

FEB 11 2022

**NORTHROP
GRUMMAN**

DSHW-2022-002089

Northrop Grumman
ATK Launch Systems LLC
PO Box 98
Magna, Utah 84044

February 10, 2022

Mr. Doug Hansen, Director
Department of Environmental Quality
Division of Waste Management and Radiation Control
P.O. Box 144880
Salt Lake City, Utah, 84114-4880

Re: Environmental Covenant and Site Management Plan for Bacchus East Area of Northrop
Grumman's, ATK Launch Systems LLC Bacchus Facility

Dear Mr. Hansen:

The attached Environmental Covenant and Site Management Plan associated with the pending
land exchange between Northrop Grumman and Kennecott are attached with this letter.

The primary purpose of the EC and SMP is to notify future property owners of the existence of
contamination and clarify access by DWMRC and Northrop Grumman to the existing groundwater
monitoring wells in this area. The EC also addresses procedures for management, removal or
possible relocation of groundwater monitoring wells. In addition to the exhibits attached to these
documents, we are working on a legal description for the area to be covered by the EC and
SMP. Once completed, the legal description will be inserted as an exhibit to both the EC and SMP.

If you have any comments or questions please reach out to me at (801) 251-2166.

Sincerely,



Kris H Blauer
Manager, Environmental Services
Kris.Blauer@ngc.com
(801) 251-2166

cc: Dale Urban
Brad Maulding

**To be recorded with Salt Lake County
Recorder – Utah Code Ann § 57-25-108**

When Recorded Return To:
Kevin Wilkinson, Esq.
Corporate Counsel
Northrop Grumman Systems Corporation
P.O. Box 98; M/S UT03-E2W1
Magna, Utah 84044-0098

With Copy To:
Douglas J. Hansen, Director
Utah Division of Waste Management and Radiation Control
P.O. Box 144880
Salt Lake City, UT 84114-4880

ENVIRONMENTAL COVENANT

1. This Environmental Covenant is made pursuant to the Utah Uniform Environmental Covenants Act, Utah Code Ann. Section 57-25-101, *et seq.* (the “Act”). Northrop Grumman Innovation Systems LLC as Owner and Grantor makes and imposes this Environmental Covenant upon the property more particularly described in Exhibit “A” attached hereto (the “Property”).
2. Notice. Notice is hereby given that the Property is or may be contaminated with hazardous waste, hazardous constituents, or solid waste, and therefore this Environmental Covenant is imposed to mitigate the risk to human health, safety and the environment. The Owner and future owners of the Property are subject to the provisions of this Environmental Covenant, which include, without limitation, (a) prohibitions on installation of any groundwater extraction wells on the Property, (b) prohibitions on extracting or using any groundwater from the Property for any purpose whatsoever, and (c) the express right of Holder and Agency to install groundwater monitoring wells on the Property. All such rights and obligations may be enforced by Holder and Agency individually. These provisions shall run with the land, subject to amendment or termination as set forth herein.
3. Property. This Environmental Covenant concerns an (TBD) acre tract of real property, currently owned by Owner, located in West Valley City (partially bounded by

6400 West on the east, 5400 South on the south, 4100 South on the north, and the Utah State Route No. 111 (SR 111) on the west) in Salt Lake County, Utah (the "Bacchus Facility"). Owner proposes to convey land (via exchange) at the Bacchus Facility ("Facility") so that Owner will own land on the west side of the Facility, currently leased by Owner, and will convey title to land on the east side of the Facility (the "East Bacchus Area") for future development. Thereafter, Owner will continue to operate the Facility on the west side while Transferees will develop the land on the East Bacchus Area.

4. Environmental Response Project. The response project facilitated by this environmental covenant is to provide a mechanism for management of the groundwater underlying the Property and other land owned by Owner in the immediate area. Historical operations at the Facility date back to 1915 and have resulted in some groundwater contamination. The Property subject to the land exchange includes groundwater monitoring wells or deep piezometers that are used to monitor groundwater quality and depth of groundwater. Groundwater contamination beneath the Property consists of perchlorate, and volatile organic constituents 1,1,1-trichloroethane (TCA), trichloroethene (TCE), Freon 113, and 1-1,1-dichloroethene (DCE). Concentrations of these constituents (VOCs) have been fairly stable or declining over the past several years. As part of the approved Corrective Measures Implementation Plan ("CMIP") (April 2014), Monitored Natural Attenuation (MNA) has been implemented as the method to evaluate the stability of the plume (CMIP at § 1.1 and Chap 3). Concentrations at existing wells are critical to characterize how remediation goals are being met at various locations within the plume. Data collected from these wells is also used to calculate the mass of contaminant in the aquifer, which is reported annually to the Division of Waste Management and Radiation Control ("DWMRC"). The existing groundwater monitoring well locations within the Property are shown on Exhibit "B". A copy of the most recent generalized plume concentration map which covers the Property and the adjacent area is attached as Exhibit "C". The seven groundwater monitoring wells within the East Bacchus Area are the following: GW-058, GW-060, GW-061, GW-074, GW-075, GW-083, and DP-6.

5. Administrative Record. The project administrative records are maintained and managed by the Utah Department of Environmental Quality, Division of Waste Management and Radiation Control.

6. Grantor. Northrop Grumman Innovation Systems LLC, is the Grantor of this Environmental Covenant. The Grantor of this Environmental Covenant is also an Owner as defined in Paragraph 7.

7. Owner. An Owner is any person who holds any interest in the Property, including, without limitation, the owner of the fee simple estate, any assign, successor in interest, mortgagee, lender, easement holder, lessee, and any other person or entity who acquires any interest whatsoever in the Property, or any portion thereof, whether or not any reference to this Environmental Covenant or its provisions are contained in the deed or other conveyance instrument, or other agreements by which such person or entity acquires its interest in the Property or any portion thereof. A person who is a Holder under this Environmental Covenant but who holds no other interest in the Property is not an Owner.

8. Transfer of Obligations. Except as provided in this Environmental Covenant, when the Owner of the fee simple estate transfers that estate to a Transferee, the Owner's obligations under this Environmental Covenant transfer to the Transferee, who then becomes an Owner. When the Owner of the fee simple estate transfers a lesser interest, or when an Owner who holds a lesser interest transfers that lesser interest or any portion thereof, the Owner's obligations under this Environmental Covenant continue, and the Transferee acquires the same obligations to the extent of the interest it acquires. Notwithstanding the foregoing, nothing herein shall relieve an Owner of an interest in the Property of its responsibilities to comply with the terms hereof and all other provisions of applicable law or of responsibility for its failure to comply during the time it held an interest in the Property.

9. Transferee. The Transferee is a person to whom an Owner transfers the Owner's obligations under this Environmental Covenant. A Transferee is any assign, successor in interest, including without limitation a future owner of an interest in fee simple, mortgagee, lender, easement holder, lessee, and any other person or entity who acquires any interest whatsoever in the Property, or any portion thereof, whether or not any reference to this Environmental Covenant or its provisions are contained in the deed or other conveyance instrument, or other agreements by which such person or entity acquires its interest in the Property or any portion thereof. When a transfer occurs, the Transferee becomes an Owner.

10. [deleted]

11. Holder. Northrop Grumman Systems Corporation, the operator of the Facility is the Holder of this Environmental Covenant.

12. Rights and Obligations of Holder. The Holder may enforce this Environmental Covenant. The Holder's obligations hereunder are limited to the specific provisions and the limited purposes described in this Environmental Covenant. Subject to the provisions hereof, the Holder's rights and obligations survive the transfer of the Property.

13. Agency. The Utah Department of Environmental Quality (UDEQ) is the Agency (as defined in the Act) under this Environmental Covenant. The UDEQ may enforce this Environmental Covenant. The UDEQ assumes no affirmative duties through the execution of this Environmental Covenant. The Director of the Division of Waste Management and Radiation Control is the UDEQ representative for this Environmental Covenant.

14. Activity and Use Limitations. As part of the environmental response project described above, Grantor hereby imposes the following activity and use limitations:

Ground Water Disturbance, and Construction Limitations. Owner hereby imposes and agrees to comply with the following activity and use limitations set forth in this paragraph 14. Owner and Transferee(s) shall not install any groundwater extraction wells on the Property, and shall not extract or use any groundwater from the Property for any purpose whatsoever. The Director and Holder shall have the right to access, install or relocate groundwater monitoring wells in locations as required for monitoring groundwater pursuant to the CMIP, and will provide reasonable notice to Owner and Transferee(s) of its intention to do so. The Director and Holder shall use reasonable efforts to find a monitor location satisfactory to Owner that minimizes to the greatest practical extent impacts to Owner's existing or planned uses of the Property. Monitor locations may be located on portions of the Property which are open space. Owner and Transferee(s) shall not move nor modify any existing or future groundwater monitoring wells on the Property without first notifying the Director and Holder in writing and obtaining the Director's approval to do so. Owner and Transferee(s) shall not authorize or engage in any construction or development activity that would permanently hinder or prevent access to an existing groundwater monitoring well or jeopardize the operation and use of such well.

15. Notice of Breach. If any event or action by or on behalf of a person or entity who holds an interest in or holds an encumbrance on the Property constitutes a breach of the activity and use limitations, the Owner shall notify the Director and Holder within 30 days of becoming aware of the event or action, and shall remedy the breach of the

activity and use limitations within 60 days of becoming aware of the event or action, or such other time frame as may be agreed to by the Owner and Director.

16. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to Utah Code Ann. § 57-25-105, subject to amendment or termination as set forth herein.

17. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to Utah Code Ann. § 57-25-111. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce correction of any non-compliance. Nothing in this Environmental Covenant shall restrict the Director from exercising any authority under applicable law.

18. Rights of Access. Grantor hereby grants to the UDEQ, all Holders, and West Valley City, the right of access to the Property for data collection, necessary response actions, inspections, and implementation or enforcement of this Environmental Covenant.

19. Compliance Reporting. Upon request from the Director, Owner or any Transferee shall submit to the Director and Holder written documentation verifying that the activity and use limitations remain in place and are being complied with. If such limitations do not remain in place, are not being complied with, or both, the Owner or any Transferee shall explain the circumstances.

20. Notice upon Conveyance. Owner shall notify the Agency and Holder within 20 days after each transfer of ownership of all or any portion of the Property. Owner's notice to the Agency and Holder shall include the name, address and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and an un-surveyed plat that shows the boundaries of the property being transferred. Instruments that convey any interest in the Property (fee, leasehold, easement, encumbrance, etc.) shall include a notification to the person or entity who acquires the interest that the Property is subject to this Environmental Covenant and shall identify the date, entry no., book and page number at which this document is recorded in the records of the Salt Lake County Recorder, in the State of Utah. Failure to provide notification shall have no effect upon the enforceability and duty to comply with this Environmental Covenant.

21. Representations and Warranties. Grantor hereby represents and warrants to the other signatories hereto:

- A. that the Grantor is the owner of the Property;
- B. that the Grantor holds fee simple title to the Property;
- C. that the Grantor has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided, and to carry out all obligations hereunder;
- D. that the Grantor has identified all other persons who own an interest in or hold an encumbrance on the Property and notified such persons of the Owner's intention to enter into this Environmental Covenant; and
- E. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Grantor is a party or by which Grantor may be bound or affected.

22. Amendment or Termination. This Environmental Covenant may be amended or terminated pursuant to the Act. Except as set forth herein, Grantor waives any and all rights to consent or notice of amendment concerning any parcel of the Property to which Grantor has no fee simple interest at the time of amendment or termination. Nothing in this Environmental Covenant shall be interpreted to mean that the Director waives the right to consent to or notice of amendment or termination of this Environmental Covenant.

23. Effective Date, Severability, and Governing Law. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a document of record for the Property with the Salt Lake County Recorder. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Utah.

24. Recordation and Distribution of Environmental Covenant. Within 30 days after the date of the final required signature upon this Environmental Covenant, Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Salt Lake County Recorder's Office. The Owner shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: the Director and

the Holder, and, each person holding a recorded interest in the Property; and any other person designated by the Director.

25. Notice. All notices, statements and other communications under the terms of this Environmental Covenant shall: (a) be in writing; (b) contain a reference to this Environmental Covenant with the date thereof and naming the parties thereto; (c) contain the address of the Property or applicable portion thereof; (d) be deemed given upon actual receipt (or refusal) with proof of delivery; and (e) be sent or delivered by (i) certified U.S. mail, return receipt requested, postage prepaid or (ii) reputable overnight courier service, and addressed as follows, or at such other address as from time to time designated in writing in accordance herewith by the party to receive the notice. Unless otherwise notified in writing by or on behalf of the current owner or the Director, any document or communication required by this Environmental Covenant shall be submitted to:

If to the Director:

Douglas J. Hansen, Director
Utah Division of Waste Management and Radiation Control
P.O. Box 144880
Salt Lake City, Utah 84114-4880

If to Northrop Grumman Innovation Systems LLC:

Northrop Grumman Systems Corporation
Attention: Law Department – Real Estate Legal Notices
2980 Fairview Park Drive
Falls Church, Virginia 22042-4511

Northrop Grumman Systems Corporation
Attention: Corporate Real Estate - Legal Notices
One Space Park Drive, M/S: D2
Redondo Beach, California 90278

If to Northrop Grumman Systems Corporation:

Northrop Grumman Systems Corporation
P.O. Box 98 M/S UT-03-E2W1

Magna, Utah 84044
Attn: Environmental Manager

And a copy to:

Northrop Grumman Systems Corporation
P.O. Box 98; M/S UT-03-E2W1
Magna, UT 840044
Attn: Law Department

26. Governmental Immunity. In approving this covenant, the Agency does not waive governmental immunity afforded by law. The Grantor, Owner, and Holder, for themselves and their successors, assigns, and Transferees, hereby fully and irrevocably release and covenant not to sue the State of Utah, its agencies, successors, departments, agents, and employees (State) from any and all claims, damages, or causes of action arising from, or on account of the activities carried out pursuant to this Environmental Covenant except for an action to amend or terminate the Environmental Covenant pursuant to Sections 57-25-109 and 57-25-110 of the Utah Code Ann. or for a claim against the State arising directly or indirectly from or out of actions of employees of the State that would result in (i) liability to the State of Utah under Section 63G-7-301 of the Governmental Immunity Act of Utah, Utah Code Ann. Section 63G-7-101, *et seq.* or (ii) individual liability for actions not covered by the Governmental Immunity Act as indicated in Sections 63G-7-202 and -902 of the Governmental Immunity Act, as determined in a court of law.

27. Payment of Agency's Costs. Consistent with the Act and other applicable law, the Owner, if invoiced, shall reimburse the UDEQ for the UDEQ's costs related to this Environmental Covenant. The invoice may be based on actual costs incurred by Agency or on the fee schedule approved by the legislature or both as applicable.

28. Grantor and Holder each represent and certify that the undersigned representative is authorized to execute this Environmental Covenant.

[signatures on following pages]

**Northrop Grumman Innovations Systems LLC, as
Grantor and Owner**

Signature:
By: A. J. Paz
Corporate Director of Real Estate

Date

STATE OF CALIFORNIA
COUNTY OF _____ ss.

On _____, before me _____,
Notary Public, personally appeared A. J. Paz, who proved to me on the basis of
satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within
instrument and acknowledged to me that he/she/they executed the same in his/her/their
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of
_____ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature _____

My commission expires _____.

Northrop Grumman Systems Corporation, as Holder.

Signature of Holder
By: A. J. Paz
Corporate Director of Real Estate

Date:

STATE OF CALIFORNIA
COUNTY OF _____ ss.

On _____, before me _____,
Notary Public, personally appeared A. J. Paz, who proved to me on the basis of
satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within
instrument and acknowledged to me that he/she/they executed the same in his/her/their
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of
_____ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal

Signature _____

My commission expires _____.

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

On behalf of the Utah Department of Environmental Quality, the Director of the Division of Waste Management and Radiation Control approves the foregoing Environmental Covenant pursuant to Utah Code Ann. Sections 57-25-102(2) and 57-25-104(1)(e).

Douglas J. Hansen , Director
Division of Waste Management and Radiation
Control

Date

State of Utah)
)
County of Salt Lake) ss:

Before me, a notary public, in and for said county and state, personally appeared Douglas J. Hansen, Director of the Utah Division of Waste Management and Radiation Control, who acknowledged to me that he did execute the foregoing instrument.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this ____ day of _____, 20 .

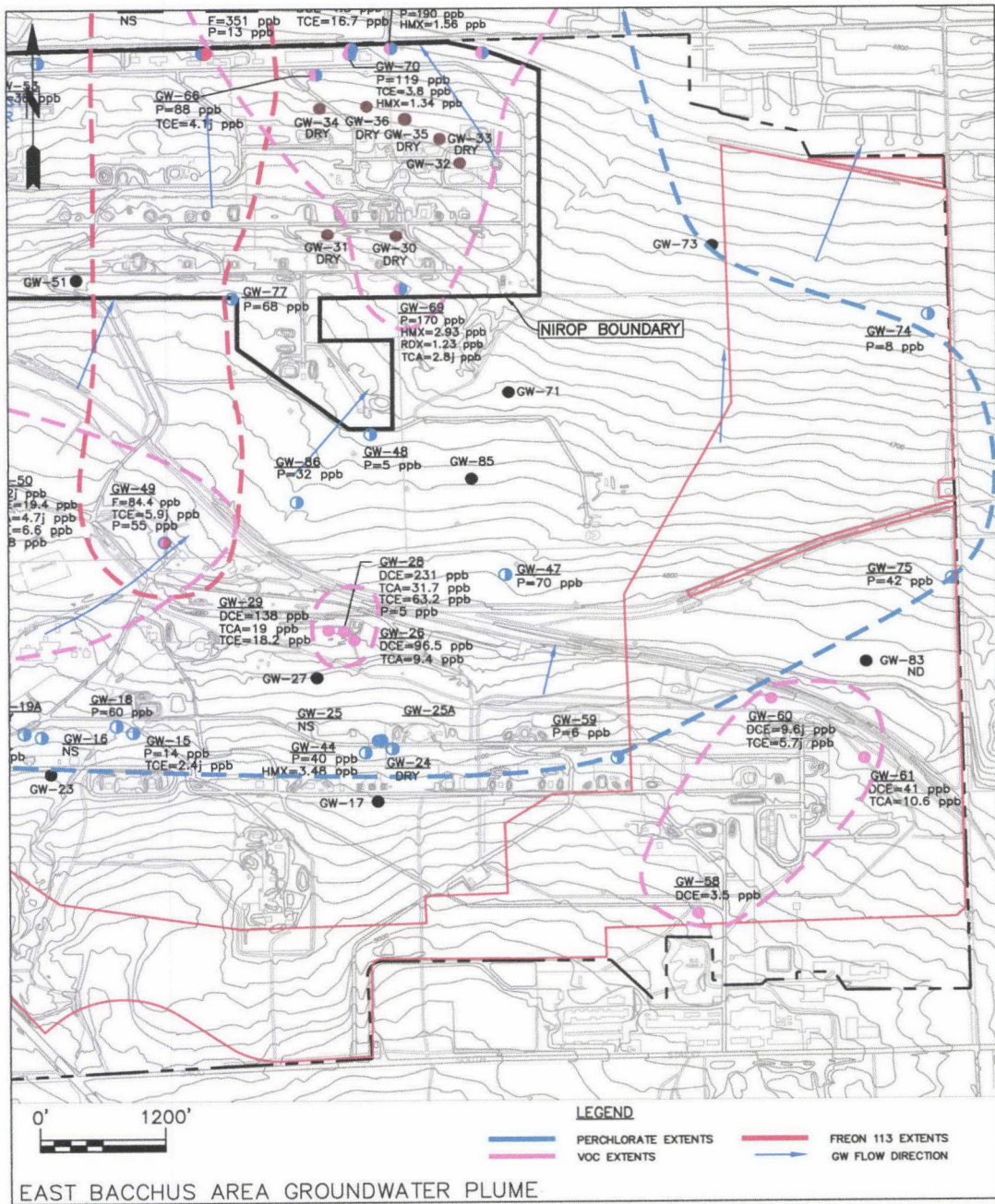
Notary Public

Date

Exhibit B



EXHIBIT C





SITE MANAGEMENT PLAN
East Bacchus Area

Prepared for:
Utah Department of Environmental Quality
Division of Waste Management and Radiation Control

Prepared by:
Northrop Grumman Systems Corporation
Bacchus Facility
UTD001705029

December 2021

1.0 SITE MANAGEMENT PLAN
East Bacchus Area, Northrop Grumman Systems Corporation
West Valley City, Utah

This Site Management Plan ("SMP") pertains to select Solid Waste Management Units (SWMUs) and a portion of the groundwater waste management unit ("GWMU") at Northrop Grumman Systems Corporation's (NGSC) Bacchus Facility, and is referenced herein as the "East Bacchus Area." The East Bacchus Area is located at approximately 6400 West and 4700 South within the City of West Valley City, Salt Lake County, comprising some 984 acres of real property. The East Bacchus Area is depicted in Exhibit A and described in Exhibit B to this SMP, and groundwater restrictions are addressed herein at Section 3.5. Soil restrictions are addressed in Section 3.6.

The East Bacchus Area contains a roughly 350-acre groundwater plume (Exhibit C) approximately 95 to 200 feet below ground surface impacted by concentrations of perchlorate, 1,1-dichloroethene (DCE), trichloroethene (TCE), and 1,1,1-trichloroethane (TCA) within the shallow unconfined groundwater aquifer. The East Bacchus property is sometimes referred to herein as the "Site." This SMP is being submitted solely by NGSC. The Division of Waste Management and Radiation Control (DWMRC or the "Division") maintains, at 195 North 1950 West, Salt Lake City, Utah, the administrative record relating to the Bacchus Facility Hazardous Waste Storage Permit.

2.0 BACKGROUND

Soils, groundwater, and other media on and within NGSC's groundwater plume and related solid waste management units (SWMUs) in the East Bacchus Area, have undergone investigation, characterization, and delineation to determine whether they are impacted by chemical compounds, metals, or other constituents. SWMUs and other areas of concern located within this area are listed and described in Section 2.1. A Corrective Measures Study (CMS) and a Corrective Measures Implementation Plan were developed for NGSC's Bacchus Facility groundwater in accordance with the requirements of the State of Utah Part B Hazardous Waste Storage Permit No. UTD001705029 (the "Permit"). The CMS was implemented for investigation, monitoring, and remediation of groundwater contamination related to the Bacchus Facility. Prior to the preparation of the CMS, three tasks (development of a groundwater flow and contaminant transport model [EarthFax, 2007], preparation of a Human Health Risk Assessment ("HHRA"), and preparation of an Ecological Risk Assessment ("ERA") were completed and approved by the Utah Division of Solid and Hazardous waste (UDSHW). Based on these measures collectively and recently collected data, land use of the East Bacchus Area is permitted, subject to the environmental restrictions identified in this SMP.

A Corrective Measures Implementation Plan (CMIP) was approved and implemented in March of 2014 which describes in detail how the approved corrective measures are to be implemented. The CMIP is currently in effect at the Bacchus Facility and will continue at the East Bacchus Area in the form of Monitored Natural Attenuation (MNA).

A HHRA was completed (Terra Mentis, 2011) to evaluate the potential risk from contaminants in groundwater within the groundwater plume (including the East Bacchus Area). The exposure scenarios included an environmental and industrial worker, a trespasser and an off-site resident. Future hypothetical on-site exposure receptors included a residential receptor, a commercial worker receptor, a construction worker, and a trespasser. Future potential off-site scenarios include residential receptors. See "Human Health Risk Assessment For Groundwater at the ATK Launch Systems, Bacchus Facility, West Valley City, Utah. UTD001705029, UDSHW, January 2011. The HHRA evaluated an assumed offsite residential, commercial, industrial, and construction worker and other comparable land uses for the East Bacchus Area.

Subsequent to the work compiled for the CMIP, an investigation (CMIP at Group 1 SWMUs, Plant 1, ATK Launch Systems, July 2013) at several SWMUs in the East Bacchus area has concluded that soils meet a no further action/unrestricted use standard. Work completed at sumps in the East Bacchus area resulted in excavation and removal of soils that primarily included lead and HMX. Following excavation and removal, all soils within the SWMUs were below RSLs. A complete summary of risk included an evaluation of human health risk consisting of dermal, ingestion, and inhalation contacts with the remaining soils, indoor air quality, and potential ecological impact. Based on the information generated from the criteria used to screen the confirmation sample results at the SWMUs, additional human health risk and/or ecological risk evaluations were not deemed necessary.

Groundwater underlying the site in 2018 contained perchlorate with a high of 35 ug/L, TCE at 8 ug/L, DCE at 39.8 ug/L, and TCA at 7.4 ug/L. Trends indicate that VOC concentrations are decreasing over time and perchlorate concentrations remain fairly steady. For this reason, groundwater is included in this site management plan.

A screening-level ecological risk assessment (SLERA) was prepared as part of ATK's Resource Conservation and Recovery Act (RCRA) permit. This SLERA included a selection process for constituents of potential ecological concern (COPECs), an exposure assessment, an ecological receptor selection process, a toxicology assessment, a risk characterization, and an uncertainty analysis. The results of the SLERA conclude that the selected COPECs do not have the potential to cause significant risks to the evaluated ecological receptors.

This SMP includes activity and use limitations and other controls that are needed to ensure that residual low levels of chemical constituents remaining in groundwater within the East Bacchus Area are adequate for protection of human health and the environment. Activity and use limitations and other controls will be implemented for the East Bacchus Area pursuant to this SMP and the East Bacchus Area Environmental Covenant that has been or shortly will be recorded at the Salt Lake County Recorder's office against the East Bacchus Area (the "Environmental Covenant").

The ERA, and the SMP satisfy the requirements of Utah Admin. Code R315-101-6 and, together with the Environmental Covenant, support a determination that corrective action is complete with controls, including the site management requirements described in this SMP, within the East Bacchus Area.

The SMP and Environmental Covenant restrictions are protective of human health and the environment. Based on all available data, the low-levels of residual contamination do not affect, properties adjacent to the East Bacchus Area.

2.1 INVENTORY, HISTORY, AND STATUS OF EAST BACCHUS SWMUs

The SWMUs located within the East Bacchus area are shown in Figure 1.

Six SWMUs were located within the East Bacchus Area; S-6, S-7A, S-7B, S-8, S-22, and SP-6. Sumps S-6, S-7A, S-7B, S-8, and S-22 received closure with No Further Action/Unrestricted Use in December 2013. SP-6 received closure with Unrestricted Use in August 2013.

All SWMUs within the East Bacchus area have been addressed as required under the permit and all of these SWMUs qualify for residential use as defined in R315-101.

2.2 AREAS OF CONCERN

ATK completed an internal assessment of buildings and other historical site uses located on East Bacchus prior to and during the initial stages of the land swap process. This work did not identify any new SWMUs or areas of unaddressed soil contamination.

3.0 SITE MANAGEMENT

In compliance with the requirements of Utah Admin. Code R315-101-6 and Utah Code Anno. § 19-6-108.3, the following site management requirements pertain to and shall be implemented within the East Bacchus Area.

3.1 LAND USE

The East Bacchus Area may be used for residential, commercial, industrial, construction worker and any other comparable uses with a similar level of human occupancy or use (collectively, "Allowed Uses") subject to the management and engineering controls specified in Section 3.5 for construction workers. Should NGSC or subsequent users of the East Bacchus Area plan to develop any use without the management and engineering controls specified in Sections 3.5 and 3.6, the owner of the East Bacchus Area, or any part thereof, and any users shall, prior to development of the use, demonstrate to the Director's satisfaction that the risk levels of the proposed use will not exceed the applicable risk exposure level.

3.2 GROUNDWATER USE

Groundwater under the East Bacchus Area and within the shallow unconfined aquifer, as defined in the 2016 Annual Groundwater Sampling Report (ATK Launch Systems, March 2017), shall not be used for potable, culinary, domestic, process, irrigation, or any other purposes. If a water well is proposed and will be completed in the deeper uncontaminated aquifer within the plume area, measures will be taken to ensure there is no cross contamination between aquifers.

3.3 ACCESS

NGSC, and the Director shall have rights of reasonable access to the East Bacchus Area, as set forth in the Environmental Covenant. Nothing in this SMP shall be construed as expanding or limiting any access and inspection authorities of either NGSC or the Division and the Director under Utah law

3.3.1 Disruption

To the extent that NGSC, or the Director, or their authorized representatives, conduct any activities on or within any portion of the East Bacchus Area, NGSC or the Director shall perform any such activities in a commercially reasonable manner and in compliance with all applicable laws, and, further, in such a manner as to not unreasonably interfere with the design, construction, development, use or enjoyment of the property and to comply with owner's or tenant's security needs. NGSC assumes all risk to NGSC of any entry or other activity by NGSC, its employees, agents, and contractors within and upon the property, and NGSC shall be solely responsible for any injury or damage to the property or its owner(s) caused by such entry or activity to the extent any injury or damage is caused by NGSC, its employees, agents, or contractors. In the event of a dispute, the Director will determine what needs, requirements, and activities are reasonable, and will consider the impact on the current or planned use or development of the affected property in making such a determination. Any person who conducts any such activities shall fully repair and/or replace any improvements or landscaping damaged by such activities and restore the property to substantially the same condition as existed prior to any such damage. In the event that the Director's activities cause damage to improvements or

landscaping, the injured party may present a claim against the State of Utah in accordance with Utah law.

3.4 WELLS

Wells may be removed and/or relocated to accommodate the development of the East Bacchus Area. Such abandonment or relocation shall be at the sole expense of the land developer and upon approval by the Director. In relocating any wells, the most important criterion in determining placement of groundwater monitoring wells and related facilities within the East Bacchus Area, as needed, is ability to adequately capture groundwater data required by this SMP and the Permit. In addition, any monitoring wells or facilities required to comply with this SMP and the Permit will be placed in areas that, to the greatest extent possible: (i) do not impede or interfere with the construction of improvements, (ii) allow any then existing improvements to remain undisturbed, and (iii) avoid disruption of the use of the East Bacchus Area.

3.5 EAST BACCHUS AREA GROUNDWATER

Any Allowed Use may be conducted within the East Bacchus Area, subject to the following management and engineering controls:

3.5.1 Management and Engineering Controls

Construction workers working within the East Bacchus Area as described in Exhibits A and B to this SMP shall not work in excavations in which there is accumulated groundwater.

3.5.2 Monitoring

There are six existing monitoring wells (GW-058, GW-060, GW-061, GW-074, GW-075, and GW-083) and one existing piezometer (DP-6) that have been installed to monitor the East Bacchus Area as depicted in Exhibit A. The wells may be replaced or abandoned to accommodate development and construction of improvements within the East Bacchus Area future developments; however, replacement wells must be located where they will monitor the East Bacchus Area. The following standards will apply:

3.5.2.1 Replacement Wells

If any monitoring well is damaged or removed due to the construction of improvements and facilities within the East Bacchus Area or becomes incapable of producing representative samples, such well will be repaired or replaced to allow for continued monitoring. If appropriate, installation of a replacement well may be deferred until after construction is completed or for a maximum of one year. Replacement wells will be placed in locations approved by the Director. Installation, development, sampling, plugging and abandonment of monitoring wells shall comply with NGSC's Standard Drilling Specification.

If a well is replaced due to an insufficient amount of water or failure of the well, it will be the responsibility of NGSC to pay for the replacement well. If the developer requires removal of a well due to construction or improvements, or if the developer damages the well, all costs to replace the well will be paid by the developer and completed by NGSC or its agent.

3.5.2.2. New Wells

The groundwater plume is dynamic and changes shape both horizontally and vertically over time. If indicated by ongoing monitoring, modeling or from other data, new wells shall be installed to track plume movement.

3.5.2.3 Monitoring Schedule

NGSC shall continue groundwater monitoring related to the East Bacchus Area as stipulated in the existing Permit. Groundwater sampling shall be conducted in accordance with Module V of the Permit. Annual groundwater monitoring shall continue on the East Bacchus Area until NGSC has demonstrated that this SMP may be terminated as specified in Section 3.7 of this SMP or as otherwise may be established to the satisfaction of the Director.

3.5.2.4 Analytical Parameters

NGSC shall analyze groundwater samples from the East Bacchus Area monitoring wells for perchlorate using EPA Method 314.0 and volatile organic compounds (VOCs) using EPA Method 8260B or equivalent as approved by the Director.

3.5.2.5 Reporting

NGSC shall submit to the Director an annual report on the data gathered during sampling and analytical results from each annual sampling event in accordance with Module V of the Bacchus Plant 1 Hazardous Waste Storage Permit as is currently required by the Permit.

3.6 EAST BACCHUS AREA SOIL

Six SWMUs were located within the East Bacchus Area; S-6, S-7A, S-7B, S-8, S-23, and SP-6. S-6, S-7A, S-7B, S-8, and S-23 received closure with No Further Action/Unrestricted Use in December 2013. SP-6 received closure with Unrestricted Use in August 2013. Therefore, soils in the East Bacchus area are suitable for use by new owners or occupants.

3.7 REPORTS

Annually, concurrent with the reporting for groundwater conditions at the Bacchus site, NGSC shall submit to the Director a report confirming that the terms and conditions of this SMP and the Environmental Covenant are being substantially satisfied.

3.8 TERMINATION

If at any time, groundwater sampling within the East Bacchus Area indicates that approved groundwater corrective action levels have been met, a statistical evaluation of the groundwater data will be completed utilizing the latest EPA guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities. If the statistical evaluation determines that groundwater action levels have been met, NGSC may request that a Corrective Action Complete Without Controls (CACWOC) determination be made for the East Bacchus Area. Upon approval of a CACWOC determination, this SMP and the Environmental Covenant for the East Bacchus Area may be terminated.

3.8 SITE MANAGEMENT CONTACTS

Inquiries concerning the SMP should be directed to the following:

If to ATK Launch Systems LLC:

Manager, Environmental Services
Propulsion Systems Division, Flight Systems Group
Northrop Grumman Systems Corporation
P.O. Box 98; M/S F1EV
Magna, Utah 84044-0098
Office: (801) 251-2166

With a copy to:

Law Department
Propulsion Systems, Flight Systems Division
Northrop Grumman Systems Corporation
P.O. Box 98; M/S EW
Magna, Utah 84044-0098
Office: (801) 251-2205

If to DEQ:

Douglas J. Hansen, Director
Utah Department of Environmental Quality
168 North 1950 West
P.O. Box 144810
Salt Lake City, Utah 84116-4810

With a copy to:

Raymond Wixom, Esq.
Assistant Attorney General
Environment Division
State of Utah
Office of Attorney General
195 North 1950 West, 2nd Floor
P.O. Box 140873
Salt Lake City, Utah 84114-0873
Office: (801) 536-0213

NGSC shall notify the Director promptly in writing of any change in the contact information for NGSC. The Director shall promptly notify NGSC of any change in his or her contact information.

REFERENCES

- EarthFax Engineering, Inc., 2007. "Groundwater Flow and Contaminant Transport Model, Alliant Techsystems Inc., West Valley City, Utah", originally published in June 2001, revised in January 2007.
- EarthFax Engineering Group, LLC. "Corrective Measures Implementation Plan (CMIP) for Groundwater at the Bacchus Facility. West Valley City, Utah. April 2014.
- Terra Mentis Environmental Consulting, 2011. "Human Health Risk Assessment for Groundwater at the ATK Launch Systems, Bacchus Facility, West Valley City, Utah". January 2011.
- Terra Mentis Environmental Consulting, 2012a. "Supplemental Human Health Risk Assessment for Two Off-Site Residences at the ATK Launch Systems, Bacchus Facility, West Valley City, Utah". March 2012.
- Terra Mentis Environmental Consulting, 2012b. "Screening-Level Ecological Risk Assessment for Groundwater at the ATK Bacchus Facility, West Valley City, Utah". April 2012.
- Tetra Tech, June 2013. Corrective Measures Study (CMS) for Groundwater. ATK Launch Systems Bacchus Facility. Magna, Utah

EXHIBIT A
East Bacchus Area
Former ATK Launch Systems Inc. Facility
West Valley City, Utah



LEGEND

- Exchange Land (approx.)
- Groundwater Monitoring Area

EXHIBIT B
BOUNDARY DESCRIPTION
EAST BACCHUS AREA

EXHIBIT C PLUME MAP EAST BACCHUS AREA

