



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III

1650 Arch Street

Philadelphia, Pennsylvania 19103-2029

IN THE MATTER OF:

National Aeronautics and Space
Administration

RESPONDENT.

Wallops FUDS Program
NASA Wallops Flight Facility
Wallops Island, Virginia 23337
EPA RCRA I.D. No. VAR000509240
EPA SEMS I.D. No. VA8800010763

FACILITY.

ADMINISTRATIVE AGREEMENT AND
ORDER ON CONSENT

U.S. EPA Docket Number:
RCRA-03-2021-0022TH

Proceeding under Section 7003 of the
Resource Conservation and Recovery Act, 42
U.S.C. § 6973 and Section 120 of the
Comprehensive Environmental Response,
Compensation, and Liability Act,
42 U.S.C. § 9620.

ADMINISTRATIVE AGREEMENT AND ORDER ON CONSENT

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I. INTRODUCTION

1. This Administrative Agreement and Order on Consent (“Consent Order”) is entered into voluntarily by the United States Environmental Protection Agency (“EPA”) and the National Aeronautics and Space Administration (“NASA”) (collectively, the “Parties”). This Consent Order provides for the performance of work to ensure that the environmental impacts associated with past or present activities at select sites that are part of the Wallops Formerly Used Defense Sites (“FUDS”) Program at the NASA Wallops Flight Facility (“WFF”), as listed in Attachment A, (hereinafter the “Select Sites”) are thoroughly investigated and appropriate response actions are taken as necessary to protect human health, welfare and the environment, including any additional work that may be required by Paragraph 76 (“Additional Work”) of this Consent Order.

2. As used throughout this Consent Order, “Day” or “day” shall mean a calendar day. In computing any period of time under this Consent Order, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

3. The Select Sites are sites or facilities that are part of the Wallops FUDS Program at WFF where the United States Department of the Army (“Army”) and NASA have determined that environmental response actions are necessary due, in whole or in part, to historic operations conducted by the Department of Defense (“DoD”) at WFF.

4. NASA has conducted, and continues to conduct, response actions at non-Select Site areas of concern at the WFF pursuant to the 2004 Administrative Agreement on Consent, RCRA-03-2004-0201TH (the “2004 Consent Agreement”), issued pursuant to Section 7003 of RCRA to which NASA and EPA are parties. This Consent Order does not affect, abrogate, or otherwise supersede the 2004 Consent Agreement.

5. In entering into this Consent Order, the mutual objectives of EPA and NASA concerning the Select Sites are to:

- a. Control the human and ecological exposure to releases of hazardous substances, solid wastes, hazardous wastes and/or hazardous constituents from any medium;
- b. Perform one or more Remedial Investigations (“RIs”) to fully determine the nature and extent of any release of hazardous substances, solid wastes, hazardous wastes and/or hazardous constituents;
- c. Perform one or more Feasibility Studies (“FSs”) to identify and evaluate alternatives for remedial action(s) necessary to prevent or mitigate migration or releases of hazardous substances, solid wastes, hazardous wastes and/or hazardous constituents;

- d. Implement and monitor, if applicable, the remedial actions approved by EPA;
 - e. Delineate the relationship of this Consent Order to the 2004 Consent Agreement;
 - f. Coordinate response actions to be consistent with the February 26, 2015 Memorandum of Agreement (the “2015 MOA”) (attached to this Consent Order as Attachment B) between the Army and NASA to support environmental restoration work at the Select Sites; and
 - g. Provide for response actions at the Select Sites in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §§ 9601 et seq., the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 (“NCP”), and applicable EPA guidance.
6. The Commonwealth of Virginia (the “Commonwealth” or “Virginia”) has been given notice of this Consent Order pursuant to Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).
7. On February 26, 2015, the Army and NASA entered into the 2015 MOA for the purpose of transferring Environmental Restoration, FUDS (“ER,F”) funds from the Army to NASA. Pursuant to the 2015 MOA, the ER,F funds are available to NASA for the conduct of necessary response actions under CERCLA, consistent with the Defense Environmental Restoration Program (“DERP”), 10 U.S.C. §§ 2701 et seq., and the NCP at the Select Sites.
8. The United States Army Corps of Engineers (“USACE”) manages the Wallops FUDS Program (EPA RCRA I.D. No. VAR000509240). NASA owns and operates property which is part of the Wallops FUDS Program.
9. NASA’s environmental response activities at WFF areas of concern, other than the Select Sites, will continue to be addressed pursuant to the 2004 Consent Agreement.
10. Response actions addressing petroleum releases at the Select Sites will be managed by NASA with oversight from the Virginia Department of Environmental Quality (“VDEQ”).
11. The reports and decision documents generated during the assessments, investigations, and remedial/removal activities described herein, as well as additional information, are located in information repositories located at the Eastern Shore Public Library in Accomack and at the Island Library in Chincoteague.

II. JURISDICTION

12. This Consent Order is issued pursuant to the authority vested in the Administrator of the EPA by Section 7003 of the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984 (collectively referred to hereinafter as “RCRA”), 42 U.S.C. § 6973. The authority vested in the Administrator has been delegated to the EPA Regional Administrators by EPA Delegation No. 8-22 dated January 18, 2017 and further delegated to the Director of the Superfund and Emergency Management Division on April 15, 2019 pursuant to Regional Delegation 1200 TN RIII-645 8-22. This Consent Order is also entered into by the Parties pursuant to CERCLA § 120, 42 U.S.C. § 9620.

13. NASA agrees to undertake and complete all actions required by the terms and conditions of this Consent Order. In any action by EPA or the United States to enforce the terms of this Consent Order, NASA consents to and agrees not to contest the authority or jurisdiction of EPA to issue or enforce this Consent Order, and agrees not to contest the validity of this Consent Order or its terms or conditions.

III. PARTIES BOUND

14. This Consent Order shall apply to and be binding upon EPA, NASA, and their respective successor departments, agencies, or instrumentalities.

15. Any change in ownership of any property covered by this Consent Order, or in the organization or status of NASA, shall not alter, diminish, or otherwise affect NASA’s obligations and responsibilities under this Consent Order.

16. NASA is responsible for complying with this Consent Order and for ensuring that all work performed pursuant to this Consent Order is conducted in accordance with the requirements of this Consent Order. NASA shall provide a copy of this Consent Order within thirty (30) days of the effective date of this Consent Order, or the date that such services are retained, to all supervisory personnel, contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Consent Order. All contracts, agreements or other arrangements with such persons shall require such persons to conduct or monitor the work in accordance with the requirements of this Consent Order. Notwithstanding the terms of any such contract, agreement or arrangement, NASA is responsible for ultimate compliance with this Consent Order and for ensuring that its contractors, subcontractors, laboratories, and consultants perform work in accordance with this Consent Order.

17. At least sixty (60) days prior to any voluntary transfer by NASA of any property interest, or in the operation of a Select Site, NASA shall notify EPA in writing of the nature of any such change. In addition, NASA shall provide a copy of this Consent Order to any successor to any

Select Site, or any portion thereof, at least fifteen (15) days prior to the effective date of such change. Not later than three (3) days after any transfer, NASA shall submit copies of the transfer documents to EPA.

IV. FINDINGS OF FACT

18. The WFF is located on Route 175, in Wallops Island, Accomack County, Virginia. The WFF consists of three land parcels: the Main Base Parcel, the Mainland Parcel, and Wallops Island. At this time, there are no Select Sites on the Mainland Parcel.

19. NASA has operated the WFF Main Base Parcel since 1959 and has owned it since 1961.

20. Wallops Island was uninhabited until 1883 when the United States Government purchased land for a Life Saving Station on the north end of Wallops Island operated by the United States Life-Saving Service. The Life-Saving Service merged with the Cutter Revenue Service and Steam Boat Inspection Service to form the U.S. Coast Guard in 1915. The original station was destroyed in 1933 and re-built in 1936 at its present location on Wallops Island.

21. In 1889, the remainder of Wallops Island was purchased by the Wallops Island Gun Club, a hunting club comprised of families from Delaware, Pennsylvania, and West Virginia. The Club was incorporated and assumed ownership in 1933 as the Wallops Island Association, Inc.

22. The United States Navy ("Navy") began purchasing private farmland near the Main Base Parcel in August 1942. The U.S. Department of the Army, Bureau of Public Works, began construction for an outlying airfield for Norfolk Naval Air Station in the fall 1942 and commissioned the Chincoteague Naval Auxiliary Air Station ("CNAAS") in March 1943. The Navy used CNAAS primarily as a training facility for naval aviation units from 1943 to 1945; however, it was also used for anti-submarine operations.

23. In January 1946, the Naval Aviation Ordnance Test Station ("NAOTS") was established at CNAAS. The NAOTS provided training for personnel and a test range to test, modify, and develop guided missiles, aircraft weapons, munitions, ordnance, and aviation fire control equipment. CNAAS became a Naval Air Station in 1950.

24. The National Advisory Committee for Aeronautics ("NACA"), the predecessor to NASA, leased land on Wallops Island from 1945 to 1947. NACA purchased Wallops Island from the Wallops Island Gun Club in 1947. The Navy leased land on north Wallops Island from NACA from 1947 to 1959 for munitions and ordnance testing, operations, and training.

25. The Navy ceased training and flight operations and declared the CNAAS excess in June 1959. The NAOTS was officially disestablished on June 30, 1959. All real property at the Main

Base Parcel (CNAAS and NAOTS) was initially occupied by NASA in June 1959 and transferred to NASA on December 1, 1961.

26. In 1959 NASA acquired the Mainland Parcel (which provides access to Wallops Island) and expanded its operations.

27. NASA began conducting formal environmental assessments and property inspections at WFF in approximately 1988. An initial property-wide environmental assessment resulted in the identification of 15 sites, which were then studied in a series of initial investigations. A series of site inspection (“SI”) reports, published in 1990, 1992, and 1996 present the results of these investigations.

28. On December 8, 2004, NASA and EPA entered into the 2004 Consent Agreement under which NASA agreed to conduct certain environmental response actions at WFF.

29. The VDEQ, EPA, NASA, and USACE reviewed records, photographs and other materials and concluded that some of the contamination identified at the Main Base Parcel and on Wallops Island are known to be associated with activities that took place prior to NASA’s presence at WFF, during operation of the CNAAS. As a result, USACE determined that the former CNAAS and NAOTS are FUDS pursuant to the DERP.

30. As part of the Wallops FUDS program, USACE has conducted investigation and remediation activities from 2000 to 2016 at certain areas of the former CNAAS property, including Select Sites. The DoD’s activities at the Select Sites included metal plating and etching; cleaning of tools and machines; generation of acidic overflow from recovery of photographic silver; aircraft and vehicle maintenance; handling of aircraft fuel spills and contaminated aircraft fuels; waste oil disposal; storage of aviation fuel; use, testing, and cleaning of ordnance and weapons; landfills; and sewage treatment. Volatile organic compounds (“VOCs,” including perchloroethene, trichloroethene, 1,2-dichloroethene, benzene, and toluene), semi-volatile organic compounds (“SVOCs,” including naphthalene, benzo(a)pyrene, and dioxins), polychlorinated biphenyls (“PCBs”), metals, total petroleum hydrocarbons (“TPHs”), munitions constituents, and munitions and explosives of concern were used or generated as part of the DoD’s operations and are Constituents of Potential Concern (“COPCs”) at Select Sites.

31. Certain Select Sites include areas at the WFF identified by USACE as Military Munitions Response Program (“MMRP”) sites. Offshore portions of MMRP sites are not intended to be addressed pursuant to this Consent Order.

32. In accordance with the 2015 MOA between the Army and NASA, the Army will provide funding to NASA to conduct CERCLA response actions at the Select Sites.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

33. Based on the Findings of Fact set forth above, and an administrative record supporting this Consent Order, EPA has determined that:

- a. NASA is a “person” as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15), and Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
- b. NASA is the “owner or operator” of WFF as defined in Section 101(2) of CERCLA, 42 U.S.C. § 9601(20).
- c. NASA is subject to the requirements of Section 6001 of RCRA, 42 U.S.C. § 6961, including compliance with the requirements of RCRA.
- d. NASA is subject to the requirements of Section 120 of CERCLA, 42 U.S.C. § 9620, including compliance with the requirements of CERCLA.
- e. The COPCs listed in Paragraph 30 of this Consent Order are “solid wastes” as defined in Section 1004(27) of RCRA, 42 U.S.C. § 6903(27) and “hazardous wastes” as defined in Section 1004(5) of RCRA, 42 U.S.C. § 6903(5), within the meaning of Section 7003 of RCRA, 42 U.S.C. § 6973.
- f. The COPCs listed in Paragraph 30 of this Consent Order, except for TPHs, are “hazardous substances” as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
- g. Imminent and Substantial Endangerment. The past handling, storage, treatment, transportation and/or disposal of solid wastes, hazardous wastes and/or hazardous constituents at the WFF may present an imminent and substantial endangerment to health or the environment within the meaning of Section 7003(a) of RCRA, 42 U.S.C. § 6973(a).
- h. The actions required by this Consent Order are necessary to protect human health and the environment.

VI. ORDER ON CONSENT

34. Based upon the administrative record, the Findings of Fact (Section IV), and Conclusions of Law and Determinations (Section V), and in consideration of the promises set forth herein, the following is hereby agreed to and ordered. NASA shall comply with all provisions of this Consent Order, including, but not limited to, all appendices to this Consent Order and all documents incorporated by reference into this Consent Order.

35. In accordance with the terms and limitations set forth in Section XIX (“Funding”) below, NASA shall finance and perform the work in accordance with this Consent Order, and the plans, standards, specifications and schedules set forth in this Consent Order or developed by NASA and approved by EPA pursuant to this Consent Order.

VII. WORK TO BE PERFORMED

36. EPA acknowledges that NASA and USACE have previously undertaken response measures at the WFF pursuant to CERCLA. The Parties intend that such response measures will be integrated herein to achieve the purposes of this Consent Order. It is the intent of the Parties that work done and generated by NASA and USACE under CERCLA prior to the effective date of this Consent Order at WFF, including pursuant to the 2004 Consent Agreement, be used to meet the requirements of this Consent Order as elements of the required action or work to be performed to the maximum extent feasible, upon submission to, and formal approval by, EPA.

37. Pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973, NASA agrees to and is hereby ordered to perform the following acts in the manner and by the dates specified herein. All work undertaken pursuant to this Consent Order shall be developed and performed, as appropriate and approved by EPA, in accordance with applicable law and relevant EPA guidance documents. Relevant guidance is available at: <https://www.epa.gov/superfund/superfund-policy-guidance-and-laws> and is incorporated herein by reference.

38. Administrative Record. NASA shall establish and maintain administrative records for the selection of response actions in accordance with CERCLA § 113(k), 42 U.S.C. § 9613(k), Subpart I of the NCP, 40 C.F.R. Pt. 300, Subpart I, and applicable EPA guidance.

39. Semi-Annual Progress Report. NASA shall provide EPA with semi-annual (every six (6) months) progress reports. The semi-annual progress reports shall provide information on the status of all ongoing response actions being implemented at the Select Sites pursuant to this Consent Order. The first semi-annual progress report will be due on the first day of the sixth full month following the effective date of this Consent Order. Subsequent semi-annual progress reports will be due every six (6) months thereafter on the first day of the month, while this Consent Order remains in effects.

40. All work performed pursuant to this Consent Order shall be under the direction of the NASA Project Coordinator. The physical absence of the EPA Project Coordinator from the WFF or a Select Site shall not be cause for the delay or stoppage of work.

A. RCRA-CERCLA INTEGRATION

41. EPA and NASA intend to integrate NASA's CERCLA response obligations and RCRA corrective action obligations which relate to the release or threat of release of hazardous substances, solid waste, hazardous waste, hazardous constituents, pollutants and/or contaminants covered by this Consent Order.
42. As provided in CERCLA § 121(e)(1), 42 U.S.C. § 9621(e)(1), NASA shall not be required to obtain permits for any CERCLA removal or remedial action conducted entirely onsite.
43. All CERCLA response actions undertaken at a Select Site shall be conducted as provided for in CERCLA and the NCP.
44. Nothing in this Consent Order shall alter NASA's or EPA's authority with respect to removal actions conducted pursuant to CERCLA § 104(a)(2), 42 U.S.C. § 9604(a)(2).

B. SITE MANAGEMENT PLAN

45. Within sixty (60) days from the effective date of this Consent Order, NASA shall submit to EPA for approval a Site Management Plan ("SMP") for Fiscal Years 2021 and 2022. The SMP shall be used as a management tool in planning, reviewing and setting priorities for all response activities at the Select Sites. The SMP shall be a two-year planning device and shall contain a timetable, plan or schedule which indicates the time and sequence of activities that will occur at the Select Sites over the ensuing two fiscal years. To ensure that the SMP continues to function as a two-year planning device that is reflective of both ongoing and planned future activities, NASA shall update the SMP on an annual basis. Each annual update shall amend, revise and/or supplement the SMP, as appropriate, so that the SMP continues to address events that will occur at the Select Sites over the following two fiscal years. For the purpose of the SMP, a fiscal year is the yearly time frame used by the United States Government that commences on October 1st of the given calendar year and ends on September 30th of the following calendar year.
46. The SMP shall, at a minimum:
- a. Identify each Select Site and provide a background of current and historic operations at each Select Site;
 - b. Describe current conditions at each Select Site;

- c. Describe the nature of the proposed action(s) to be taken at each Select Site, including those actions which are necessary to mitigate any immediate threat to public health or the environment;
- d. List the schedules and the deadlines for all submissions and response actions which are ongoing, planned and/or proposed over the course of the ensuing two fiscal years, including any deadlines already required by EPA pursuant to this Consent Order.

47. Upon receipt of EPA approval of the SMP for Fiscal Years 2021 and 2022, and for every subsequent SMP, NASA shall implement the EPA-approved SMP in accordance with the terms and schedules contained therein.

48. Upon approval by EPA, the SMP shall be incorporated into, and become enforceable under this Consent Order.

C. REMOVAL AND EMERGENCY ACTIONS

49. NASA has completed CERCLA removal actions at the WFF (as documented in the administrative record to this Consent Order), and to the best of NASA's knowledge, removal actions are not necessary at the Select Sites at this time. In the event that NASA and/or EPA determine that additional removal actions are necessary at any of the Select Sites, any such removal action will be undertaken in accordance with this Section VII ("Work to Be Performed").

50. NASA shall provide EPA with timely notice of any proposed removal action.

51. If during the course of performing the activities required under this Consent Order NASA identifies an actual or a substantial threat of a release of any solid waste, hazardous waste, hazardous substance, pollutant, or contaminant at or from a Select Site, NASA may undertake removal actions to abate the danger and threat that may be posed by such actual or threatened release. All removal actions conducted at Select Sites shall be conducted in a manner consistent with this Consent Order, CERCLA, Executive Order 12,580, and the NCP and shall, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release(s) or threatened release(s) concerned.

52. Prior to determining to undertake removal actions, NASA shall submit to EPA for review and comment:

- a. Documentation of the actual or threatened release at or from the Select Site;

- b. Documentation that the actions proposed will abate the danger and threat that may be posed by release of solid waste, hazardous waste, hazardous substances, pollutants, or contaminants at or from the Select Site;
- c. Documentation that the action is consistent with the NCP, applicable state regulations, and, to the extent practicable, contributes to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned;
- d. An Engineering Evaluation/Cost Analysis (“EE/CA”), or its equivalent for a Non-Time Critical Removal Action (“NTCRA”). A NTCRA is a removal action for which a planning period of at least six months exists before on-site activities must be initiated. The EE/CA shall contain an analysis of removal alternatives for a Select Site. The screening of alternatives shall be based on criteria as provided in CERCLA and the NCP, such as cost, feasibility, and effectiveness.
- e. A NTCRA Plan and Target Date for the proposed action.
- f. EPA shall expedite all reviews of these proposals to the maximum extent practicable.

53. The opportunity for review and comment for proposed removal actions, as stated in Paragraph 52 above, may not apply if the action is in the nature of an emergency removal taken because a release or threatened release may present an imminent and substantial endangerment to human health or the environment and NASA may determine that such review and comment is impractical. However, in the case of an emergency removal action, NASA shall provide EPA with oral notice as soon as possible. A written notice shall be transmitted to EPA within forty-eight (48) hours after NASA determines that an emergency removal action is necessary, which will include any deviations from the oral notice. Within seven (7) days after initiating an emergency removal action, NASA shall provide EPA with the written basis (factual, technical and scientific) for such action and any available documents supporting such action. Upon completion of an emergency removal action, NASA shall state whether, and to what extent, the emergency removal action varied from the description of the action in the written notice provided pursuant to this Section. Within sixty (60) days of completion of an emergency removal action, NASA will furnish EPA with a Removal Action Memorandum addressing the information provided in the written notification, whether and to what extent the action varied from the description previously provided, and any other information required by CERCLA or the NCP, and in accordance with EPA guidance for such actions. Such actions may be conducted at any time, either before or after the issuance of a Record of Decision (“ROD”).

54. All activities pursuant to this Consent Order will be performed in accordance with the Health and Safety Plan described in Paragraph 58 (“Health and Safety Plan”) and will be

conducted so as to minimize the threat to the person(s) carrying out the activity and to the surrounding public.

D. REMEDIAL INVESTIGATION/FEASIBILITY STUDY

55. NASA shall conduct activities and submit deliverables as provided by this Consent Order for the development of a RI/FS at each Select Site. All such work shall be conducted in accordance with the provisions of this Consent Order, CERCLA, the NCP, and EPA guidance, including, but not limited to, the “Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA” (“RI/FS Guidance”) (Office of Solid Waste and Emergency Response, EPA, Directive No. 9355.3-01 (October 1988)), available at <http://semspub.epa.gov/src/document/11/128301>, “Guidance for Data Useability in Risk Assessment (Part A), Final” (Office of Solid Waste and Emergency Response, EPA, Directive No. 9285.7-09A, PB 92-963356 (April 1992)), available at <http://semspub.epa.gov/src/document/11/156756>, and guidance referenced therein. The RI shall consist of collecting data to characterize site conditions, determining the nature and extent of the contamination at or from a Select Site, assessing risk to human health and the environment, and conducting treatability testing as necessary to evaluate the potential performance and cost of the treatment technologies that are being considered. The FS shall determine and evaluate (based on treatability testing, where appropriate) alternatives for remedial action to prevent, mitigate, or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from a Select Site.

56. RI/FS Workplan. In accordance with the schedule established in the EPA-approved SMP, NASA shall submit to EPA a workplan for the RI/FS at a Select Site (“RI/FS Workplan”). The RI/FS Workplan is subject to approval by EPA and shall be developed in accordance with, at a minimum, relevant EPA guidance documents and applicable law.

- a. The RI/FS Workplan shall be designed to determine the presence, magnitude, extent, direction, and rate of movement of any hazardous substances, solid wastes, hazardous wastes and/or hazardous constituents within and beyond the boundaries of a Select Site. The RI/FS Workplan shall document the procedures NASA shall use to conduct those activities necessary to: (a) characterize the source(s) of contamination; (b) characterize the potential pathways of contaminant migration; (c) define the degree and extent of contamination; (d) identify actual or potential human and/or ecological receptors; and (e) support the development of alternatives from which a remedial action(s) will be selected. NASA may propose to implement the work contained in the RI/FS Workplan in a phased approach. A specific schedule for expeditious implementation of all activities shall be included in the RI/FS Workplan.

- b. The RI/FS Workplan shall include: (a) a Project Management Plan (which shall include a schedule for submission of periodic progress reports, and submission of final RI and FS Reports); (b) a Data Collection Quality Assurance Plan; (c) a Data Management Plan; and (d) a reference to the site-wide Community Relations Plan referenced in Paragraph 140.

57. Upon receipt of EPA's approval of the RI/FS Workplan, NASA shall implement the EPA-approved RI/FS Workplan in accordance with the terms and schedules contained therein. Upon approval by EPA, the RI/FS Workplan shall be incorporated into and become enforceable under this Consent Order. All schedules included in the EPA-approved RI/FS Workplan shall be incorporated into the SMP.

58. Health and Safety Plan. Concurrent with the submission of the RI/FS Workplan, NASA shall submit a Health and Safety Plan to EPA, for informational purposes, that ensures the protection of on-site workers and the public during performance of on-site work under this Consent Order. The plan shall comply with all currently applicable Occupational Safety and Health Administration regulations found at 29 C.F.R. Pt. 1910.

59. For those Select Sites that the Parties determine present a negligible or minimal risk and are strong candidates for no action, NASA shall submit a concise FS statement indicating negligible or minimal risks were found and no action is warranted. NASA shall submit the concise FS statement to EPA for approval.

60. Upon completion of implementation of an RI or FS at a Select Site, NASA shall submit to EPA for approval an RI Report or FS Report, respectively, in accordance with the requirements and schedule contained in the EPA-approved SMP.

E. PROPOSED PLAN AND RECORDS OF DECISION

61. In accordance with the schedule established in the EPA-approved SMP, after EPA approval of a RI/FS, NASA shall submit a draft Proposed Remedial Action Plan ("PRAP") to EPA for review and comment.

62. In accordance with the schedule established in the EPA-approved SMP, and after EPA's acceptance of the PRAP, NASA shall provide a reasonable opportunity, not less than thirty (30) days, for submission of written and oral public comments on any PRAP and the supporting analysis and information, including the RI/FS, pursuant to the requirements of Section 117(a)(2) of CERCLA, 42 U.S.C. § 9617(a)(2), and Section 300.430(f)(3)(i) of the NCP, 40 C.F.R. § 300.430(f)(3)(i).

63. Following the public review and comment period for the PRAP, NASA, in consultation with EPA, will determine if the PRAP should be modified based on the comments received. Any

necessary modifications will be made by NASA and the modified documents will be provided to EPA for review. The Parties may recommend that additional public comment be solicited if modifications to the PRAP substantially change the remedy originally proposed to the public.

64. After completion of the public comment period, NASA shall submit a draft ROD to EPA for approval, which shall include a Responsiveness Summary and shall be drafted in accordance with CERCLA § 121, 42 U.S.C. § 9621, the NCP, and applicable EPA guidance.

65. EPA, in consultation with NASA, will select the remedial action(s). NASA will notify the public of the remedial action(s) selected in a ROD. Notice of the ROD shall be made available to the public before commencement of any remedial action. The ROD shall be accompanied by a discussion of any significant changes (and the reasons for such changes) from the PRAP and a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations, pursuant to the requirements of Section 117(b) of CERCLA, 42 U.S.C. § 9617(b), and Sections 300.430(f)(3)(ii) and (4) of the NCP, 40 C.F.R. § 300.430(f)(3)(ii) and (4).

66. Upon issuance of a ROD, said ROD shall be incorporated into and become enforceable under this Consent Order.

F. REMEDIAL DESIGN/REMEDIAL ACTION

67. Remedial Design.

- a. Remedial Design Workplan. In accordance with the schedule established in the EPA-approved SMP, after issuance of a ROD, NASA shall submit to EPA for approval a Remedial Design (“RD”) Workplan for each ROD. The RD Workplan shall provide for the design of the remedy set forth in the ROD. The RD Workplan shall be developed in accordance with the ROD, relevant EPA guidance documents and applicable law. Upon its approval by EPA, the RD Workplan shall be incorporated into and become enforceable under this Consent Order and NASA will implement the RD as provided in the RD Workplan. All schedules included in the final RD Workplan shall be incorporated into the SMP.
- b. In accordance with the EPA-approved RD Workplan, NASA shall submit to EPA for approval an RD Report. The RD Report shall be developed in accordance with the ROD, relevant EPA guidance documents and applicable law.

68. Remedial Action.

- a. Remedial Action Workplan. In accordance with the schedule established in the EPA-approved SMP, after EPA approval of a RD Report, NASA shall submit to EPA for approval a Remedial Action (“RA”) Workplan for each ROD. The RA

Workplan shall provide for construction and implementation of the remedy set forth in the ROD. The RA Workplan shall be developed in accordance with relevant EPA guidance documents and applicable law. Upon its approval by EPA, the RA Workplan shall be incorporated into and become enforceable under this Consent Order. All schedules included in the final RA Workplan shall be incorporated into the SMP.

- b. NASA shall implement the remedial action selected in the ROD in accordance with the schedules and specifications set forth in the EPA-approved RD Report, the EPA-approved RA Workplan, and relevant EPA guidance documents and applicable law.
- c. Upon completion of implementation of a remedial action at a Select Site, in accordance with the schedule established in the EPA-approved SMP, NASA shall submit to EPA for approval an RA Report. The RA Report shall be developed in accordance with relevant EPA guidance documents and applicable law and shall describe activities performed during implementation, provide actual specifications of the implemented remedial action(s), provide a preliminary schedule for long-term remedial action (“LTRA”) monitoring (if necessary) and operation and maintenance (“O&M”) (if necessary), and provide a preliminary assessment of remedial action performance. The schedule in the final RA Report shall be incorporated into the SMP.
- d. EPA shall approve the RA Report if it determines, on the basis of the RA Report and any other relevant information, that the remedial action has achieved or is achieving all of the performance standards set forth in the ROD, and is otherwise consistent with, and performing as designed as set forth in, the EPA-approved RD Report.
- e. If EPA disapproves the RA Report, it shall notify NASA in writing of those activities that must be undertaken to complete the remedial action requirements and shall set forth a schedule, which shall be incorporated into the SMP, for the completion of those activities. NASA shall complete the activities in accordance with the schedule set forth in the EPA notification.
- f. If NASA has determined that the RA is “Complete,” as defined in Paragraph 71 (“Close-Out Report and Certification of RA Completion”), NASA shall submit a Close-Out Report requesting EPA’s Certification of RA Completion, as described in Paragraph 71.a, instead of an RA Report.

69. Remedial Action Monitoring Plan and Operation and Maintenance Plan. In accordance with the schedule established in the SMP, NASA shall submit to EPA for approval an LTRA Monitoring Plan and an O&M Plan for each Select Site, if necessary. Both the LTRA Monitoring

Plan and O&M Plan shall contain schedules for completion of the work described therein. The LTRA Monitoring Plan and O&M Plan shall be developed in accordance with relevant EPA guidance documents and applicable law. Upon their approval by EPA, the LTRA Monitoring Plan and O&M Plan shall be incorporated into and become enforceable under this Consent Order. All schedules included in the final LTRA Monitoring Plan and O&M Plan shall be incorporated into the SMP.

70. Five-Year Reviews. If an RA is selected that results in hazardous substances, pollutants, or contaminants remaining at a Select Site above levels that allow for unlimited use and unrestricted exposure, NASA shall review such action no less often than every five (5) years after initiation of the selected RA, as required by Section 121(c) of CERCLA, 42 U.S.C. § 9612(c), and the NCP. Following each review, in accordance with the schedule established in the EPA-approved SMP, NASA shall submit a Five-Year Review Report, developed in accordance with EPA guidance, to EPA for its concurrence.

71. Close-Out Report and Certification of RA Completion. The RA is “Complete” for purposes of this Paragraph 71 when it has been fully performed and the performance standards set forth in the EPA-approved RD Report have been achieved.

- a. NASA shall submit a Close-Out Report to EPA requesting EPA’s Certification of RA Completion within ninety (90) days after it has determined that RA is Complete. The report must be prepared in accordance with Chapter 2 (Remedial Action Completion) of EPA’s “Close Out Procedures for NPL Sites” guidance (May 2011), as supplemented by “Guidance for Management of Superfund Remedies in Post Construction,” Office of Land and Emergency Mgmt., EPA, Directive 9200.3-105 (Feb. 2017), and be certified in accordance with Paragraph 95 (“Certification”).
- b. If EPA concludes that the RA is not Complete, it shall notify NASA in writing and shall provide a description of any deficiencies. EPA’s notice may include a schedule for addressing such deficiencies or may require NASA to submit a schedule for EPA approval. NASA shall perform all activities described in the notice in accordance with the schedule.
- c. If EPA concludes that the RA is Complete, EPA shall so certify to NASA. This certification will constitute the Certification of RA Completion for purposes of the Consent Order. Certification of RA Completion will not affect NASA’s remaining obligations under the Consent Order.

G. EPA APPROVAL OF DELIVERABLES

72. Initial Submissions. EPA will review reports, workplans, attachments, and any other documents submitted pursuant to this Consent Order (“Deliverables”) for approval, except for progress reports or as provided otherwise in this Consent Order. EPA shall: (a) approve, in whole or in part, the Deliverable; (ii) approve the Deliverable upon specified conditions; (iii) disapprove, in whole or in part, the Deliverable; or (iv) any combination of the foregoing. In the event of EPA’s disapproval, EPA shall specify in writing the deficiencies in the Deliverable.

73. Resubmissions. Upon receipt of a notice of disapproval or a notice of approval on condition under Paragraph 72 (“Initial Submissions”), NASA shall, within forty-five (45) days, submit to EPA for approval a revised Deliverable, which responds to any comments received and/or corrects any deficiencies identified by EPA. After review of the resubmitted Deliverable, EPA may: (a) approve, in whole or in part, the Deliverable; (b) approve the Deliverable upon specified conditions; (c) modify the Deliverable; (d) disapprove, in whole or in part, the Deliverable, requiring NASA to correct the deficiencies; or (e) any combination of the foregoing.

74. Implementation. Upon approval, approval upon condition, or modification by EPA under Paragraph 72 (“Initial Submissions”) or Paragraph 73 (“Resubmissions”), of any Deliverable, or any portion thereof: (a) such Deliverable, or portion thereof, will be incorporated into and enforceable under the Consent Order; and (b) NASA shall take any action required by such Deliverable, or portion thereof. Notwithstanding the receipt of a notice of disapproval, NASA shall proceed to take any action required by any non-deficient portion of the Deliverable, unless otherwise directed by EPA.

75. Any Deliverables required by this Consent Order are, upon approval by EPA, incorporated into this Consent Order. Any noncompliance with EPA-approved Deliverables shall be considered a violation of this Consent Order.

H. ADDITIONAL WORK

76. EPA may determine or NASA may propose that certain tasks are necessary in addition to or in lieu of the tasks included in any EPA-approved workplan when such additional work is necessary to meet the objectives set forth in Section I (“Introduction”). If EPA determines that such additional work is necessary, EPA will specify in writing the basis for its determination that additional work is necessary. Within fifteen (15) days after the receipt of such request, NASA shall have the opportunity to meet or confer with EPA to discuss the additional work. Within thirty (30) days of NASA’s receipt of EPA’s determination that additional work is necessary, or according to an alternative schedule established by EPA, NASA shall submit for EPA approval a workplan for the additional work. Upon approval of a workplan for any additional work, NASA shall implement the workplan in accordance with the schedule and provisions contained therein. All schedules included in a workplan for additional work shall be incorporated into the SMP.

NASA may invoke the dispute resolution procedures set forth in Section XVI (“Dispute Resolution”) regarding any additional work required by EPA.

VIII. QUALITY ASSURANCE

77. Throughout all sample collection and analysis activities, NASA shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures, as specified in the EPA-approved RI Workplan. In addition, NASA shall:

- a. Ensure that the laboratories it uses for analyses perform such analyses according to the EPA methods included in “Test Methods for Evaluating Solid Waste,” (EPA, SW-846, (Nov. 1986)) or other methods deemed satisfactory to EPA. NASA shall only use laboratories that have a documented quality system that complies with the “EPA Requirements for Quality Assurance Project Plans,” QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006); “Guidance for Quality Assurance Project Plans,” QA/G-5, EPA/240/R 02/009 (Dec. 2002); and “Uniform Federal Policy for Quality Assurance Project Plans,” Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005) or equivalent documentation as determined by EPA. If methods other than EPA methods are to be used, NASA shall submit all analytical protocols to be used for analyses to EPA for approval at least thirty (30) days prior to the commencement of analyses and shall obtain EPA approval prior to the use of such analytical protocols.
- b. Ensure that laboratories it uses for analyses participate in a quality assurance/quality control (“QA/QC”) program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analyses of samples provided by EPA to demonstrate the quality of the analytical data. If the analysis reveals deficiencies in a laboratory’s performance or QA/QC, NASA shall submit a plan to address the deficiencies and EPA may require resampling and additional analysis.
- c. Inform the EPA Project Coordinator at least fourteen (14) days in advance of any laboratory analysis regarding which laboratory will be used by NASA and ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analysis.
- d. EPA may request that NASA change laboratories for reasons which may include, but shall not be limited to, deficiencies in QA/QC or performance, conflict of interest, or confidential agency audit information.

IX. PUBLIC COMMENT AND REVIEW OF CONSENT ORDER

78. EPA shall provide public notice, opportunity for a public meeting and a reasonable opportunity for public comment on this proposed Consent Order. After consideration of any comments submitted during a public comment period of not less than thirty (30) days (which EPA may extend), EPA may withhold consent or seek to amend all or part of this Consent Order if EPA determines that comments received disclose facts or considerations which indicate that this Consent Order is inappropriate, improper, or inadequate.

79. In the event that the Parties are unable to agree on modifications to the proposed Consent Order as a result of public comment, EPA reserves the right to take such action as may be necessary to protect public health and the environment, including but not limited to, issuance of a subsequent order to NASA or any other person in connection with the Select Sites under Section 7003 of RCRA.

X. ACCESS

80. EPA and/or its representatives shall have the authority to enter WFF at all reasonable times for purposes consistent with the provisions of this Consent Order. Such authority shall include, but not be limited to: inspecting records, logs, contracts, and other documents relevant to implementation of this Consent Order; reviewing and monitoring the progress of NASA, and its contractors, in carrying out the activities under this Consent Order; conducting, with prior notice to NASA, tests that EPA deems necessary; assessing the need for planning additional remedial response actions at Select Sites; and verifying data or information submitted to EPA. NASA shall honor all reasonable requests for access to WFF made by EPA, upon presentation of credentials showing the bearer's identification and that he/she is an employee or agent of EPA. The NASA Project Coordinator or his/her designee will provide briefing information, coordinate access and escort to restricted or controlled-access areas, arrange for installation passes, and coordinate any other access requests, which arise. NASA shall use its best efforts to ensure that conformance with the requirements of this Paragraph 80 do not delay access.

81. EPA shall have the right to enter all areas of WFF that are entered by contractors performing work under this Consent Order.

82. The rights granted in Paragraphs 80 and 81 to EPA regarding access shall be subject to regulations and statutes, including WFF security regulations, as may be necessary to protect national security or classified information as defined in Executive Order 12,958, as amended, and comply with WFF's health and safety requirements. Such requirements shall not be applied so as to unreasonably hinder EPA from carrying out its responsibilities and authority pursuant to this Consent Order.

83. NASA shall provide an escort whenever EPA requires access to restricted areas of WFF for purposes consistent with the provisions of this Consent Order. EPA shall provide reasonable notice to the NASA Project Coordinator, or his or her designee, to request any necessary escorts for such restricted areas. NASA shall not require an escort to any area of WFF unless it is a restricted, controlled-access area. Upon request of EPA, NASA shall promptly provide a written list of current restricted or controlled-access areas.

84. Upon a denial of any aspect of access, NASA shall provide an immediate explanation of the reason for the denial, including reference to the applicable regulations, and upon request, a copy of such regulations. Within forty-eight (48) hours, NASA shall provide a written explanation for the denial. To the extent possible, NASA shall expeditiously provide a recommendation for accommodating the requested access in an alternate manner.

85. NASA shall ensure that all response measures, ground water rehabilitation measures and remedial actions of any kind that are undertaken pursuant to this Consent Order on any areas that: a) are presently owned by the United States and which are occupied by NASA or leased by NASA to any other entity; or b) are in any manner under the control of NASA or any lessees or agents of NASA, shall not be impeded or impaired in any manner by any transfer of title or change in occupancy or any other change in circumstances of such areas.

86. Nothing herein shall be construed as limiting EPA's statutory authority for access or information gathering.

XI. SAMPLING AND DATA/DOCUMENT AVAILABILITY

87. NASA shall submit to EPA the results of all sampling and/or tests or other data, including raw data, generated by, or on behalf of, NASA during implementation of this Consent Order, upon request. Within thirty (30) days of a request by EPA for such data, NASA shall submit the requested data to EPA. Upon request, EPA will make available to NASA data generated by EPA for the purposes of oversight of the work.

88. NASA shall notify EPA, in writing, at least fourteen (14) days in advance of any field activities, including but not limited to, well drilling, installation of equipment, or sampling. At the request of EPA, NASA shall provide or allow EPA or its authorized representatives to take split or duplicate samples of all samples collected by NASA pursuant to this Consent Order. Nothing in this Consent Order shall limit or otherwise affect EPA's authority to collect samples pursuant to applicable law, including, but not limited to, RCRA and CERCLA.

89. Confidential Business Information. NASA may assert that all or part of any information submitted to EPA pursuant to this Consent Order is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Any assertion of confidentiality shall be adequately substantiated by NASA when the

assertion is made in accordance with 40 C.F.R. § 2.204(e)(4). Information subject to a confidentiality claim shall be disclosed only to the extent allowed by, and in accordance with, the procedures set forth in 40 C.F.R. Pt. 2, Subpart B. If no such confidentiality claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to NASA. NASA shall not assert any confidentiality claim with regard to any physical, sampling, monitoring, or analytical data.

90. Privileged Information. NASA may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If EPA makes a request for production of a document, record, or other information, and NASA asserts such a privilege in lieu of providing documents, NASA shall provide EPA with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the author's name and title; (4) the name and title of each addressee and recipient; (5) a description of the contents; and (6) the privilege asserted by NASA. However, no documents, data, reports or other information created or generated pursuant to the requirements of this Consent Order shall be withheld on the grounds that they are privileged.

XII. RECORD PRESERVATION

91. NASA agrees that it shall preserve, during the pendency of this Consent Order and for a minimum of at least ten (10) years after its termination, all data, records, and documents in its possession or in the possession of its divisions, officers, directors, employees, agents, contractors, successors, and assigns which relate in any way to this Consent Order or to hazardous waste management and/or disposal at the Select Sites. After ten (10) years, NASA shall make such records available to EPA for inspection or shall provide copies of such records to EPA. NASA shall notify EPA in writing at least thirty (30) days prior to the proposed destruction of any such records, and shall provide EPA with copies of the documents upon EPA's request and provide a reasonable opportunity to EPA to inspect and/or take possession of any such records. NASA shall not destroy any record to which EPA has requested access for inspection and/or copying until EPA has obtained such access or withdrawn its request for such access. Nothing in this Section XII ("Record Preservation") shall in any way limit the authority of EPA under Section 3007 of RCRA, 42 U.S.C. § 6927, or any other access or information-gathering authority. In addition, NASA shall provide documents and information retained under this Section XII ("Record Preservation") at any time before expiration of the ten (10) year retention period at the written request of EPA.

XIII. PROJECT COORDINATORS/CONTRACTORS

92. Project Coordinators.

- a. At any time after the effective date of this Consent Order, NASA or EPA may change their respective Project Coordinators. Each party agrees to provide written notice to the other party at least ten (10) days prior to such change. The written notice shall include the name, address, phone number, electronic mail address and qualifications of such person.
- b. EPA designates Ms. Lorie Baker as the EPA Project Coordinator.
- c. NASA designates Mr. David Liu as the NASA Project Coordinator.

93. Contractors. NASA shall notify EPA, in writing, of the identity of any contractors performing work under this Consent Order within ten (10) days after the effective date of this Consent Order or within ten (10) days of their selection and contract award.

XIV. NOTIFICATION

94. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, submissions, Deliverables, or other communications relating to or required under this Consent Order shall be in writing and shall be sent as follows:

- a. One electronic copy, and, upon request from EPA, one hardcopy, of all documents to be submitted to EPA shall be sent to:

Lorie Baker
EPA Project Manager
U.S. EPA, Region III (3SD12)
Hazardous Site Cleanup Division
Office of Federal Facilities and Site Assessment
1650 Arch Street
Philadelphia, PA 19103-2029
baker.lorie@epa.gov

b. Documents to be submitted to NASA shall be sent to:

David Liu
Restoration Program Manager
NASA Goddard Space Flight Center
Wallops Flight Facility
Building F-160 Code 250. W
Wallops Island, Virginia 23337
david.liu-1@nasa.gov

95. Certification. Any notice, report, certification, data presentation, or other document submitted by NASA pursuant to this Consent Order which discusses, describes, demonstrates, or supports any finding or makes any representation concerning NASA’s compliance or noncompliance with any requirement of this Consent Order shall be certified by a duly authorized representative of NASA. A person is a “duly authorized representative” only if: (a) the authorization is made in writing; (b) the authorization specifies either an individual or position having responsibility for overall operation of the site or activity (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and (c) the written authorization is submitted to the EPA Project Coordinator.

96. The certification required by Paragraph 95 (“Certification”) shall be in the following form:

I certify that the information contained in or accompanying this **[type of submission]** is true, accurate, and complete.

As to **[the/those identified portion(s)]** of this **[type of submission]** for which I cannot personally verify **[its/their]** accuracy, I certify under penalty of law that **this [type of submission]** and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature : _____

Name : _____

Title : _____

XV. PENALTIES

97. NASA shall be liable for stipulated penalties in the amounts set forth below for failure to comply with the obligations specified in Paragraph 97.a, 97.b, and 97.c, unless the delay is excused as provided in Section XVIII, (“Force Majeure and Excusable Delay”). Compliance by NASA shall include commencement or completion, as appropriate, of any activity, plan, study or report required by this Consent Order in an acceptable manner and within the specified time schedules in and approved under this Consent Order. Stipulated penalties shall accrue as follows:

- a. For failure to commence, perform or complete response actions as prescribed, or directed, pursuant to this Consent Order:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$ 1,500
15th day and beyond	\$ 3,000

- b. For failure to submit any draft or final workplan, plans, or reports as required by this Consent Order, in an acceptable manner and within the specified time schedules in and approved under this Consent Order:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$ 1,000
15th day and beyond	\$ 2,500

- c. For failure to submit semi-annual progress reports as required by this Consent Order, in an acceptable manner and within the specified time schedules in and approved under this Consent Order:

Period of Noncompliance	Penalty Per Violation Per Day
1st through 14th day	\$ 500
15th day and beyond	\$ 1,000

98. All penalties shall begin to accrue on the day after the complete performance is due or a violation occurs and shall continue to accrue through the final day of or correction of the violation. Payment shall be due within thirty (30) days of NASA’s receipt of a written demand for payment, which will describe the nature of the violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Consent Order.

99. Interest. If payment is not made within thirty (30) days of the date of NASA’s receipt from EPA of a written demand for payment of the penalties, or of the date of agreement or decision resolving a dispute, interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the first day after NASA’s receipt of EPA’s demand letter, or the date of the agreement or decision resolving the dispute, and will accrue until such penalties and interest

have been paid in full. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. An additional penalty of six percent (6%) per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for ninety (90) days or more.

100. Payment Instructions. All penalty payments shall be paid to the Treasurer of the United States and be made at <https://www.pay.gov>. All payments shall reference (a) Wallops Flight Facility, (b) NASA's name and address, and (c) the EPA Docket Number of this Consent Order.

101. Copies or verification of the transmittal of payment shall be sent simultaneously to the EPA Project Coordinator.

102. NASA may dispute EPA's demand for payment of stipulated penalties for any alleged violation of this Consent Order by invoking the dispute resolution procedures under Section XVI ("Dispute Resolution"). Stipulated penalties shall continue to accrue, but need not be paid, for any alleged noncompliance which is the subject of dispute resolution during the dispute resolution period. If NASA does not prevail upon resolution of the dispute, all payments shall be due to EPA within thirty (30) days of resolution of the dispute. If NASA prevails upon resolution, no penalties shall be paid. In the event that NASA prevails in part, penalties shall be due on those matters in which NASA did not prevail.

103. Neither the invocation of informal or formal dispute resolution pursuant to Section XVI ("Dispute Resolution"), nor the payment of penalties shall alter in any way NASA's obligation to comply with the requirements of this Consent Order.

104. The stipulated penalties set forth in this Section XV ("Penalties") shall not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of NASA's failure to comply with any of the requirements of this Consent Order.

105. Notwithstanding any other provision of this Section XV ("Penalties"), EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Consent Order.

106. Nothing in this Section XV ("Penalties") is intended to limit NASA's ability to request an extension of a deadline or schedule as permitted by Section XXVI ("Subsequent Modification").

XVI. DISPUTE RESOLUTION

107. Unless specifically set forth elsewhere in this Consent Order, if a dispute arises under this Consent Order, the procedures of this Section XVI ("Dispute Resolution") shall apply.

108. Within thirty (30) days after any action which leads to or generates a dispute, NASA shall submit to EPA a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, NASA's position with respect to the dispute and the information relied upon to support such position.

109. Informal Dispute Resolution. Upon receipt of a written statement of dispute, EPA and NASA shall engage in informal dispute resolution among the Project Coordinators and/or their immediate supervisors. EPA and NASA Project Coordinators/immediate supervisors shall have thirty (30) days to resolve the dispute. During this informal dispute resolution period, EPA and NASA shall confer as many times as are necessary to discuss and attempt resolution of the dispute.

110. Formal Dispute Resolution, Tier 1 – Dispute Resolution Committee.

- a. If the Parties are unable to resolve a dispute informally pursuant to Paragraph 109 (“Informal Dispute Resolution”), NASA may, within fourteen (14) days of the conclusion of the informal dispute period, present the dispute to the Dispute Resolution Committee (“DRC”) for formal dispute resolution. If NASA does not elevate the dispute to the DRC for formal dispute resolution, NASA shall be deemed to have agreed with EPA's position with respect to the dispute.
- b. The DRC shall have twenty-one (21) days to unanimously resolve the dispute and issue a written decision signed by all Parties.
- c. The Parties shall each designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Consent Order. The EPA's representative on the DRC is the Director of the Superfund and Emergency Management Division for EPA Region III. NASA's designated member is the Goddard Space Flight Center Director of Management Operations. Written notice of any delegation of authority from the Parties' designated representative on the DRC shall be provided to the other Party. The DRC members shall, as appropriate, confer, meet and exert their best efforts to resolve the dispute and issue a unanimous written decision signed by all Parties.

111. Formal Dispute Resolution, Tier 2 – EPA Regional Administrator.

- a. If the DRC is unable to unanimously resolve the dispute pursuant to Paragraph 110 (“Formal Dispute Resolution, Tier 1 – Dispute Resolution Committee”) the written statement of dispute shall be forwarded by the DRC to the EPA Region 3 Regional Administrator for resolution, within twenty-one (21) days of the conclusion of the Tier 1 formal dispute resolution period.

- b. The Regional Administrator shall have twenty-one (21) days to review and resolve the dispute. Upon request, prior to resolving the dispute, the Regional Administrator shall meet and confer with NASA to discuss the issue under dispute. The Regional Administrator shall provide the Parties with a written final decision setting forth resolution of the dispute. The duties of the Regional Administrator set forth in this Section XVI (“Dispute Resolution”) shall not be delegated.

112. The existence of a dispute and EPA’s consideration of matters placed in dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Consent Order during the pendency of the dispute resolution process except as agreed by EPA in writing. The invocation of dispute resolution does not stay the accrual of stipulated penalties under this Consent Order. All elements of the work required by this Consent Order, which are not affected by the dispute, shall continue to be completed in accordance with the applicable schedule.

113. Work Stoppage. When dispute resolution is in progress, work affected by the dispute will be discontinued if the Director of the Superfund and Emergency Management Division for EPA Region III directs, in writing, that work related to the dispute be stopped because, in EPA’s opinion, such work, among other things, is inadequate or defective. To the extent possible, EPA shall consult with NASA prior to initiating a work stoppage. After stoppage of work, if NASA believes that the work stoppage is inappropriate or may have potential significant adverse impacts, NASA may meet with EPA to discuss the work stoppage. Following this meeting, and further consideration of the issues, the Director of the Superfund and Emergency Management Division for EPA Region III will issue, in writing, a final decision with respect to the work stoppage. The final written decision of the Director of the Superfund and Emergency Management Division for EPA Region III may immediately be subjected to Tier 1 formal dispute resolution.

114. Within twenty-one (21) days of resolution of a dispute pursuant to the procedures specified in this Section XVI (“Dispute Resolution”), NASA shall incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Consent Order according to the amended plan, schedule or procedures.

115. Resolution of a dispute pursuant to this Section XVI (“Dispute Resolution”) constitutes a final resolution to any dispute arising under this Consent Order. All Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Section.

XVII. ENFORCEABILITY

116. Violation of this Consent Order, or failure or refusal to comply with this Consent Order, may subject NASA to a citizen suit pursuant to Section 7002 of RCRA, 42 U.S.C. § 6972, or

Section 310 of CERCLA, 42 U.S.C. § 9659. Any such violations may be subject to civil penalties under Section 7003(b) of RCRA, 42 U.S.C. § 6973(b), and Sections 310(c) and 109 of CERCLA, 42 U.S.C. § 9659(c) and 9609, and are subject to adjustment as provided for by the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended through the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015, and the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Pt. 19.

117. This Consent Order, including its provisions related to statutory requirements, Remedial Actions, record keeping, reporting and schedules of compliance, shall be enforceable under citizen suits pursuant to Section 7002 of RCRA, 42 U.S.C. § 6972, and Section 310 of CERCLA, 42 U.S.C. § 9659.

118. In the event of any action filed under Section 7002 of RCRA, 42 U.S.C. § 6972, or Section 310 of CERCLA, 42 U.S.C. § 9659, alleging any violation of this Consent Order, it shall be presumed that this Consent Order, including those provisions which address record keeping, reporting and schedules of compliance, are requirements, standards, and conditions, and are thus enforceable under Section 7002 of RCRA and Section 310 of CERCLA.

119. Nothing in this Consent Order shall be deemed as authorizing any person(s) to seek judicial review of any action or work where such review is barred by CERCLA, including but not limited to Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XVIII. FORCE MAJEURE AND EXCUSABLE DELAY

120. NASA shall perform the requirements of this Consent Order in the manner and within the time limits set forth herein, unless the performance is prevented or delayed by events which constitute a force majeure. NASA shall have the burden of proving such a force majeure. A force majeure is defined as any event arising from causes beyond the control of NASA, that delays or prevents the performance of any obligation under this Consent Order despite NASA's best efforts to fulfill the obligation. The requirement that NASA exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event: (1) as it is occurring, and (2) following the potential force majeure event, such that the delay is minimized to the greatest extent possible. Such events do not include increased costs of performance, changed economic circumstances, reasonably foreseeable weather conditions or weather conditions which could have been overcome by due diligence, or failure to obtain federal, state, or local permits.

121. NASA shall notify EPA, in writing, within seven (7) days after it becomes or should have become aware of any event which NASA claims constitutes a force majeure. Such notice shall (1) identify the event causing the delay, or anticipated to cause delay, and the anticipated length of delay, including necessary demobilization and remobilization; (2) provide NASA's rationale for attributing such delay to a force majeure event; (3) state the measures taken or to be taken to

prevent or minimize the delay; (4) estimate the timetable for implementation of those measures; and (5) state whether, in the opinion of NASA, such event may cause or contribute to an endangerment to public health or the environment. NASA shall undertake best efforts to avoid and minimize the delay. Failure to comply with the notice provision of this Paragraph 121 and to undertake best efforts to avoid and minimize the delay shall waive any claim of force majeure by NASA. NASA shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.

122. If EPA determines that there is excusable delay because the failure to comply or delay has been or will be caused by a force majeure, the time for performance of that requirement of this Consent Order may be extended, upon EPA approval, for a period equal to the delay resulting from such force majeure. If EPA determines that the delay or anticipated delay has been or will be caused by a force majeure, then EPA will notify NASA, in writing, of the length of the extension, if any, for performance of such obligations affected by the force majeure. Such an extension shall not alter the schedule for performance or completion of any other tasks required by this Consent Order which are not directly affected by the force majeure.

123. If EPA disagrees with NASA's assertion of a force majeure, then NASA may elect to invoke the dispute resolution, and shall follow the procedures set forth in Section XVI ("Dispute Resolution"). In any such dispute, NASA shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that NASA's best efforts were exercised to avoid and mitigate the effects of the delay, and that NASA complied with the requirements of this Section XVIII ("Force Majeure and Excusable Delay"). If NASA satisfies this burden, then EPA will extend the time for performance as EPA determines is necessary. NASA will modify all necessary workplans to reflect any modified schedules.

124. Excusable Delay Due to Coordination with USACE.

- a. Delays by USACE affecting NASA's ability to perform a requirement of this Consent Order constitute an excusable delay to the extent that NASA's ability to perform such requirement in the manner and within the time limits set forth in this Consent Order is dependent on USACE providing data, information, input, or other responses in a timely manner. NASA shall notify EPA, in writing, of the delay and EPA, in consultation with NASA, will extend the time period for performance of the requirement as necessary. NASA will modify all necessary workplans to reflect the new schedule.
- b. In the case of a delay as described in Paragraph 124.a, NASA will take any necessary steps, which may include the invocation of dispute resolution pursuant to Paragraph 6 of the 2015 MOA, to ensure that USACE complies with its coordination obligations pursuant to Paragraph 4.e of the 2015 MOA.

XIX. FUNDING

125. It is the expectation of the Parties that all obligations of NASA arising under this Consent Order, other than the payment of penalties, will be fully funded by the Army pursuant to the terms of the 2015 MOA. NASA agrees to seek sufficient ER,F funding from the Army to fulfill its obligations under this Consent Order. It is the expectation of the Parties that funding made available or transferred by the Army to NASA for fulfilling obligations associated with this Consent Order will not exceed \$2 million per Fiscal Year.

126. In accordance with the requirements of Section 3.b and c of the 2015 MOA (“Funding of the Response Action Work”), NASA shall include in its submissions to the Army the specific cost estimates and budgetary proposals associated with the implementation of this Consent Order.

127. Any requirement for the payment or obligation of funds, including stipulated penalties, by NASA established by the terms of this Consent Order shall be subject to the availability of appropriated funds. No provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341.

128. Unavailability of ER,F Funds.

- a. Permanent Cessation in ER,F Funding. Notwithstanding any other provisions of this Consent Order, if NASA is unable to fulfill its obligations under this Consent Order due to a permanent cessation in ER,F funding from the Army, NASA’s obligations to perform response actions pursuant to this Consent Order, except for those obligations under Section XII (“Record Preservation”), shall be terminated. NASA shall provide EPA written notice within seven (7) days of first becoming aware of the permanent cessation of ER,F funding.
- b. Inadequate Yearly ER,F Funding. Notwithstanding any other provisions of this Consent Order, if NASA is unable to fulfill its obligations under this Consent Order due to partial, but inadequate, ER,F funding in a given Fiscal Year, NASA will, in consultation with EPA, prioritize and allocate that Fiscal Year’s ER,F funding, taking into consideration legal requirements pertaining to each Select Site, relative risks to human health and the environment, and other relevant factors. NASA shall provide EPA written notice within seven (7) days of first becoming aware of the shortfall in ER,F funding for the Fiscal Year. NASA will modify all necessary workplans to reflect any modified schedules.

XX. RESERVATION OF RIGHTS

129. EPA expressly reserves all rights and defenses that it may have, including the right to disapprove of work performed by NASA pursuant to this Consent Order, to require that NASA correct and/or re-perform any work disapproved by EPA, and to request that NASA perform tasks in addition to those stated in the relevant EPA guidance documents, workplan(s), reports(s) and/or this Consent Order.

130. EPA hereby reserves all of its statutory and regulatory powers, authorities, rights and remedies, both legal and equitable, including any which may pertain to NASA's failure to comply with any of the requirements of this Consent Order. This Consent Order shall not be construed as a covenant not to sue, or as a release, waiver or limitation of any rights, remedies, powers and/or authorities, civil or criminal, which EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority .

131. The signing of this Consent Order and NASA's consent to comply shall not limit or otherwise preclude EPA from taking additional enforcement action pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973, or any other authority, should EPA determine that such action is warranted.

132. This Consent Order is not intended to be, nor shall it be construed as, a permit. NASA acknowledges and agrees that EPA's approval of any work or workplan does not constitute a warranty or representation that the work or workplan will achieve the required cleanup or performance standards. Compliance with this Consent Order does not relieve NASA of any obligation to comply with any other applicable local, state, or federal laws and regulations, including any requirement to obtain and comply with any local, state, or federal permit or approval, except as otherwise provided for in Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1).

133. Notwithstanding any other provisions of this Consent Order, EPA retains all of its authority to take, direct, or order any and all actions necessary to protect public health or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste or constituents of such wastes, on, at, or from a Select Site, including but not limited to the right to bring enforcement actions under RCRA, CERCLA, and any other applicable statutes or regulations against NASA or any other person. EPA reserves the right to seek reimbursement from NASA for costs incurred by EPA in connection with any such response actions. Notwithstanding compliance with the terms of this Consent Order, NASA is not released from liability, if any, for the costs of any response actions taken by EPA.

134. EPA reserves whatever rights it may have under CERCLA or any other law, or in equity, to recover from NASA any costs incurred by EPA in overseeing the implementation of this Consent Order.

XXI. OTHER CLAIMS

135. Nothing in this Consent Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation, or other entity for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any solid waste, hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Select Sites.

136. National Priorities List Listing. NASA agrees not to challenge, in any forum, a proposed or final rule listing the WFF, or any portion thereof, on the National Priorities List, set forth at 40 C.F.R. Pt. 300, App. B, based on a claim that changed site conditions that resulted from the performance of the work required by this Consent Order in any way affected the basis for listing the site.

XXII. OTHER APPLICABLE LAWS

137. All actions required to be taken pursuant to this Consent Order shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. The Parties recognize that under Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), and the NCP, portions of the response actions called for by this Consent Order and conducted entirely on site, where such response actions are selected and carried out in accordance with CERCLA, are exempt from the requirement to obtain Federal, Commonwealth, or local permits. All activities must, however, comply with the applicable or relevant and appropriate Federal and Commonwealth standards, requirements, criteria, or limitations that would have been included in any such permit. Except as otherwise provided in Section 121(e)(1) of CERCLA, NASA shall obtain or require its authorized representatives to obtain all permits and approvals necessary under such laws and regulations.

XXIII. NATURAL RESOURCE DAMAGES

138. For purposes of Section 113(g)(1) of CERCLA, 42 U.S.C. § 9613(g)(1), the Parties agree that, upon the effective date of this Consent Order, remedial action under CERCLA shall be deemed to be scheduled and an action for damages (as defined in Section 101(6) of CERCLA, 42 U.S.C. § 9601(6)) must be commenced within three (3) years after the completion of the remedial action for the last operable unit at the site.

XXIV. NOTICE OF NON-LIABILITY OF EPA

139. EPA shall not be deemed a party to any contract involving NASA and relating to activities at the Select Sites or WFF and shall not be liable for any claim or cause of action arising from or on account of any act, or omission of NASA, its officers, employees, contractors, receivers, trustees, agents or assigns, in carrying out the activities required by this Consent Order.

XXV. COMMUNITY ENGAGEMENT

140. NASA shall prepare a Community Relations Plan for WFF in accordance with EPA guidance and Section 300.430(c) of the NCP, 40 C.F.R. § 300.430(c), and submit it to EPA for review and comment within sixty (60) days of the effective date of this Consent Order. This plan responds to the need for an interactive relationship with all interested community elements, both on and off WFF, regarding environmental response activities conducted pursuant to this Consent Order by NASA. NASA shall amend or revise the Community Relations Plan as necessary to incorporate the response actions conducted at Select Sites. Any revision or amendment to the Community Relations Plan shall be submitted to EPA for review and comment.

141. If requested by EPA, NASA shall participate in community involvement activities, including, but not limited to, (a) the preparation of information regarding any work for dissemination to the public, with consideration given to including mass media and/or Internet notification, (b) public meetings that may be held or sponsored by EPA to explain activities at or relating to Select Sites, and (c) making technical expertise available for responding to community inquiries. NASA's community involvement activities may include providing online access to initial submissions and updates of deliverables to any Community Advisory Groups, or other community entities, to provide them with a reasonable opportunity for review and comment. All community involvement activities conducted by NASA at EPA's request are subject to EPA's oversight.

142. As requested by EPA, NASA shall, within thirty (30) days, designate and notify EPA of NASA's Community Involvement Coordinator ("CI Coordinator"). NASA may hire a contractor for this purpose. NASA's notice must include the name, title, and qualifications of the NASA CI Coordinator. NASA's CI Coordinator is responsible for providing support regarding EPA's community involvement activities, including coordinating with EPA's CI Coordinator regarding responses to the public's inquiries about the Select Sites.

143. If EPA determines, in consultation with NASA and Army, that ER,F funds may be made available for technical assistance to qualified community groups pursuant to a technical assistance plan ("TAP") as provided in EPA's "Interim Guidance: Providing Communities with Opportunities for Independent Technical Assistance in Superfund Settlements" (Sept. 2009)

<https://www.epa.gov/enforcement/interim-guidance-opportunities-independent-technical-assistance-superfund-settlements>), EPA may seek to modify this Consent Order, in accordance with Paragraph 144 (“Modification of this Consent Order”), to require NASA to provide for the availability of technical assistance pursuant to a TAP.

XXVI. SUBSEQUENT MODIFICATION

144. Modification of this Consent Order. This Consent Order may be amended only by mutual agreement of EPA and NASA. Any such amendment shall be in writing, shall be signed by an authorized representative of each Party, shall have as its effective date the date on which it is signed by EPA, and shall be incorporated into this Consent Order.

145. Minor modifications in the workplans, studies, techniques, procedures, designs or schedules utilized in carrying out this Consent Order and necessary for the completion of the project may be made in writing by mutual agreement of the EPA and NASA Project Coordinators. Workplans, studies, techniques, procedures, designs, or schedules will be modified accordingly by NASA.

146. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by NASA shall be construed as relieving NASA of its obligation to obtain approval from EPA, if and when required by this Consent Order.

XXVII. SEVERABILITY

147. If a court issues an order that invalidates any provision of this Consent Order or finds that NASA has sufficient cause not to comply with one or more provisions of this Consent Order, NASA shall remain bound to comply with all provisions of this Consent Order not invalidated or determined to be subject to a sufficient cause defense by the court’s order.

XXVIII. TERMINATION AND SATISFACTION

148. The provisions of this Consent Order shall be deemed satisfied upon NASA’s receipt of written notice from EPA that NASA has demonstrated, to the satisfaction of EPA, that the terms of this Consent Order, including any additional tasks determined by EPA to be required pursuant to this Consent Order, have been satisfactorily completed. This notice shall not, however, terminate NASA’s obligation to comply with any continuing obligations hereunder including, but not limited to, Sections XII (“Record Preservation”), XX (“Reservation of Rights”), XXI (“Other Claims”), and XXII (“Other Applicable Laws”).

XXIX. ATTORNEYS' FEES

149. NASA shall bear its own costs and attorneys' fees.

XXX. EFFECTIVE DATE

150. This Consent Order shall be effective when EPA signs this Consent Order after the public comment period as specified in Section IX ("Public Comment and Review of Consent Order"). Within two (2) business days of signing this Consent Order, EPA will provide NASA with a copy of the signature page of this Consent Order signed by the Director of the Superfund and Emergency Management Division for EPA Region III. The undersigned representative of NASA certifies that it is fully authorized to enter into the terms and conditions of this Consent Order and to bind NASA to this document.

In the matter of the Formerly Used Defense Sites Program at the NASA Wallops Flight Facility

IT IS SO AGREED:

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

DATE:

BY: _____

Paul Leonard
Director
Superfund and Emergency Management Division
United States Environmental Protection Agency
Region III

In the matter of the Formerly Used Defense Sites Program at the NASA Wallops Flight Facility

IT IS SO AGREED:

FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION:

DATE: _____

BY: _____

David A. Reth
Director, Management Operations
NASA Goddard Space Flight Center

ATTACHMENT A

SELECT SITES COVERED BY THIS CONSENT ORDER

USACE PROJECT NO. OR NASA SITE NAME/NO.	AREAS WITHIN PROJECTS	CLARIFICATION OF RESPONSIBILITY
USACE Project 03 – MMRP (Gunboat Point, Strafing Target, Ammunition Disposal Area, and Target Center located on northern portion of WI)	Gunboat Point	
	Strafing Target	
	Ammunition Disposal Area (also referred to as the EOD Area)	
	Target Center	
USACE Project 04 – MMRP (Machine Gun and Rocket Firing Area located on northeastern portion of WI)	Machine Gun and Rocket Firing Area	
USACE Project 05 – MMRP (Grebe Range and Explosive Ammunition Test Facility located on central to northern portion of WI)	Grebe Range – Building W-42 – Concrete Slab 20-mm Gun	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers.
	Grebe Range – Building W-44 – Control Shack	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	Grebe Range – Building W-45 – Mk 37 Equipment Hut	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	Grebe Range – Building W-46 – Mk 37 Grebe Range	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	Explosive Ammunition Test Facility – Building W-81 – Explosive Ammunition Test Facility	
	Explosive Ammunition Test Facility – Building W-140 – Environmental Test Chamber	
	Explosive Ammunition Test Facility – Rocket Cluster Site	
USACE Project 06 - HTRW (WI NAOTS Cantonment Area located on northern WI)	Wallops NAOTS Cantonment Area (A1-1)	FUDS - Anticipated NFA after current phase is completed
	Building W-13 – Carpenter Shop	
	Building W-23 – Saw Filing Shop	FUDS - Anticipated NFA after current phase is completed
	Building W-34 – Paint Shop	
	Building W-35 – Paint Storage	FUDS - Anticipated NFA after current phase is completed
	Building W-47- M37 Generator House	FUDS - Anticipated NFA after current phase is completed
	Building W-63 – Gasoline Storage Tank and W-64 – Fuel Oil Storage Tanks	FUDS - Anticipated NFA after current phase is completed

Attachment A – Select Sites Covered by this Consent Order

	Building W-65 – Battery Charging Shop	
	Building W-66 – Plumbing Shop	FUDS - Anticipated NFA after current phase is completed
	Building W-69 – Range Storage #1	FUDS - Anticipated NFA after current phase is completed
	Building W-69A – Range Storage #2	FUDS - Anticipated NFA after current phase is completed
	Building W-39 – NAN Battery Shed	FUDS - Anticipated NFA after current phase is completed
USACE SMP Project 07 – MMRP (Boat Basin et al. located on eastern portion of MB)	Gun Butts No. 1 (J-18) and 2 (J-130)	
	Pyrotechnics Dump	
	South Bank of Boat Basin	
USACE SMP Project 08 – HTRW (Boat Basin et al. located on eastern portion of MB)	Building J-1 – Storehouse	FUDS - Anticipated NFA after current phase is completed
	Building J-3 – Bos'n Locker Battery Locker	FUDS - Anticipated NFA after current phase is completed
	Building J-4 – Head (also known as Bathroom)	FUDS - Anticipated NFA after current phase is completed
	Building J-5 – Battery Shop (Boat)	FUDS - Anticipated NFA after current phase is completed
	Building J-6 – Paint Locker	FUDS - Anticipated NFA after current phase is completed
	Building J-7 – Carpenter Shop	FUDS - Anticipated NFA after current phase is completed
	Building J-13 – Machine Shop	FUDS - Anticipated NFA after current phase is completed
	Building J-14 – Storehouse	FUDS - Anticipated NFA after current phase is completed
	Septic Tank in Between J-1 and J-5	FUDS - Anticipated NFA after current phase is completed
USACE SMP Project 09 – MMRP (Main Base Range – Skeet Range located on north central portion of MB)	Building A-26A and A-26B	
	Building A-28 – Tower Trap House	
	Building A-37 – Control and Storage	
USACE SMP Project 11 – HTRW (Main Base Areas of Interest located throughout MB)	PROJECT 11 – Groundwater within Project 11 Area	To Be Determined
	Building D-1 – Hangar	FUDS - Anticipated NFA after current phase is completed
	Building D-9 – Laundry and Dry-Cleaning Plant	FUDS - Anticipated NFA after current phase is completed
	Building D-21 – Battery Shop	
	Building D-22 – Gun Cleaning Shop	
	Building D-23 – CASU Paint Shop	FUDS - Anticipated NFA after current phase is completed

Attachment A – Select Sites Covered by this Consent Order

Building D-24 – Rocket Assembly Hut	FUDS - Anticipated NFA after current phase is completed
Building D-25 – Battery Shop	
Building 9/B-5 – Hangar	FUDS - Anticipated NFA after current phase is completed
Building 37/B-2 – Hangar	
Building 58/B-14 – Hangar	FUDS - Anticipated NFA after current phase is completed
Building 52/A-7 Auxiliary Power Station	
Building A-45A – Aircraft Maintenance	
Building B-16 – HEDRON Metal and Carpenter Shop	FUDS - Anticipated NFA after current phase is completed
Building B-22 – Ground School Navigation Point	
Building B-23 – PWD Paint Shop	FUDS - Anticipated NFA after current phase is completed
Building 8B/B-24 – PWD Joiner Shop	
Buildings B-26, B-28, and B-29 – Paint Storage	FUDS - Anticipated NFA after current phase is completed
Building B-2A – Flammable Storage	
Buildings B-47 and B-48 – Flammable Storage	
Building B-53 – Flammable Storage	
Buildings B-62 and B-63 – Flammable Storage	
Building B-34 – Auto Body and Paint Shop/Fire House	FUDS - Anticipated NFA after current phase is completed
Building B-37 – Paint Storage	
Building B-41 – Paint Storage	FUDS - Anticipated NFA after current phase is completed
Building B-42 – P.W. Plumbing and Sheet Metal Shop	
Building E-6 – Garbage House	
Building A-43 – Catapult	FUDS - Anticipated NFA after current phase is completed
Building F-12 – Head/Trailer Park Laundry	FUDS - Anticipated NFA after current phase is completed
Building F-22 – Photographic Laboratory	
Building F-28 – Battery Locker	FUDS - Anticipated NFA after current phase is completed
Building F-32 – Laundry and Heads	
Building G-59 – Laundry	FUDS - Anticipated NFA after current phase is completed
Building H-22 – Laundry and Storage	FUDS - Anticipated NFA after current phase is completed

Attachment A – Select Sites Covered by this Consent Order

Buildings D-19 and D-20 – CASU Line Shack	
Building D-42 – Line Shack – built by the Navy in 1947 (WFF-2957-23). Removed by the Navy circa 1950 (WFF-2957-23). No NACA/NASA use identified.	
Buildings A-30 and A-31 – Line Shacks	FUDS - Anticipated NFA after current phase is completed
Buildings A-34A and A-45 – Aircraft Operations Line Shacks	
Building N-163 – Line Shack	FUDS - Anticipated NFA after current phase is completed
Building N-164 – Line Shack	FUDS - Anticipated NFA after current phase is completed
Building D-30 – Drone Engineering	FUDS - Anticipated NFA after current phase is completed
Building 10/B-27 – Ambulance and Truck Garage	
Building A-32 – Ordnance Shack	FUDS - Anticipated NFA after current phase is completed
Building D-29 – Ordnance Shack	FUDS - Anticipated NFA after current phase is completed
Building F-19 – Quonset Storage	
Building M-15 – Ordnance Shack	FUDS - Anticipated NFA after current phase is completed
Building N-116 – Ordnance Shop	
Building D-28 – Carpenter Shop	FUDS - Anticipated NFA after current phase is completed
Building B-155 – Carpenter Shop	FUDS - Anticipated NFA after current phase is completed
Building E-53 – Electric and Plumbing Shop	
Building 21/B-6 – Link Trainer/Electric Shop	
Building 41/B-17 – Utility Building/Storage	FUDS - Anticipated NFA after current phase is completed
Building B-50 – Edging and Planning Shop	
Building D-34 – Tire Shop	FUDS - Anticipated NFA after current phase is completed
Building E-16 – Garage Storage	
Building E-153 – Auto Body Paint Shop	
Building E-31A – Heavy Equipment Repair Machine	
Building E-82 – Gas Tanker Repair	
Building E-146 – Paint Storage	

Attachment A – Select Sites Covered by this Consent Order

	Building B-20 – Ground School Communications/Carpenter Shop	
	Building 1/1D/C-4 – Barracks/Hobby Shop/Aircraft Maintenance	
	Building 1/1D/C-5 – Barracks/Hobby Shop/Aircraft Maintenance	
	Building E-10 – Ground School Projector/Laborer's Shop	
	Building 4B/C-3 – Latrine/Photographic Laboratory	
	D-44 - Fertilizer Building D-44 H Storage of Fertilizer	
	Building E-20 – Oil Storage	
	Building E-58 – Saw Mill	FUDS - Anticipated NFA after current phase is completed
	Building F-26 – Saw Mill	
	Building F-26A – Saw Mill	
	Building B-147 – Compressor Building	FUDS - Anticipated NFA after current phase is completed
	F-10, D-1, B-129, Runway 35, and N-159 Aprons	
	A-17 - Line Shack	
	A-18 - Line Shack	FUDS - Anticipated NFA after current phase is completed
	A-34-B - Aircraft Operations Line Shack	
USACE SMP Project 12 – CON-HTRW (POL Storage and Distribution mostly located in central portion of MB)	Building F-14 – Gas Station	FUDS - Anticipated NFA after current phase is completed
	Building 7/E-19 – Bulk Oil Storage	FUDS - Anticipated NFA after current phase is completed
	Building B-5A – Heating Unit House	FUDS - Anticipated NFA after current phase is completed
	A-46 B - Jet Fuel Storage Tank Status: Closed in Place	FUDS - Anticipated NFA after current phase is completed
	A-46A - Jet Fuel Storage Tank Status: Closed in Place	FUDS - Anticipated NFA after current phase is completed
	Building E-56 – Ship Service Gasoline Station	
	Building A-46 – Jet Fuel Receiving Station	FUDS (but likely no contaminants; might have to revisit later if contaminants found)
	Pipeline on MB	FUDS - Anticipated NFA after current phase is completed
USACE SMP Project 13 – HTRW (Old WWTP located on north central portion of MB)	Old WWTP	
USACE SMP Project 15 – HTRW (Active Remediation Projects)	Site 9 Abandoned Drum Dump	FUDS - Anticipated NFA after current phase is completed
	Construction Debris Landfill (CDL)	

Attachment A – Select Sites Covered by this Consent Order

	Site 14 Debris Pile	FUDS - Anticipated NFA after current phase is completed
	Site 15 Debris Pile	FUDS - Anticipated NFA after current phase is completed
	Site 48-M-Area Disturbed Soil	FUDS - Anticipated NFA after current phase is completed
	Site 49 – Runway 10/28 West End Disturbed Soil Site	FUDS - Anticipated NFA after current phase is completed
	Site 50 – Boat Basin Disturbed Soil Site	FUDS - Anticipated NFA after current phase is completed
	Site 51 – Airplane Parts Disposal Area	FUDS - Anticipated NFA after current phase is completed
	Site 52 – Runway 04/22 North End Construction Debris Area	FUDS - Anticipated NFA after current phase is completed
USACE Project 17 -- PRP/HTRW Main Base (includes a variety of AIs from the Main Base Sector)	B-51 - Plating Shop B-51 B	
	F-10 - NAOTS Hangar (ORD), Technical Services Shop and Offices F-10 J	
	D-44 - Fertilizer Building D-44 H Storage of Fertilizer (should be listed under Project 11)	
	N-159 - Air Maintenance Hangar N-159 In Use by NASA	

ATTACHMENT B

MEMORANDUM OF AGREEMENT BETWEEN ARMY AND NASA

MEMORANDUM OF AGREEMENT
WALLOPS FLIGHT FACILITY, VA
DEPARTMENT OF THE ARMY
&
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

This Memorandum of Agreement (Agreement), as authorized by section 315 of the National Defense Authorization Act for Fiscal Year 2015, Public Law 113-291, is entered into between the Department of the Army (Army) and the National Aeronautics and Space Administration (NASA), also referred to as the “Agencies”, in regard to the conduct of environmental restoration work on certain locations at the Wallops Flight Facility in Virginia.

WHEREAS, the Wallops Flight Facility in Virginia is located on property owned by the United States and under the administrative jurisdiction and real property accountability of NASA, with various Federal flight related operations taking place on the property.

WHEREAS, NASA has been and continues to conduct response actions at various locations on the Wallops Flight Facility under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 et seq., and the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act (RCRA)), 42 U.S.C. §§ 6901 et seq.

WHEREAS, NASA and the U.S. Environmental Protection Agency (EPA) entered into an Administrative Agreement on Consent under section 7003 of RCRA in 2004 (Consent Agreement) under which NASA has conducted environmental response actions at the Wallops Flight Facility.

WHEREAS, the Department of Defense (DoD) has agreed that the environmental restoration of each facility or site listed in Attachment A may be provided for under this Agreement, subject to the authorizing legislation.

WHEREAS, the response actions that are necessary at the Wallops Flight Facility sites are in various stages of completion ranging from the CERCLA Preliminary Assessment stage to the Response Complete or No DoD Action Indicated stage.

WHEREAS, the Agencies agree that NASA, as the land holding agency for the Wallops Flight Facility, is the most suitable agency to conduct all response actions on the facility under CERCLA or RCRA, in light of their knowledge of the condition and uses of the property and their planned operations for the future, and the legislation discussed above authorizes the Army

to fund the conduct of response actions by NASA at the locations on the facility that are discussed in this Agreement and listed in Attachment A.

WHEREAS, the Army and NASA intend to provide a process under which necessary response actions consistent with CERCLA and the Defense Environmental Restoration Program (DERP) (10 U.S.C. §§ 2701 et seq.), on certain sites listed in Attachment A as agreed by the Agencies, will be conducted by NASA using Environmental Restoration, FUDS, (ER,F) funds appropriated to the Department of Defense (DoD) for the conduct of DERP response actions at these locations and transferred to NASA from the Army for this purpose.

NOW, THEREFORE, the Army and NASA agree as follows.

1. **PURPOSE AND AUTHORITY.** This Agreement is entered into by the Army and NASA for the purpose of arranging between the Agencies for the transfer of ER,F funds from the Army to NASA to provide funds to NASA for the conduct of necessary CERCLA response actions, consistent with the DERP and the National Oil and Hazardous Substances Contingency Plan, 40 CFR Part 300 (NCP) at the sites agreed upon by the Agencies. The authority for this Agreement is section 315 of the National Defense Authorization Act for Fiscal Year 2015, Public Law 113-291, 10 U.S.C. § 2701(d), 31 U.S.C. § 1535 (the Economy Act), and section 120 of CERCLA. This Agreement does not create any obligations, requirements, liabilities, causes of action, or basis for claims. It is not enforceable by any third party and no third party may seek to enforce its terms or conditions.

2. **SCOPE.** This Agreement applies only to the sites listed at Attachment A. In order to create a record of all sites at Wallops Flight Facility that will be or have been the subject of environmental investigation, the Agencies have also agreed that the sites listed in Attachment B are locations where necessary response actions will be conducted by NASA using funds other than the ER,F appropriations. Attachment C includes sites where investigations have been conducted by NASA and/or the U.S. Army Corps of Engineers (USACE) and no additional environmental response actions are necessary either because no action is required or because all necessary response actions have been completed. Future costs associated with sites listed on Attachment B or Attachment C will not be funded using the ER,F funds under this Agreement, unless NASA proposes and the Agencies agree to move a site to Attachment A under the terms of this Agreement.

3. **FUNDING OF THE RESPONSE ACTION WORK.**

a. On a Fiscal Year basis when ER,F appropriations are available, the Army will provide to NASA an amount no greater than \$2 Million for the costs of response actions to be conducted during that Fiscal Year which are within the scope of this Agreement, as described in an annual work plan prepared by NASA in advance of each Fiscal Year for the projects. NASA agrees to

execute response actions at Wallops Flight Facility sites listed in Attachment A to the extent it is funded to do so as outlined in the annual spend plan as described in this Agreement. The groundwater contamination that is included in Attachment A includes areas where the contamination may have originated from past activities during the period the property was under the jurisdiction of the Navy or from activities during the period the property has been under the jurisdiction of NASA or both. As soon as the Agencies have sufficient site characterization data to understand possible sources for the groundwater contamination included in Attachment A, they will meet and confer with the goal of agreement on a reasonable and fair allocation of the costs for response actions for this groundwater contamination. Once agreement is reached by the Agencies on this allocation, this Agreement and Attachment A will be amended to reflect the allocation of all future costs between the Agencies for responding to this groundwater contamination.

b. At the beginning of the first effective fiscal year of this Agreement and each Fiscal Year thereafter, NASA will prepare and provide to the Army an annual spend plan for the Fiscal Year in question. This plan will provide information on the status of each project at a site, including the planned CERCLA phase of the work for the ensuing Fiscal Year, the amount of ER,F funds expended at the project through the end of the prior Fiscal Year, the work to be performed in the current Fiscal Year with an estimated cost, and the estimated cost and time frame to achieve Response Complete for the project site in question. This spend plan will include a line item for any NASA internal program and project management costs to be charged and paid using the ER,F funds transferred to NASA from the Army under this Agreement for the Fiscal Year in question. Any obligation by the Army of ER,F funds in support of this Agreement will be accomplished using a Military Interdepartmental Purchase Request, DD Form 448 (MIPR), signed by authorized officials of the Agencies, and funds will be transferred as provided in the MIPR.

c. NASA will report to the Army by August 15 of the current Fiscal Year on the obligation and disbursement of ER,F funds under this Agreement, with an accounting of funds used by project, the status of work achieved at each project, all NASA plans to obligate remaining funds before the end of the Fiscal Year, and a summary of the remaining ER,F funds that NASA expects it will not be able to obligate by the end of the Fiscal Year. If possible, NASA will transfer the excess unobligated ER,F funds back to the Army by September 15 of the Fiscal Year. Not later than thirty (30) days after the end of the Fiscal Year, NASA will provide a final accounting of obligations and disbursements of ER,F funds from the prior Fiscal Year for the project work performed and all costs paid under this Agreement in the prior Fiscal Year. Any remaining prior Fiscal Year ER,F funds will be promptly transferred back to the Army.

d. The annual amount to be provided to NASA may be adjusted by agreement of the Agencies at any time during the course of the work, based on a request with a detailed cost estimate and justification from NASA to the Army. Any such agreement will be the subject of a written amendment to this Agreement, as well as a revised, amended, or new MIPR reflecting the changed annual amount. The provision of funds for each site listed in Attachment A will cease

when the remedy for the site is in place or a decision is made that no further DoD action is required, whichever first occurs.

e. This Agreement does not document the obligation of funds by the Army or the USACE. Nothing in this Agreement requires the obligation or payment of funds in violation of 31 U.S.C. § 1541 (the Anti-Deficiency Act), or any other applicable provision of law.

4. RESPONSE ACTION WORK.

a. NASA agrees that, upon receipt of ER,F funding, it will conduct all funded response actions on the sites listed in Attachment A in accordance with CERCLA and the NCP. NASA will use the ER,F funds provided by the Army annually each Fiscal Year to conduct these response actions. NASA will not use any ER,F funds provided by the Army to pay for the costs of response actions at locations other than the sites listed in Attachment A, or for the costs of responding to releases to the environment at these sites that were not caused by DoD actions at the time the Wallops Flight Facility was owned by the United States and under the jurisdiction of DoD. NASA may use the ER,F funds for internal program and project management costs and for the purposes provided in the authorizing legislation, such as costs incurred by the Virginia Department of Environmental Quality (VDEQ) in expediting technical review of project documents for the sites listed in Attachment A and assistance in clarifying State laws and regulations, and associated with the project response action work within the scope of this Agreement.

b. Army agrees that NASA, as the most suitable agency to conduct all response actions on the facility, will be free to make site cleanup decisions, as appropriate, consistent with governing law and regulations.

c. After the end of each Fiscal Year, NASA will report to the Army on the response action work completed during the preceding Fiscal Year at each of the sites listed in Attachment A, the amount of ER,F funds expended for this work, the Year when it is estimated that all response actions conducted under this Agreement will be complete at each of the sites, and the estimated cost to complete all response actions at the sites.

d. As each site listed in Attachment A reaches the phase where the final remedy for the site is in place, NASA will report to the Army that the site has achieved Remedy In Place (RIP), a phase used by DoD for annual DERP reporting purposes. As each site achieves the phase of completion of a remedy, no action, no further action, or No DoD Action Indicated (NDAI), NASA will report to the Army that the site has achieved Response Complete and cease expending additional ER,F funds on the site. The authority of NASA to conduct additional response actions at any location on the Wallops Flight Facility without expending ER,F funds is not affected by this Agreement.

e. USACE will provide all documents and information to NASA, including making knowledgeable staff available to share information, as necessary and appropriate to facilitate the conduct of response actions by NASA on the sites.

f. As a part of the response action work to be conducted by NASA at the sites, NASA will be responsible for consultation with EPA, the Virginia Department of Environmental Quality (VDEQ), any natural resource trustee, and any Indian tribal government. In addition, NASA will be responsible for satisfying the public involvement, administrative record, and public comment and response requirements of CERCLA and the NCP for all removal and remedial actions conducted by NASA at the sites.

5. SITE LIST.

a. The sites that are within the scope of this Agreement are listed in Attachment A. The Agencies have discussed this list and agree that it will be used to define the locations (sites) and project types that are included in this Agreement.

Sites other than those listed in Attachment A are not included within the scope of this Agreement for funding purposes and will be addressed if and when they arise. If the Army or NASA intends to propose the addition of any new location as a new site in Attachment A, regardless of contaminant, the proposing agency will submit the proposal in writing, with an explanation of the basis for eligibility that satisfies the criteria for inclusion in the DERP program under the then current versions of the DoD DERP Manual, [currently DoDM 4715.20 (March 9, 2012)], and the Formerly Used Defense Sites (FUDS) Program Policy [currently Engineer Regulation 200-3-1 (10 May 2004)]. The proposal will be accompanied by written evidence in support of satisfaction of the eligibility criteria, along with any and all evidence of the control, use of, accountability for, operations on, and release of contamination by any other entities, including NASA, at the proposed site. The proposal and all supporting evidence will be submitted to the USACE deciding official for a determination of eligibility. A determination under this section may be submitted for consideration under the Dispute Resolution provision, paragraph 6, below. If designated as a site within the scope of this Agreement, the new location will be added as a site by amendment of Attachment A, and will be considered to be within the scope of this Agreement for funding and response action responsibility. Should NASA need the assistance and expertise of the Army or USACE in the conduct of response actions associated with military munitions, the Army agrees to provide expert advice and assistance to NASA if requested by NASA.

b. If the Army or NASA intends to propose the deletion of a site from the list in Attachment A, the proposing agency will submit this proposal in writing, with an explanation of the basis for determining the lack of eligibility of the site under the program criteria for inclusion in the DERP program under the then current versions of the DoD DERP Manual [currently DoDM 4715.20 (March 9, 2012)], and the Engineer Regulation 200-3-1 (10 May 2004). The proposal will be accompanied by written evidence in support of a determination that the site does not meet the eligibility criteria, along with any and all evidence of the control, use of, accountability for, operations on, and release of contamination by any other entities, including NASA, at the proposed site. The proposal and all supporting evidence will be submitted to the USACE deciding official for a determination of lack of eligibility for designation as a site within the scope of this Agreement. If this determination is made, the location will be removed as a listed site by amendment of Attachment A, and will be considered to be outside the scope of this

Agreement for funding and response action responsibility. A determination under this section may be submitted for consideration under the Dispute Resolution provision, paragraph 6, below.

c. If the Army or NASA finds evidence that any third party entity is or may be responsible for any release for which costs have been incurred in conducting response actions under this Agreement, this evidence will immediately be disclosed to the other agency for a determination under paragraph 5.b, above, for possible removal from the site list at Attachment A. In addition, the Army will initiate a review to determine if a cost recovery action should be pursued against one or more potentially responsible parties (PRP) under sections 107 and 113 of CERCLA for all or a portion of the response costs that have been incurred by either NASA or the USACE at or from the site of the release. If a cost recovery action is under consideration, the Army and USACE will be the lead agency for purposes of claims, demands, or litigation to recover the response costs, and will coordinate with the U.S. Department of Justice (DOJ) in regard to the claim or action. If any amount of funds is recovered for response actions that were funded using ER,F funds, by voluntary payment, settlement, or a litigation judgment, these funds will be returned to USACE and the Army for recovery into the ER,F transfer account under normal DERP cost recovery processes. If any such claim or action is under consideration, NASA will cooperate with USACE, the Army, and DOJ in providing all available evidence and information and making available all witnesses, employees, contractors, or agents and their records and information in support of the claim or action. NASA will provide all necessary accounting information in support of the claim, and will cooperate in providing such information on an ongoing basis if a PRP will be responsible for a portion of ER,F response costs in the future. Army and USACE attorneys will be the primary agency attorneys for any cost recovery action that is considered, initiated, pursued, or completed for any site listed in Attachment A.

6. DISPUTE RESOLUTION.

The Agencies will use their best efforts to resolve any dispute related to this MOA at the lowest levels and in an informal fashion through consultation, negotiation, or other forms of non-binding alternative dispute resolution mutually acceptable to the Agencies. In the event the dispute cannot be resolved at the informal level, the dispute may be elevated to the next senior official level in each respective agency by either agency in writing with a description of the disputed issue and the position of the agency. The responding agency will provide a written statement of its position on the dispute. Since time is of the essence, each level will confer regarding the dispute and attempt to reach resolution within twenty-one (21) days, unless otherwise mutually agreed by the officials responsible for the dispute at the elevated level. If the matter is elevated further, the agency seeking further elevation will do so in writing and provide a written statement of its position at this stage in the dispute. The responding agency will reply in writing with its position on the remaining matters in dispute. The Agencies agree that if a matter is not resolved by an Army Secretariat Representative and a NASA Administrator Representative by mutual agreement under this process, either agency reserves its right to seek further review under Executive Orders or policies that provide for the consideration and

resolution of disputes between agencies in the Executive Branch of the United States Government, including Executive Order 12088, Federal Compliance with Pollution Control Standards (Oct. 13, 1978), and Executive Order 12146, Management of Federal Legal Resources (July 18, 1979). If a dispute is referred for further review in the Executive Branch, each agency will provide its position in writing on the matters in dispute.

7. INTERAGENCY COMMUNICATIONS.

a. All communications to or from the Army will be transmitted through the following program manager:

Chief, DoD Environmental Programs Team
Environmental Division
HQ USACE
Telephone 202-761-7504

The Army may change the designated program manager at any time. In the event of a change, the Army will notify NASA in writing no more than thirty (30) business days after the change takes effect.

b. All communications to or from NASA will be transmitted through the following program manager:

Paul Robert
Environmental Compliance and Restoration Program Manager
Environmental Management Division
NASA Headquarters
Telephone: 202-358-1305
Email: paul.robert-1@nasa.gov

NASA may change the designated program manager at any time. In the event of a change, NASA will notify the Army in writing no more than thirty (30) business days after the change takes effect.

8. AMENDMENT OF AGREEMENT.

This Agreement may be modified or amended by written, mutual agreement of the Agencies. Either agency may propose an amendment in writing and the Agencies will confer to consider the proposed amendment. Any agreed Amendment will refer to this Agreement, be designated with a numeric identifier, and signed by an authorized representative of each agency before it is effective.

9. TERMINATION OF AGREEMENT.

This Agreement may be terminated by either agency by providing written notice of intent to terminate to the other agency. The Agencies will confer regarding a termination notice to determine if an unresolved issue can be addressed other than through termination. The termination will take effect no sooner than ninety (90) days after the notice or the beginning of the next Fiscal Year, whichever is later. During this period, the Agencies will cooperate to

provide a transition of the work that will allow for no interruption of a response action that would create an unacceptable threat to human health or the environment. Any ER,F funds held by NASA after termination and not obligated will be returned to the Army within ninety (90) days after the termination is effective. The agency seeking termination will also provide notice to the EPA and the VDEQ of the intent to terminate this Agreement. Documents related to the termination process will be placed in the administrative record file maintained for the site.

10. EFFECTIVE DATE. This Agreement is effective on the date of the later signature of the authorized representatives of the Agencies set forth below.

ON BEHALF OF THE U.S. ARMY



Hershell E. Wolfe

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health)

Date 20150223

ON BEHALF OF THE NASA

Richard J. Keegan, Jr.

NASA Associate Administrator for Mission Support Directorate

Date _____

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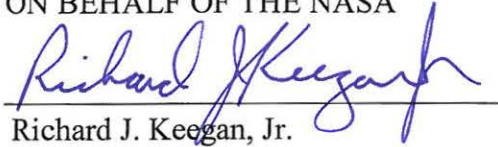
ON BEHALF OF THE U.S. ARMY

Hershell E. Wolfe

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health)

Date _____

ON BEHALF OF THE NASA



Richard J. Keegan, Jr.

NASA Associate Administrator for Mission Support Directorate

Date 02/26/2015

ATTACHMENT A - FUDS SITES COVERED BY THIS AGREEMENT

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
USACE Project 03 – MMRP (Gunboat Point, Strafing Target, Ammunition Disposal Area, and Target Center located on northern portion of WI)	<u>Gunboat Point</u>	
	<u>Strafing Target</u>	
	<u>Ammunition Disposal Area (also referred to as the EOD Area)</u>	
	<u>Target Center</u>	
USACE Project 04 – MMRP (Machine Gun and Rocket Firing Area located on northeastern portion of WI)	<u>Machine Gun and Rocket Firing Area</u>	
USACE Project 05 – MMRP (Grebe Range and Explosive Ammunition Test Facility located on central to northern portion of WI)	<u>Grebe Range – Building W-42 – Concrete Slab 20-mm Gun</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers.
	<u>Grebe Range – Building W-44 – Control Shack</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	<u>Grebe Range – Building W-45 – Mk 37 Equipment Hut</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	<u>Grebe Range – Building W-46 – Mk 37 Grebe Range</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	<u>Explosive Ammunition Test Facility – Building W-81 – Explosive Ammunition Test Facility</u>	
	<u>Explosive Ammunition Test Facility – Building W-140 – Environmental Test Chamber</u>	
	<u>Explosive Ammunition Test Facility – Rocket Cluster Site</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
USACE Project 06 - HTRW (WI NAOTS Cantonment Area located on northern WI)	<u>Wallops NAOTS Cantonment Area (AI-1)</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-13 – Carpenter Shop</u>	
	<u>Building W-23 – Saw Filing Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-34 – Paint Shop</u>	
	<u>Building W-35 – Paint Storage</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-47- M37 Generator House</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-63 – Gasoline Storage Tank and W-64 – Fuel Oil Storage Tanks</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-65 – Battery Charging Shop</u>	
	<u>Building W-66 – Plumbing Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-69 – Range Storage #1</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building W-69A – Range Storage #2</u>	FUDS - Anticipated NFA after current phase is completed

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building W-39 – NAN Battery Shed</u>	FUDS - Anticipated NFA after current phase is completed
USACE SMP Project 07 – MMRP (Boat Basin et al. located on eastern portion of MB)	<u>Gun Butts No. 1 (J-18) and 2 (J-130)</u>	
	<u>Pyrotechnics Dump</u>	
	<u>South Bank of Boat Basin</u>	
USACE SMP Project 08 – HTRW (Boat Basin et al. located on eastern portion of MB)	<u>Building J-1 – Storehouse</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-3 – Bos'n Locker Battery Locker</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-4 – Head (also known as Bathroom)</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-5 – Battery Shop (Boat)</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-6 – Paint Locker</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-7 – Carpenter Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-13 – Machine Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building J-14 – Storehouse</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Septic Tank in Between J-1 and J-5</u>	FUDS - Anticipated NFA after current phase is completed
USACE SMP Project 09 – MMRP (Main Base Range – Skeet Range located on north central portion of MB)	<u>Building A-26A and A-26B</u>	
	<u>Building A-28 – Tower Trap House</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building A-37 – Control and Storage</u>	
USACE SMP Project 11 – HTRW (Main Base Areas of Interest located throughout MB)	PROJECT 11 -- GROUNDWATER WITHIN PROJECT 11 AREA	To Be Determined
	<u>Building D-1 – Hangar</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building D-9 – Laundry and Dry-Cleaning Plant</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building D-21 – Battery Shop</u>	
	<u>Building D-22 – Gun Cleaning Shop</u>	
	<u>Building D-23 – CASU Paint Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building D-24 – Rocket Assembly Hut</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building D-25 – Battery Shop</u>	
	<u>Building 9/B-5 – Hangar</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building 37/B-2 – Hangar</u>	
<u>Building 58/B-14 – Hangar</u>	FUDS - Anticipated NFA after current phase is completed	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building 52/A-7 Auxiliary Power Station</u>	
	<u>Building A-45A – Aircraft Maintenance</u>	
	<u>Building B-16 – HEDRON Metal and Carpenter Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-22 – Ground School Navigation Point</u>	
	<u>Building B-23 – PWD Paint Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building 8B/B-24 – PWD Joiner Shop</u>	
	<u>Buildings B-26, B-28, and B-29 – Paint Storage</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-2A – Flammable Storage</u>	
	<u>Buildings B-47 and B-48 – Flammable Storage</u>	
	<u>Building B-53 – Flammable Storage</u>	
	<u>Buildings B-62 and B-63 – Flammable Storage</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building B-34 – Auto Body and Paint Shop/Fire House</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-37 – Paint Storage</u>	
	<u>Building B-41 – Paint Storage</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-42 – P.W. Plumbing and Sheet Metal Shop</u>	
	<u>Building E-6 – Garbage House</u>	
	<u>Building A-43 – Catapult</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building F-12 – Head/Trailer Park Laundry</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building F-22 – Photographic Laboratory</u>	
	<u>Building F-28 – Battery Locker</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building F-32 – Laundry and Heads</u>	
	<u>Building G-59 – Laundry</u>	FUDS - Anticipated NFA after current phase is completed

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building H-22 – Laundry and Storage</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Buildings D-19 and D-20 – CASU Line Shack</u>	
	<u>Building D-42 – Line Shack</u> – built by the Navy in 1947 (WFF-2957-23). Removed by the Navy circa 1950 (WFF-2957-23). No NACA/NASA use identified.	
	<u>Buildings A-30 and A-31 – Line Shacks</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Buildings A-34A and A-45 – Aircraft Operations Line Shacks</u>	
	<u>Building N-163 – Line Shack</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building N-164 – Line Shack</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building D-30 – Drone Engineering</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building 10/B-27 – Ambulance and Truck Garage</u>	
	<u>Building A-32 – Ordnance Shack</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building D-29 – Ordnance Shack</u>	FUDS - Anticipated NFA after current phase is completed

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building F-19 – Quonset Storage</u>	
	<u>Building M-15 – Ordnance Shack</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building N-116 – Ordnance Shop</u>	
	<u>Building D-28 – Carpenter Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-155 – Carpenter Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building E-53 – Electric and Plumbing Shop</u>	
	<u>Building 21/B-6 – Link Trainer/Electric Shop</u>	
	<u>Building 41/B-17 – Utility Building/Storage</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-50 – Edging and Planning Shop</u>	
	<u>Building D-34 – Tire Shop</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building E-16 – Garage Storage</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building E-153 – Auto Body Paint Shop</u>	
	<u>Building E-31A – Heavy Equipment Repair Machine</u>	
	<u>Building E-82 – Gas Tanker Repair</u>	
	<u>Building E-146 – Paint Storage</u>	
	<u>Building B-20 – Ground School Communications/Carpenter Shop</u>	
	<u>Building 1/1D/C-4 – Barracks/Hobby Shop/Aircraft Maintenance</u>	
	<u>Building 1/1D/C-5 – Barracks/Hobby Shop/Aircraft Maintenance</u>	
	<u>Building E-10 – Ground School Projector/Laborer's Shop</u>	
	<u>Building 4B/C-3 – Latrine/Photographic Laboratory</u>	
	D-44 - Fertilizer Building D-44 H Storage of Fertilizer	
	<u>Building E-20 – Oil Storage</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building E-58 – Saw Mill</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building F-26 – Saw Mill</u>	
	<u>Building F-26A – Saw Mill</u>	
	<u>Building B-147 – Compressor Building</u>	FUDS - Anticipated NFA after current phase is completed
	<u>F-10, D-1, B-129, Runway 35, and N-159 Aprons</u>	
	<u>A-17 - Line Shack</u>	
	<u>A-18 - Line Shack</u>	FUDS - Anticipated NFA after current phase is completed
	<u>A-34-B - Aircraft Operations Line Shack</u>	
USACE SMP Project 12 – CON-HTRW (POL Storage and Distribution mostly located in central portion of MB)	<u>Building F-14 – Gas Station</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building 7/E-19 – Bulk Oil Storage</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Building B-5A – Heating Unit House</u>	FUDS - Anticipated NFA after current phase is completed

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<i>A-46 B - Jet Fuel Storage Tank Status: Closed in Place</i>	FUDS - Anticipated NFA after current phase is completed
	<i>A-46A - Jet Fuel Storage Tank Status: Closed in Place</i>	FUDS - Anticipated NFA after current phase is completed
	<i><u>Building E-56 – Ship Service Gasoline Station</u></i>	
	<i><u>Building A-46 – Jet Fuel Receiving Station</u></i>	FUDS (but likely no contaminants; might have to revisit later if contaminants found)
	<i><u>Pipeline on WMB</u></i>	FUDS - Anticipated NFA after current phase is completed
USACE SMP Project 13 – HTRW (Old WWTP located on north central portion of MB)	<i><u>Old WWTP</u></i>	
USACE SMP Project 15 - HTRW (Active Remediation Projects)	<i><u>Site 9 Abandoned Drum Dump</u></i>	FUDS - Anticipated NFA after current phase is completed
	<i><u>Construction Debris Landfill (CDL)</u></i>	
	<i><u>Site 14 Debris Pile</u></i>	FUDS - Anticipated NFA after current phase is completed
	<i><u>Site 15 Debris Pile</u></i>	FUDS - Anticipated NFA after current phase is completed
	<i><u>Site 48-M-Area Disturbed Soil</u></i>	FUDS - Anticipated NFA after current phase is completed
	<i><u>Site 49 – Runway 10/28 West End Disturbed Soil Site</u></i>	FUDS - Anticipated NFA after current phase is completed
	<i><u>Site 50 – Boat Basin Disturbed Soil Site</u></i>	FUDS - Anticipated NFA after current phase is completed

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Site 51 – Airplane Parts Disposal Area</u>	FUDS - Anticipated NFA after current phase is completed
	<u>Site 52 – Runway 04/22 North End Construction Debris Area</u>	FUDS - Anticipated NFA after current phase is completed
USACE Project 17 --PRP/HTRW Main Base (includes a variety of AOIs from the Main Base Sector)	B-51 - Plating Shop B-51 B	
	F-10 - NAOTS Hangar (ORD), Technical Services Shop and Offices F-10 J	
	D-44 - Fertilizer Building D-44 H Storage of Fertilizer (should be listed under Project 11)	
	N-159 - Air Maintenance Hangar N-159 In Use by NASA	

ATTACHMENT B - NASA SITES

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
USACE Project 05 – MMRP (Grebe Range and Explosive Ammunition Test Facility located on central to northern portion of WI)	<u>Grebe Range – Building W-42 – Concrete Slab 20-mm Gun</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers.
	<u>Grebe Range – Building W-44 – Control Shack</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	<u>Grebe Range – Building W-45 – Mk 37 Equipment Hut</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
	<u>Grebe Range – Building W-46 – Mk 37 Grebe Range</u>	FUDS responsible for MEC and any non-transformer issues; NASA responsible for transformers;
USACE SMP Project 08 – HTRW (Boat Basin et al. located on eastern portion of MB)	<u>Building J-12 – Transformer</u>	
USACE SMP Project 11 – HTRW (Main Base Areas of Interest located throughout MB)	<u>PROJECT 11 -- GROUNDWATER WITHIN PROJECT 11 AREA</u>	To be determined
	<u>Building 50/E-24 - Structure to house gasoline pump and meter</u>	
	<u>Building F-36 – Generator House/Storage</u>	
	<u>Building F-44 – Compressor Building</u>	
	<u>Building N-218 – Flammables Storehouse</u>	
	<u>Building E-134 – Squad Line Shop</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>Building F-139 – Paint Locker</u>	
	<u>Building F-21 – Quonset Storage/Carpenter and Material Shop</u>	This is the former Navy building, and NASA has removed and replaced it in the same general vicinity; F-21 was not identified as a potential area of concern for historic NASA WFF activities; if any release is discovered in this area, there is a potential for it to be from a Navy or a NASA activity
USACE SMP Project 12 – CON-HTRW (POL Storage and Distribution mostly located in central portion of MB)	<u>Building E-1 – Electrical Substation Transformer Bank</u>	
	<u>E-24A - Gasoline Storage Tanks (6)</u>	
	<u>E-25 - Gasoline Storage Tank</u>	
	<u>E-26 - Gasoline Storage Tank</u>	
	<u>E-27 - Gasoline Storage Tank</u>	
	<u>E-36 - Gasoline Issue</u>	
	<u>E-55 - Gasoline Storage Tank</u>	
	<u>Building F-18 – Transformer Bank</u>	
	<u>Pole Mounted Transformers on WI</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
USACE Project 16 – PRP/MMRP[1] (Aircraft Gun Testing and Pistol Range located on north central portion of MB)	<u>Aircraft Gun Testing and Pistol Range – A-27</u>	
	<u>Rifle Range - The Rifle Range is a rectangular area west of the triangular part of the High Tower Skeet Range.</u>	
	<u>Range Storage Bldg A-26</u>	
USACE Project 17 --PRP/HTRW Main Base (includes a variety of AOIs from the Main Base Sector)	<u>D-101 - Electronics and Electrical Maintenance Shop D-101 A Electronics and Electrical Maintenance Shop</u>	If any release is discovered in this area, there is a potential for it to be from a Navy or a NASA activity
	<u>D-137 - Water Treatment Pump House D-137 A Water Treatment Pump House</u>	
	<u>B-129 - Aircraft Fire and Crash Building B-129 B Offices and Fire Trucks</u>	
	<u>N-222 - Surplus Storage/Disposal Building N-222 B Supply Storage</u>	
	<u>J-219 - Small Craft Overhaul Shop J-219 E Maintenance and Repair</u>	
	<u>F-10A- Paint Locker (ORD), Tool and Storage F-10A J Flammable, Oils, Paints, Solvents</u>	
	<u>F-10B - Battery Shop (ORD), Heat Treating Shop F-10B J Batteries Storage</u>	
	<u>D-12 - Pump House, S.D.P. Number 2 D-12 H Sewage Disposal</u>	
	<u>D-12A - Sewage Treatment Plant Biofilter D-12A H Part of Sewage System</u>	
	<u>D12-B - Sewage Treatment Plant Communitor D12-B H Part of Sewage System</u>	
<u>D-12C - Sewage Treatment Plant Primary Sediment Tank D-12C H Part of Sewage System</u>		

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>D-12D - Sewage Treatment Sludge Drying Beds D-12D H Part of Sewage System</u>	
	<u>D-12E - Sewage Treatment Plant Sludge Digestion Tank D-12E H Part of Sewage System</u>	
	<u>D-12F - Sewage Treatment Plant Divers Box Valve Pit, Diversion Box, S.D.P. Number 2 D-12F H Part of Sewage System</u>	
	<u>D-12G - Sewage Treatment Plant Secondary Sedimentation D-12G H Part of Sewage System</u>	
	<u>D-12H - Sewage Treatment Plant Chlorine Reaction Basin D-12H H Part of Sewage System</u>	
	<u>D-12I - Sewage Treatment Plant Concrete Block Outfall D-12I H Part of Sewage System</u>	
	<u>D-12J - Sewage Treatment Plant Chlorine Reaction and Contact D-12J H Part of Sewage System</u>	
	<u>D-96 - Sewage Plant (rotary biofilter) D-96 H Part of Sewage System</u>	
	<u>D-97 - Sewage Treatment Plant Primary Sedimentation Tank D-97 H Part of Sewage System</u>	
	<u>D-98 - Sewage Treatment Plant Sludge Drying Bed D-98 H Part of Sewage System</u>	
	<u>D-98A - Sewage Treatment Plant Sludge Drying Bed D-98A H Part of Sewage System</u>	
	<u>D-99 - Sewage Treatment Plant Sludge Digester D-99 H Part of Sewage System</u>	
	<u>D-100 - Sewage Treatment Plant Secondary Sedimentation D-100 H Part of Sewage System</u>	
	<u>H-30 - Four Car Garage H-30 In Use by NASA</u>	

USACE Project No. or NASA Site Name/No.	Areas within Projects	Clarification of Responsibility
	<u>F-20 - Quonset Storage/Ordnance Shop F-20</u>	This is the former Navy building, and NASA has removed and replaced it in the same footprint; F-20 was not identified as a potential area of concern for historic NASA WFF activities; if any release is discovered in this area, there is a potential for it to be from a Navy or a NASA activity
	<u>C-15 - Fire House C-15</u>	
	<u>D-8 - Boiler House D-8</u>	
	<u>N-166 - Alcohol Storage Bldg. N-166</u>	
USACE Project 18 – PRP/MMRP[4] (MEC Borrow/Fill Area located throughout WI)	<u>Wallops Island MEC Borrow/Fill Areas – located throughout the northern and central portions of WI.</u>	

ATTACHMENT C - NO FURTHER ACTION SITES

USACE Project No. or NASA Site Name/No.	Areas within Projects / History	Clarification of Responsibility
USACE SMP Project 10 – MMRP (Practice Bombing Target located in marshland east of Boat Basin and northeast of VIC)	<u>Practice Bombing Target</u>	No DoD Action Indicated
USACE SMP Project 12 – CON-HTRW (POL Storage and Distribution mostly located in central portion of MB)	<u>N-133 - Filling Station/Credit Union</u>	FUDS/NASA
USACE SMP Project 14 – MMRP (Regulus Launch Area located on south-central portion of MB)	<u>Regulus Launch Area</u>	FUDS (NOFA, MMRP, SI, closed-out)

ATTACHMENT C
LIST OF ACRONYMS

AI	Area of Interest
CASU	Carrier Aircraft Service Unit
CDL	Construction Debris Landfill
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R.	Code of Federal Regulations
CI	Community Involvement
CNAAS	Chincoteague Naval Auxiliary Air Station
CON-HTRW	Containerized Hazardous, Toxic, and Radioactive Waste
COPC	Constituents of Potential Concern
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DRC	Dispute Resolution Committee
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ER,F	Environmental Restoration, Formerly Used Defense Sites
FS	Feasibility Study
FUDS	Formerly Used Defense Site
HEDRON	Headquarters Squadron
HTRW	Hazardous, Toxic, and Radioactive Waste
LTRA	Long-Term Remedial Action
MB	Main Base
MEC	Munitions and Explosives of Concern
MMRP	Military Munitions Response Program
MOA	Memorandum of Agreement
NACA	National Advisory Committee for Aeronautics
NAN	Naval Air Navigation
NAOTS	Naval Aviation Ordnance Test Station
NASA	National Aeronautics and Space Administration
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
NPL	National Priorities List
NTCRA	Non-Time-Critical Removal Action
O&M	Operation and Maintenance
ORD	Ordnance
OSWER	Office of Solid Waste and Emergency Response
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oils, and Lubricants
PRAP	Proposed Remedial Action Plan
PRP/HTRW	Potentially Responsible Party/Hazardous, Toxic, and Radioactive Waste
P.W.	Public Works
PWD	Public Works Department

Attachment C – List of Acronyms

QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
SEMS	Superfund Enterprise Management System
SI	Site Inspection
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
TAP	Technical Assistance Plan
TBD	To Be Determined
TCRA	Time-Critical Removal Action
TPH	Total Petroleum Hydrocarbons
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
VDEQ	Virginia Department of Environmental Quality
VOC	Volatile Organic Compound
WFF	Wallops Flight Facility
WI	Wallops Island
WWTP	Waste Water Treatment Plant