and Oil with Sludge and Debris sample were below regulatory limits and thus characterized as non-hazardous waste (Appendix D).

Also on 29 May 2015, composite samples were collected from the three north compartments of the buried barge via opened hatches, and a composite sample was collected from the two south compartments of the buried barge via opened hatches by ERS for laboratory analysis and characterization by Chemtex in Sulphur, Louisiana.

The composite oily liquid samples collected from the north side compartments of the buried barge was labelled Oil 1, and analyzed by Chemtex for PCBs and Flashpoint. The composite oily liquid sample collected from the south side of the buried barge was labelled Oil 2, and

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analyzed by Chemtex for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Flashpoint and Total Chlorides. A copy of the laboratory results has been included as Appendix D.

Based on GCAL and Chemtex analytical results ERS removed and transported the remaining oily liquid waste from the buried barge and alkyne storage tank pump house to their facility located at 8583 Joe Ledoux Road in Lake Charles, Louisiana, for recycling.

On 11 June 2015 a composite sample of oily sludge was collected from the three north compartments on the buried barge via opened hatches, and a grab sample of oily sludge was collected from the diesel tank inside the alkyne storage tank pump house by ERRS and delivered to a GCAL courier in Jennings, Louisiana, for transport to their laboratory in Baton Rouge, Louisiana for analysis and characterization of contents.

The composite oily sludge sample collected from the north compartments of the buried barge was labelled SBA – Oil Sludge – 061115, and analyzed by GCAL for TCLP Metals, TCLP VOCs, TCLP SVOCs , VOCs, SVOCs, PCBs, Total Metals, Toxicity, BTUs and Sulfides. The grab sample from the diesel tank located inside the alkyne storage tank pump house was labelled SBA – Diesel Tank – 061115, and analyzed by GCAL for TCLP Metals, TCLP VOCs, TCLP SVOCs, VOCs, SVOCs, PCBs, Total Metals, Toxicity, BTUs and Sulfides. A copy of the laboratory results has been included as Appendix D.

GCAL analytical results for the sludge sample SBA – Oil Sludge – 06111, contained elevated levels of benzene and vinyl chloride above regulatory limits for non-hazardous waste.

4.5 Air Monitoring

START-3 conducted air monitoring during all OPA removal activities utilizing a RAE Systems MultiRAE Multi-Gas detector configured to monitor oxygen, carbon monoxide, hydrogen sulfide, lower explosive limit (LEL) of methane, and volatile organic compounds (VOCs).

Hazardous constituents were not detected above background levels during the removal action for 25 May 2015 to 29 May 2015 and 08 June 2015 to 12 June 2015. During the 05 October 2015 to 06 October 2015 OPA removal action high volatile organic compound (VOC) readings (peak of 206 part per million) were recorded in the locker room located in the alkyne storage building on the buried barge. Due to the high concentrations of detected VOCs, the ERRS

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contractors donned respirators while conducting removal activities in the locker room located in the alkyne storage building on the buried barge.

4.6 Site Restoration

On June 10 2015 ERRS began removal of the sand/gravel road that was built during the week of 25 June 2015 for vacuum trucks to access the buried barge and associated alkyne storage tank pump house during the OPA removal activities. Earthen berms that were erected along the constructed sand/gravel road were removed and the sand/gravel graded to the sites original contour. On 11 June 2015 ERRS completed all site restoration.

5 SUMMARY OF REMOVAL ACTION

The EPA ERRS team assessed and removed 105,858 gallons of non-hazardous liquid waste from the buried barge and associated alkyne storage tank pump house, and 20 tons of non-hazardous solid waste from the alkyne storage tank pump house and perimeter area of the buried barge. The oily liquid waste was transported by Clean Harbors Environmental and Sprint Removal from 26 May 2015 to 29 May 2015, and by Environmental Response Services from 9 June 2015 to 10 June 2015 and 05 October 2015 to 06 October 2015, for disposal at an approved disposal facility. The solid waste was transported by Chemical Waste Management on 11 June 2015 for disposal at an approved disposal facility. These OPA removal actions resulted in the removal of chemical hazards that presented a potential threat to public health or welfare of the United States and/or the environment.

The SBA site OPA removal activities were concluded on 06 October 2015. In summary, the following removal actions took place at the SBA site.

Transported and Disposed Off-Site

- Approximately 105,858 gallons of non-hazardous, non-Department of Transportation (DOT) regulated oily liquid.
- Approximately 20 tons of non-Resource Conservation and Recovery Act (RCRA) regulated solids.

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This final removal action report was prepared as part of the requirements of Technical Direction Document (TDD) 10/Dynamac-077-15-001 and serves as documentation of removal work completed to date.

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Attachment 5

February 4, 2016 CERCLA Removal Report for SBA Shipyard

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) REMOVAL REPORT
For
SBA SHIPYARD
9040 CASTEX LANDING ROAD
JENNINGS, JEFFERSON DAVIS PARISH, LOUISIANA

CERCLIS Identification Number: LAD008434185

Prepared for
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, Texas 75202

Date Prepared:

February 4, 2016

Prepared by
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COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) REMOVAL REPORT
For
SBA Shipyard

9040 CASTEX LANDING ROAD
JENNINGS, JEFFERSON DAVIS PARISH, LOUISIANA

Date Prepared:

February 4, 2016

Reference Numbers

Contract No.:	EP-W-06-077
TDD No.:	1/Dynamac-077-15-003
CERCLIS No.:	LAD008434185
SSID No.:	A6FX
EPA OSC:	Mark Hayes
START PjM:	Karen Berecz

Prepared by:

Karen Berecz
CSS-Dynamac START-3 Project Manager **Date:** 02/04/2016

Approved by:

Steve Cowan
CSS-Dynamac START-3 Program Manager **Date:** 02/04/2016

☒ The EPA Task Monitor provided final approval of this report

☐ The EPA Task Monitor did not provide final approval of this report prior to the completion date of the Technical Direction Document.

EXECUTIVE SUMMARY

CSS-Dynamac (Dynamac), the Superfund Technical Assessment and Response Team (START-3) contractor, was tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response Branch (PRB), under Contract Number EP-W-06-077, Technical Direction Document (TDD) Number 1/Dynamac-077-015-003 (Appendix A), to perform removal oversight and to provide technical assistance during the Comprehensive Environmental Response, Compensation, and Liability Act (CECLA) non-time critical removal action at the SBA Shipyard (SBA) site located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana. The CERCLA non-time critical removal action was conducted by Bandera Resources Inc. (Bandera) and Environmental Restoration LLC (ER) as team subcontractors to Environmental Quality Management (EQM), the EPA Emergency and Rapid Response Services (ERRS) contractor. Dynamac START-3 conducted on-site air monitoring, provided technical assistance and performed written and photographic documentation of removal activities from 01 September 2015 to 04 September 2015.

During the period of 01 September 2015 to 04 September 2015 the EPA response team assessed and removed approximately 18,200 gallons of hazardous sludge and oily liquid waste from the buried barge, and 25 yards of non-hazardous solid waste from the alkyne storage tank pump house and perimeter area of the buried barge. The sludge and oily liquid waste was transferred from the buried barge and placed temporarily in vacuum boxes that would be removed at a later date when the disposal facility had availability. Solid waste was transported by Chemical Waste Management on 04 September 2015 for disposal at a regulatory-approved disposal facility.

The SBA Site CERCLA non-time critical removal activities were concluded on 09 November 2015 by ERRS contractors. In summary, the following removal actions took place at the SBA site.

Transported and Disposed Off-site

- Approximately 7,145 gallons of hazardous liquid sludge waste;
- Approximately 2,145 gallons of hazardous liquid waste; and
- Approximately 25 yards of non-Resource Conservation and Recovery Act (RCRA) regulated solids.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) REMOVAL REPORT
For
SBA SHIPYARD
9040 Castex Landing Lane
Jennings, Jefferson Davis Parish, Louisiana

CERCLIS Number: LAD008434185

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ABBREVIATIONS AND ACRONYMS

BANDERA	Bandera Resources Inc.
BGS	Below Ground Surface
CDD	Chlorinated Dibenzo-p-Dioxins
CDF	Chlorinated Dibenzofurans
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
DRO	Diesel Range Organic
EPA	U.S. Environmental Protection Agency
EQM	Environmental Quality Management
ER	Environmental Restoration LLC
ERT	EPA Environmental Response Team
ERRS	EPA Emergency and Rapid Response Services
ESI	Expanded Site Inspection
FOSC	Federal On-Scene Coordinator
GCAL	Gulf Coast Analytical Laboratory
GPS	Global Positioning System
GRO	Gasoline Range Organics
HASP	Health and Safety Plan
HWD	Hazardous Waste Division
LDEQ	Louisiana Department of Environmental Quality
LEL	Lower Explosive Limits
LTU	Land Treatment Unit
NRC	National Response Center
OPA	Oil Pollution Act
ORO	Oil Range Organics
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PDF	Portable Document Format
PjM	Project Manager

RCRA	Resource Conservation Recovery Act
RCI	Reactivity, Corrosivity and Ignitibility
RFI	RCRA Facility Investigation
RM	Response Manager
RPB	Response and Prevention Branch
SARA	Superfund Amendments and Reauthorization Act
SAM	Site Assessment Manager
SBA	SBA Shipyard
SI	Site Inspection
SWD	Solid Waste Division
START	Superfund Technical Assessment and Response Team
SVOC	Semi-Volatile Organic Compounds
T&D	Transportation and Disposal
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TDD	Technical Direction Document
TPH	Total Petroleum Hydrocarbons
USCG	United States Coast Guard
USGS	United States Geological Survey
VOC	Volatile Organic Compounds

1 INTRODUCTION

CSS-Dynamac, the Superfund Technical Assessment and Response Team (START-3) contractor, was tasked by the U.S. Environmental Protection Agency (EPA) Region 6 Response and Prevention Branch (RPB), under Contract Number EP-W-06-077, Technical Direction Document (TDD) Number 1/Dynamac-077-15-003 to perform removal oversight and technical assistance during the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) non-time critical removal action at the SBA Shipyard (SBA) Site located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana. A CERCLA non-time critical removal was based on Gulf Coast Analytical Laboratory (GCAL) analytical results from sludge samples collected during a June 2015 Oil Pollution Act (OPA) removal action, and characterized as CERLCA substances (Appendix D).

The SBA Site is an inactive and abandoned shipyard facility whose entrance is located at Latitude 30.16415º North and Longitude 92.61588º West, as determined by a Trimble Geo Explorer 3 Global Positioning System (GPS) unit. The former SBA facility is situated on approximately 98 acres of land located in a rural-industrial area. The site is bordered by residential properties to the north, south by wetlands, west by rural land and wetlands, and east by the Mermentau River. The site is located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana, at the end of State Highway 3166 and adjacent to the west bank of the Mermentau River. Access to the property is restricted by a locked gate and wire fencing.

A Site Location Map is provided as Figure 1, and a Site Aerial Map is provided as Figure 2. All figures and appendices are provided as separate portable document format (PDF) files. CSS-Dynamac START-3 (START-3) provided technical assistance from 01 September 2015 to 04 September 2015. START-3 has prepared this document to describe the technical scope of work that was completed as part of the TDD.

2 PURPOSE AND SCOPE

The purpose of the CERCLA non-time critical removal action at the SBA Site was to remove hazards substances that may present an imminent and substantial danger to public health and welfare of the United States in accordance with the Comprehensive Environmental Response,

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Compensation, and Liability Act (CERCLA) and consistent with *40 Code of Federal Regulations (CFR) Part 300*.

The objective of the CERCLA non-time critical removal at the SBA Site was to remove hazardous sludge and oily liquid waste containing benzene, vinyl chloride, cresols, arsenic, barium, chromium, lead, mercury, sulfide, total organic halides and cyanide from a buried barge and associated alkyne storage pump house, and transport the waste materials to a regulatory-approved disposal facility for disposal.

The scope of work defined in the TDD (Appendix A) included written and photographic documentation and technical assistance. CSS-Dynamac START-3 was specifically tasked (1) to review completeness of disposal documentation such as manifests, waste profile data, and other information; (2) to provide air monitoring, and (3) to develop a site-specific health and safety plan (HASP).

The EPA Federal On-scene Coordinator (FOSC) for the site is Mark Hayes, and the START-3 Project Manager (PjM) is Karen Berecz.

3 SITE BACKGROUND

Information regarding site location, background information, and site description is presented in the following subsections.

3.1 Site Location and Description

The SBA Site is situated on approximately 98 acres of land in a rural-industrial area located at 9040 Castex Landing Road in Jennings, Jefferson Davis Parish, Louisiana. The geographic coordinates at the abandoned office and facility entrance are Latitude 30.16415° North and Longitude 92.61588° West. The property is located in Jefferson Davis Parish and is referenced on the Mermentau Quadrangle Louisiana, U.S. Geological Survey (USGS) 7.5 minute quadrangle.

The SBA facility is inactive and abandoned. SBA was an industrial location for waste and fuel storage associated with past barge cleaning operations. The SBA Site was used for construction, repair, retrofitting, and cleaning of barges from the mid 1960's to 1999 (Figure 3). In 1993, SBA Shipyards leased approximately 30 acres of the facility to Leevac Marine. Since

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that time, Leevac Marine has purchased the northern portion of the facility that was used for construction and repair of barges and other vessels. The southern portion of the facility is owned by Louis and Suzanne Smailhall (Figure 4). Three barge slips and a dry dock are located on the Mermentau River. The slips were used to dock barges during cleaning and/or repairs. Barges serviced at SBA typically held diesel, coal tar, crude oil, gasoline, asphalt, creosote, miscellaneous chemicals or agricultural related materials such as tallow, corn oil or soybean. Chlorinated solvents were the primary constituents used in the cleaning process of the barges at SBA. Except for portions of the property possibly used for livestock grazing there is no known industrial use for SBA prior to operations beginning in the mid 1960's.

Wastes from the barge cleaning operations were managed in a waste management area that included four impoundments, a land treatment unit (LTU) and storage tanks. Wastes from the barge cleaning, for the most part, consisted of hydrocarbon residues. In addition to the hydrocarbons other wastes on site included asphalt, creosote, methyl-methacrylate, methanol, caustic soda, styrene, coal tar, vinyl acetate, carbon tetra chloride, ethyl acrylate and acrylates. During the barge cleaning process the hydrocarbons were separated from the water into surface impoundments that were known as Oil Pit, Water Pit 1, Water Pit 2 and Water Pit 3. Water was recycled to barge cleaning and some of the water was converted to steam for cleaning operations. Aboveground oil/water separators and storage tanks eventually replaced the functions of the surface impoundments. A Site Plan Map is provided as Figure 3.

The SBA Site is located at the end of State Highway 3166 and adjacent to the west bank of the Mermentau River (Figure 1). The site is bordered by residential properties to the north, south by wetlands, west by rural land and wetlands, and east by the Mermentau River. A Site Aerial Map is provided as Figure 2. Access to the property is restricted by a locked gate and wire fencing.

3.2 Background Information

Information regarding the SBA Site has been obtained through previous investigations by the Louisiana Department of Environmental Quality (LDEQ), United States Coast Guard (USCG), EPA Site Assessment Manager (SAM) and START-3 site inspections conducted under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and EPA Federal On-Scene Coordinator (FOSC) and START-3 removal assessment activities.

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In 1980, SBA submitted a RCRA Part A Application to EPA indicating that SBA did not treat, store or dispose of hazardous waste. In late 1989, SBA began remediation activities on the four impoundments that were in service since 1968. Visual indications of the possible presence of contamination were observed during subsurface investigations conducted from November 1989 to February 1990 by SBA contractors. In addition, four monitor wells were also installed at the time. In 1990, SBA submitted a notification to LDEQ as a generator of hazardous waste. Subsurface contamination was observed at the SBA site by LDEQ on February 1990. In August 1990, the LDEQ, Solid Waste Division (SWD) issued an Order (OC-159) to SBA to close the waste management units. A memo was written in July 1994 that either LDEQ Hazardous Waste Division (HWD) or EPA would handle closure activities for the SBA site. In 1994 the EPA Region 6 RCRA Enforcement Branch assumed the role for regulatory authority for the site and SBA hired a contractor to conduct a RCRA Facility Investigation (RFI). SBA submitted an RFI work plan in 1996. In December 2002 EPA issued an Order and Agreement for Interim Measures/Removal Action (IM/RA) of Hazardous/Principal Threat Wastes at SBA Shipyards, Inc., pursuant to Resource Conservation Recovery Act (RCRA) Section 3008(h).

During October 2012, Dan Chapman, LDEQ and MSTC Hutton and MST2 Swindle of USCG received notification via the National Response Center (NRC) that a barge located at SBA was being scrapped and oil was leaking from the breached hull onto the surrounding soil. It was also noted that those working on the barge were setting fire to the discharge oil in place, and this had been occurring for a couple of weeks (NRC Report # 1028084). Once on scene, LDEQ and USCG noted no work was being conducted but there was evidence of previous work having been done, specifically scrapping of a barge. During a revisit to SBA it was further evident that a barge was being scrapped. During conversations it was determined that operations would cease until all free-floating oil and waste water was removed. In late October 2012, LDEQ, USCG and FOSC Roberto Bernier of the US EPA met on-scene to discuss the agreed upon course of action to monitor the responsible party led contractor operations for removal of oil and waste water.

In December 2012 START-3 conducted a site reconnaissance inspection at the SBA Site. Brenda Nixon-Cook, EPA SAM, Mark Miller and Tommy Dolan, LDEQ representatives accompanied START-3 on the inspection. At the time of inspection tar-like material was observed in soils to a depth of 3 to 4 feet below ground surface (bgs) near the onsite ditches.

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Evidence of the former pits and former land treatment unit were not observed during the reconnaissance. Four monitoring wells were present on the western portion of the property. A partially buried barge, an asphalt tank, and partially scrapped metal from a former 10,000 barrel tank remained onsite.

During the August 2013 Site Inspection (SI) at the SBA Shipyard conducted by START-3 and EPA SAM Brenda Cook, soil was collected to 16 bgs, ground water, surface water and sediment samples were also collected to assess the migration of contamination at SBA. A waste sample was collected at the western edge of the partially buried barge from exposed waste, and characterized as asphaltic, tarry and oily. A second waste sample was collected from an oily matrix substance leaking from the southwest corner of the alkyne storage pump house associated with the buried barge. The waste samples from the partially buried barge, and alkyne storage pump house associated with the buried barge were collected to identify the source material and contamination at SBA. The polycyclic aromatic hydrocarbons (PAHs), acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, phenol, and pyrene, were detected in waste samples from the partially buried barge and the alkyne storage pump house associated with the buried barge, soils from the former waste impoundments, and the barge slips.

In September 2014 EPA SAM, Brenda Nixon-Cook, and START-3 conducted an Expanded Site Inspection (ESI). River sediment samples from the Mermentau River and wetland sediment samples were collected to identify and assess the migration of contamination at SBA in the surface water pathway. Additional ground water was collected on-site to assess the migration of contamination to the groundwater pathway. Waste samples were collected from the northwestern edge of the partially buried barge and characterized as hard and oily with a hydrocarbon odor; and from an area of stained soil near the old boiler near the southwest corner of the alkyne storage pump house associated with the buried barge and characterized as a waste sample. Analytical data from the sediment and wetland samples contained PAHs that meet observed released criteria. The waste samples collected near the southwest corner of the alkyne storage pump house, and the northwestern edge of the partially buried barge contained elevated levels of Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans

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(CDFs) to include: 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin, octachlorodibenzo-p-dioxin, 1,2,3,4,7,8-hexachlorodibenzofuran, 1,2,3,6,7,8-hexachlorodibenzofuran, 2,3,4,6,7,8-hexachlorodibenzofuran and 2,3,4,7,8-pentachlorodibenzofuran.

In October 2014 EPA FOSC Mark Hayes and START-3 mobilized to the SBA Site to assess the buried barge and associated alkyne storage tank pump house. START-3 collected two waste samples from the alkyne storage tank pump house visible on the buried barge, and one on-site liquid sample from the overhead horizontal saddle tank located 50 feet north of the pump house structure. START-3 ascertained the following measurements of the buried barge associated with the alkyne storage tank pump house based on visible portions of the buried barge:

- 50 feet (length) x 20 feet (width) x 7.6 feet (depth). Depth of the buried barge was measured from a hatch opening on the east side of the alkyne storage tank pump house.

Analytical results indicated that the fluid and sludge media samples collected from the alkyne storage tank pump house associated with the buried barge contained elevated concentrations of PAHs to include 1,1´-biphenyl, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene and pyrene.

4 REMOVAL ACTIVITIES

The following sections provide a summary of the CERCLA non-time critical removal activities conducted at the SBA Site from 01 September 2015 to 04 September 2015.

4.1 Introduction

The CERCLA non-time critical removal action activities were initiated under the direction of EPA FOSC Mark Hayes. The ERRS contractor was EQM who was represented by team subcontractors, Bandera and ER. Transportation and Disposal (T&D) was supervised under Response Manager (RM) Don Edgington with Bandera, using subcontractors from Environmental Restoration (ER). This team was responsible for conducting the CERCLA non-time critical removal activities at the site. Removal activities included the complete removal and off-site disposal of hazardous sludge and oily liquid waste from within the buried barge, and associated alkyne storage tank pump house.

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In preparation for the CERCLA non-time critical removal activities, a site-specific HASP was prepared and approved by CSS-Dynamac Health and Safety Manager. During the CERCLA non-time critical removal activities, START-3 personnel documented field activities using a site-dedicated field logbook, digital photographs and PolReps provided as Appendices C, B, and F respectively.

4.2 Chronology of Removal Action

On 31 August 2015, EPA FOSC Mark Hayes activated START-3 and the ERRS contractors to mobilize and conduct a CERCLA non-time critical removal activity beginning the morning of 01 September 2015. The chronology of the CERCLA non-time critical removal activities conducted at the SBA site and documented by START-3 from 01 September 2015 to 04 September 2015 have been included as Appendix B and C.

On 01 September 2015, EPA FOSC Bryant Smalley in place of EPA FOSC Mark Hayes, along with START-3, and the ERRS contractors arrived at the SBA site to perform a CERCLA non-time critical removal action. START-3 provided technical support, performed air monitoring, and conducted written and photographic documentation of removal actions. ERRS utilizing a heavy duty suction hose attached to a vacuum box began the transfer of hazardous sludge and oily liquid waste from within the buried barge. The process of transferring hazardous sludge and oily liquid waste from the buried barge to the vacuum box involved a vacuum truck with a heavy duty suction hose attached to a port on one side of the vacuum box, while another heavy duty suction hose used by ERRS was attached to a port on the opposite side of the vacuum box. The suction hose used by ERRS was placed inside the port side compartments of the buried barge via opened hatches, and the vacuum truck was then engaged and the transferring of hazardous sludge and oily liquid waste to the vacuum box initiated. Removal of waste from the port side compartments of the buried barge filled five (5) vacuum boxes with approximately 2,400 – 2,600 gallons of hazardous sludge and oily liquid waste in each vacuum box.

All hazardous sludge and oily liquid waste removed from the port side of the buried barge was accessed and gauged by the ERRS RM and START-3 from three hatch openings along the port side of the buried barge prior to removal activities: the furthest east hatch on port side, the center hatch on port side, and the furthest west hatch on port side. Measurements made by the ERRS RM and START-3 of the hazardous sludge and oily liquid waste remaining in the

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compartment holds on the port side of the buried barge are as follows: furthest east hatch on port side = 4 feet 4 inches, center hatch = 2 feet 10 inches, furthest west hatch on port side = 17 inches.

On 02 September 2015, EPA FOSC Bryant Smalley, START-3, and the ERRS contractors arrive at the SBA site to continue the CERCLA non-time critical removal action. START-3 continued to provide technical support, perform air monitoring, and conduct written and photographic documentation of removal actions. ERRS restaged the five (5) half full vacuum boxes from yesterday, along the on-site road near the entrance for later transportation and disposal by Clean Harbors at the Deer Park Facility located in LaPorte, Texas upon disposal facility availability. ERRS also continued the removal of hazardous sludge and oily liquid waste from compartments on the port side of the buried barge into a remaining empty vacuum box. In addition, ERRS began the removing of hazardous sludge and oily liquid waste from within the alkyne storage tank pump house on the buried barge.

On 03 September 2015, EPA FOSC Bryant Smalley, START-3, and the ERRS contractors arrives at the SBA site to continue the CERCLA non-time critical removal action. START-3 continued to provide technical support, perform air monitoring, and conduct written and photographic documentation of removal actions. During removal activities ERRS discovered a small hole in the starboard side locker room floor of the alkyne storage tank pump house of the buried barge. The small hole in the locker floor of the alkyne storage tank pump house on the buried barge was a hatch, welded shut. ERRS also discovered another hatch on the port side of the locker room in the alkyne storage tank pump house on the buried barge. ERRS was unable to open the hatch on the starboard side since it was welded shut, but was able to remove the hatch on the port side compartment located on the floor of the locker room in the alkyne storage tank pump house on the buried barge. It was determined that this was one storage compartment with two hatches on the buried barge. Measurements made by the ERRS RM and START-3 of the storage compartment beneath the locker room of the alkyne storage tank pump house on the buried barge contained approximately 7,000 gallons of an oily liquid mixture. In addition, ERRS discovered a third hatch on the starboard side of the buried barge in the machine shop of the alkyne storage tank pump house on the buried barge. The third hatch was located beneath a sheet of metal at the entrance to the machine shop of the alkyne storage tank pump house on the buried barge. The oily liquid mixture gauged by the ERRS RM and

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START-3 in the compartment beneath the machine shop area in the alkyne storage tank pump house on the buried barge contained approximately 16,000 gallons.

ERRS continued removal of hazardous sludge and oily liquid waste to staged vacuum boxes from the port and starboard compartments in the locker room, and starboard compartment in the machine shop of the alkyne storage tank pump house on the buried barge. Once both vacuum boxes were half full with hazardous sludge and oily liquid waste they were restaged with the other five half full vacuum boxes along the on-site road near the entrance for later transportation and disposal by Clean Harbors at the Deer Park Facility located in LaPorte, Texas upon disposal facility availability. Also, ERRS placed all bagged waste and solid waste generated from removal activities in the alkyne storage tank pump house into a staged lined roll-off container for later transportation and off-site disposal by Chemical Waste Management at the Sulphur, Louisiana facility.

Finally, ERRS continued the reconstruction of the berm around the perimeter of the alkyne storage tank pump house on the buried barge. Visqueen was placed over the machine shop entrance of the alkyne storage tank pump house on the buried barge to prevent water from seeping in. All hatches on the buried barge were closed and locked, except the hatch located in the machine shop of the alkyne storage building on the starboard side of the buried barge. EPA FOSC Smalley requested START-3 to collect composite samples on 04 September 2015 for waste characterization and profiling from the hatch in the locker room and machine shop in the alkyne storage tank pump house on the buried barge. A final assessment and gauging of compartments from the seven open hatches by the ERRS RM and START-3 estimated the remaining waste in the buried barge at approximately 30,700 gallons.

On 04 September 2015 START-3 and the ERRS contractors arrive at the SBA site to continue the CERCLA non-time critical removal action. START-3 continued to provide technical support, perform air monitoring, conduct written and photographic documentation of removal actions, and collect samples for waste characterization and profiling. To prevent rain from entering the building ERRS placed and secured visqueen over all window openings on the alkyne storage tank pump house on the buried barge. ERRS completed the reconstruction of the berm around the perimeter of the alkyne storage tank pump house on the buried barge, once again completely covering the berm with visqueen. ERRS also completed the removal of bagged

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waste and solid waste from inside the alkyne storage tank pump house into the staged lined roll off container later removed by a Chemical Waste Management truck and taken to their facility located at 7170 John Brannon Road in Sulphur, Louisiana for disposal.

START- 3 collected composite samples for waste characterization and profiling from the port side hatch in the locker room and the starboard side hatch in the machine shop of the alkyne storage tank pump house on the buried barge. The port side hatch in the locker room and starboard hatch in the machine shop of the alkyne storage tank pump house on the buried barge were closed and locked after START-3 collected samples for analysis. The composite samples were delivered to TestAmerica Laboratories Inc. in Baton Rouge, Louisiana for chemical analysis. START-3 and ERRS demobilized from site.

4.3 Chronology of Hazardous Oily Liquid and Solid Waste Removed

During the week of 01 September 2015 to 04 September 2015 a CERCLA non-time critical removal was performed at SBA on the buried barge and associated alkyne storage tank pump house, with hazardous sludge and oily liquid waste being staged in seven, half full vacuum boxes on-site for later transportation and disposal (T&D) by Clean Harbors Environmental to the Deer Park Facility located in LaPorte, Texas, upon disposal facility availability. In addition, 25 yards of non-hazardous solid waste was removed from the alkyne storage tank pump house and surrounding area for disposal by Chemical Waste Management at the facility in Sulphur, Louisiana.

On 04 September 2015 a Chemical Waste Management roll off truck removed and transported approximately 25 yards of solid waste on manifest WM-20006655 to their facility located at 7170 John Brannon Road in Sulphur, Louisiana, for disposal (US EPA ID Number: LAD000777201). A copy of the waste manifest has been included as Appendix E.

During the week of 03 November 2015 to 09 November 2015 T&D activities were completed, with oversight provided by ERRS. An estimated total of 7,145 gallons of hazardous liquid sludge waste and 2,415 gallons of hazardous liquid waste were removed from the seven staged vacuum boxes on-site by Clean Harbors for disposal at the Deer Park Facility located at 2027 Independence Parkway South in LaPorte, Texas.

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On 03 November 2015, Clean Harbor Environmental (US EPA ID MAD039322250) removed and transported an estimated 4,500 gallons of hazardous liquid waste on manifest 001710891 FLE, and an estimated 25 yards of hazardous liquid sludge waste on manifest 001710897 FLE to the Clean Harbor Deer Park LLC facility located at 2027 Independence Parkway South in LaPorte, Texas, for disposal (US EPA ID Number: TXD055141378). A copy of the waste manifests has been included as Appendix E. The volume transported and disposed of by Clean Harbor at the LaPorte, Texas facility on 03 November 2015 was 2,500 gallons of hazardous liquid sludge and 100 gallons of contact waste water as calculated by the RM and provided in a waste inventory log and included as Appendix G.

On 04 November, 2015 Clean Harbor Environmental (US EPA ID MAD039322250) removed and transported an estimated 25 yards of hazardous liquid sludge waste on manifest 005320121 FLE to the Clean Harbor Deer Park LLC facility located at 2027 Independence Parkway South in LaPorte, Texas, for disposal (US EPA ID Number: TXD055141378). A copy of the waste manifest has been included as Appendix E. The volume transported and disposed of by Clean Harbor at the LaPorte, Texas facility on 04 November 2015 was 2,500 gallons of hazardous liquid sludge and 100 gallons of contact waste water as calculated by the ERRS RM and provided in a waste inventory log and included as Appendix G.

On 05 November 2015, Clean Harbor Environmental (US EPA ID MAD039322250) removed and transported an estimated 3,500 gallons of hazardous liquid waste on manifest 005320135 FLE, and an estimated 5 yards of hazardous liquid sludge waste from the RCRA empty vacuum box on manifest 005320122 FLE to the Clean Harbor Deer Park LLC facility located at 2027 Independence Parkway South in LaPorte, Texas, for disposal (US EPA ID Number: TXD055141378). A copy of the waste manifests has been included as Appendix E. The volume transported and disposed of by Clean Harbor at the LaPorte, Texas facility on 05 November 2015 was 20 gallons of hazardous liquid sludge and 30 gallons of contact waste water as calculated by the ERRS RM and provided in a waste inventory log and included as Appendix G.

On 06 November 2015, Clean Harbor Environmental (US EPA ID MAD039322250) removed and transported an estimated 5 yards of hazardous liquid sludge waste from the RCRA empty vacuum box on manifest 005230123 FLE to the Clean Harbor Deer Park LLC facility located at

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2027 Independence Parkway South in LaPorte, Texas, for disposal (US EPA ID Number: TXD055141378). A copy of the waste manifests has been included as Appendix E. The volume transported and disposed of by Clean Harbor at the LaPorte, Texas facility on 06 November 2015 was 20 gallons of hazardous liquid sludge and 30 gallons of contact waste water as calculated by the RM and provided in a waste inventory log and included as Appendix G.

On 09 November 2015, Clean Harbor Environmental (US EPA ID MAD039322250) removed and transported an estimated 2,000 gallons of hazardous liquid waste on manifest 005320136 FLE, an estimated 10 yards of hazardous liquid sludge waste from the RCRA empty vacuum box on manifests 005320125 FLE and 005320126 FLE, and an estimated 25 yards of hazardous liquid sludge waste on manifest 005320124 FLE to the Clean Harbor Deer Park LLC facility located at 2027 Independence Parkway South in LaPorte, Texas, for disposal (US EPA ID Number: TXD055141378). A copy of the waste manifests has been included as Appendix E. The volume transported and disposed of by Clean Harbor at the LaPorte, Texas facility on 09 November 2015 was 2,105 gallons of hazardous liquid sludge and 2,155 gallons of contact waste water as calculated by the RM and provided in a waste inventory log and included as Appendix G.

4.4 Sampling and Analysis

On 04 September 2015 START-3 collected two composite samples of liquid waste for waste characterization and profiling. One liquid waste composite sample was collected from the port side hatch in the locker room and the second liquid waste composite sample was collected from the starboard side hatch in the machine shop of the alkyne storage tank pump house on the buried barge.

The composite sample collected from the port side hatch in the locker room of the alkyne storage tank pump house was labelled SBA-PLR-002, and analyzed by Test America for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-volatile Organic Compounds (SVOCs), Polychlorinated Biphenyls (PCBs), RCRA metals and mercury (Hg), Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, Total Petroleum Hydrocarbons (TPH) as Diesel Range Organics (DRO), Gasoline Range Organics (GRO) and Motor Oil Range Organics (ORO), Ignitibility, and Oil &Grease.

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The composite sample collected from the starboard side hatch in the machine shop of the alkyne storage tank pump house on the buried barge was labelled SBA-SBHC-001, and also analyzed by Test America for TCL VOCs, TCL SVOCs, PCBs, RCRA metals and Hg, TCLP VOCs, TCLP SVOCs, TCLP metals, TPH as DRO, GRO and ORO, Ignitibility, and Oil & Grease.

Laboratory results from TestAmeica indicated that results from both liquid waste samples collected contained elevated concentrations of PAHs and TPHs in the form of diesel (DRO), motor oil (ORO), and gasoline range organics (GRO) (Appendix D). Based on Test America analytical results the remaining liquid waste in the buried barge and associated alkyne storage tank pump house was characterized as chemical constituents not associated and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and consistent with *40 Code of Federal Regulations (CFR) Part 300*.

As evidenced by the analytical results of the liquid waste samples collected from the port side hatch in the locker room, and the starboard side hatch in the machine shop of the alkyne storage tank pump house on the buried barge the CERCLA removal on the buried barge and associated alkyne tank pump house was complete.

4.5 Air Monitoring

START-3 conducted air monitoring during the CERCLA non-time critical removal activities utilizing a RAE Systems MultiRae Multiple Gas Detector configured to monitor oxygen, carbon monoxide, hydrogen sulfide, lower explosive limits (LEL) of methane, and volatile organic compounds (VOCs). Hazardous constituents were not detected above background levels during the CERCLA non-time critical removal action.

4.6 Site Restoration

On 2 September 2015 ERRS started improvements to the earthen berm around the perimeter of the alkyne storage tank pump house by removing the torn and weathered visqueen covering the berm. On 3 September 2015 ERRS continued the reconstruction of the earthen berm around the perimeter of the alkyne storage tank pump house on the buried barge. Additional on-site soil was added to areas of the earthen berm where sloughing had occurred. Additionally, visqueen was placed over the machine shop entrance of the alkyne storage tank pump house on the buried barge to prevent water from seeping in. On 4 September 2015 ERRS placed and

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secured visqueen over all window openings on the alkyne storage tank pump house on the buried barge to prevent rain from entering the structure. ERRS also completed the reconstruction of the berm around the perimeter of the alkyne storage tank pump house on the buried barge, once again completely covering the berm with visqueen.

5 SUMMARY OF REMOVAL ACTION

During the period of 01 September 2015 to 04 September 2015 the EPA response team assessed and removed approximately 18,200 gallons of hazardous sludge and oily liquid waste from the buried barge, and 25 yards of non-hazardous solid waste from the alkyne storage tank pump house and perimeter area of the buried barge. The sludge and oily liquid waste was transferred from the buried barge and placed temporarily in vacuum boxes that would be removed at a later date when the disposal facility had availability. The solid waste was transported by Chemical Waste Management on 04 September 2015 for disposal at a regulatory-approved disposal facility.

ERRS and their contractor removed approximately 7,145 gallons of hazardous liquid sludge waste and 2,145 gallons of hazardous liquid waste from the vacuum boxes temporarily staged at the SBA site during the week of 01 September 2015. The sludge and liquid waste was transported by Clean Harbors Environmental from 03 November 2015 to 09 November 2015 for disposal at a regulatory-approved disposal facility. This CERCLA non-time critical removal action resulted in the removal of chemical hazards that presented a potential threat to public health or welfare of the United States and/or the environment.

The SBA Site CERCLA non-time critical removal activities were concluded on 09 November 2015. In summary, the following removal actions took place at the SBA site.

Transported and Disposed Off-site

- Approximately 7,145 gallons of hazardous liquid sludge waste;
- Approximately 2,145 gallons of hazardous liquid waste; and
- Approximately 25 yards of non-Resource Conservation and Recovery Act (RCRA) regulated solids.

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This final removal action report was prepared as part of the requirements of Technical Direction Document (TDD) 1/Dynamac-077-15-003 and serves as documentation of removal work completed to date.

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