

**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, REGION IX**

In the Matter of:)
)
)
U.S. Air Force and)
Raytheon Company,) Docket PWS-AO 2007-007
)
Respondents.)
) ADMINISTRATIVE ORDER FOR
Tucson International Airport Area Site,) RESPONSE ACTION
Pima County, Arizona)
Proceeding Under Section 1431 of the Safe)
Drinking Water Act, 42 U.S.C. § 300i)

I. JURISDICTION

1) This Administrative Order (“Order”) is issued to Respondents United States Air Force (“USAF”) and Raytheon Company (“Raytheon”) pursuant to the authority vested in the Administrator of the Environmental Protection Agency (“EPA”) by Section 1431(a) of the Safe Drinking Water Act (“SDWA”), 42 U.S.C. § 300i(a). The Administrator of EPA has delegated the authority to take these actions to the Regional Administrator of EPA Region IX by EPA Delegation 9-17 (1200-TN-350) dated May 11, 1994, and the Regional Administrator has delegated the authority to take these actions to the Water Division Director by Regional Delegation 1250.36 (May 8, 2000).

II. STATE COORDINATION

2) Pursuant to Section 1431 of the SDWA, 42 U.S.C. § 300i, EPA consulted with the state of Arizona and local authorities on this matter.

III. PARTIES BOUND

- 3) This Order shall apply to and be binding on the Respondents, and upon their successors and assigns as well as affiliated organizations, agents, contractors, and consultants.

IV. PURPOSE

- 4) This Order compels the Respondents to conduct measures to abate the threat to public health presented by the past and present contamination from the Air Force Plant #44, which is located in Tucson, Arizona ("AFP 44"), by performing the response actions described as the Scope of Work ("SOW"), incorporated herein as Appendix A to this Order.

V. DEFINITIONS

- 5) All other terms, not otherwise defined herein, shall have their ordinary meanings unless defined in SDWA, in which case the SDWA definition shall control.

"Contractor" shall mean any person, including the contractors, subcontractors, or agents, retained or hired by Respondents to undertake any Work under this Order

"Day" shall mean a calendar day, unless otherwise specified.

"Order" shall mean this SDWA § 1431 Administrative Order, any attachments and appendices to this Order, and all documents that are to be produced or submitted pursuant to this Order. All attachments or appendices to this Order, and all documents that are to be produced or submitted pursuant to this Order are incorporated into this Order, and shall be enforceable hereunder.

IV. FINDINGS OF FACT

- 6) Respondent USAF is a federal agency of the United States Government.

- 7) Raytheon is the government contractor operating AFP 44. Until December 17, 1997, Respondent Raytheon was known as HE Holdings, Inc., which was the successor to Hughes Aircraft Company and Hughes Missile Systems Company, which collectively have operated AFP 44 from 1951 to the present.
- 8) AFP 44 is part of the Tucson International Airport Area Superfund Site (the "Site"), which was listed on the National Priorities List, 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 8, 1983. The Site encompasses approximately ten square miles in the southeastern part of Tucson, in Pima County, Arizona. The AFP 44 facility encompasses approximately 1,365 acres southwest of the Tucson International Airport. AFP 44 is a government-owned, contractor-operated military industrial facility manufacturing, modifying, and maintaining missile systems for the United States Department of Defense, foreign military sales, and direct commercial sales.
- 9) Respondent Raytheon and its predecessors have used and disposed of metals, chlorinated solvents and other substances at the AFP 44 facility since 1951. Raytheon used trichloroethylene ("TCE") in several degreasers and as a general-purpose solvent from the 1950s through the mid-1970s. By the mid-1970s, Raytheon had replaced TCE with trichloroethane ("TCA") as the dominant solvent in use at the facility. In the late 1980s, TCA was discontinued in favor of limited freon use and aqueous degreasers.
- 10) At AFP 44, Raytheon used 1,4-dioxane ("DX") as a stabilizer to enhance the life of the solvent bath for degreasing manufactured parts. The use of DX prevented solvents from breaking down in the presence of light, heat and oxygen, or from

reacting with acids and metal salts during the degreasing process. Raytheon has used DX with TCA in mixtures up to eight percent DX by volume.

- 11) When Raytheon used TCE and TCA, it collected waste solvents from the manufacturing area and disposed of them in drums into generally uncontrolled landfills at AFP 44. Raytheon also discharged liquid solvent wastes into unlined disposal channels and pits, as well as into various landfills at AFP 44. Waste solvents and other substances, including TCE, TCA and DX, migrated from these disposal areas into groundwater at the Site.
- 12) Contaminants that have entered the groundwater and soils at AFP 44 include: TCE; TCA; DX; perchloroethene; 1,1-dichloroethene; chloroform; benzene; chromium; cadmium; lead; nickel; and cyanide. Sampling data from 2006 detected TCE in the groundwater up to 3,400 parts per billion (“ppb”), and DX up to 298 ppb.
- 13) On April 3, 1986, USAF issued a Remedial Action Plan for cleanup of the groundwater, which provided for a groundwater extraction and treatment plant using air stripping and carbon adsorption designed to remove both chromium and chlorinated solvents from extracted groundwater at rates up to 5,000 gallons per minute. Respondents started operation of the groundwater extraction and treatment system in 1987. In 1994, Respondents switched chromium treatment from the extraction and treatment system to a wellhead treatment system that targeted only wells where chromium exceeded the federal maximum contaminant level (“MCL”).
- 14) The groundwater contamination from the AFP 44 facility combines with a separate contamination plume originating at the Tucson International Airport. AFP 44 and the Tucson International Airport make up the southern and northern ends

respectively of the Site, divided generally by the east-west line of Los Reales Road. The Respondents' groundwater extraction and treatment system is located just south of Los Reales Road to intercept and isolate contamination moving towards the north of Los Reales Road.

- 15) Pursuant to a 1991 consent decree, liable parties for the Tucson International Airport contamination have treated twenty-two billion gallons of groundwater from a treatment system at the northern end of the groundwater contamination plume (the Tucson Airport Remediation Project," or "TARP"). The treated water is served through a public drinking water system to 50,000 residents of Tucson, comprising roughly 9% of the municipal water supply needs. In the 1991 consent decree, Respondents participated in a settlement pursuant to the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9601 et seq., addressing their liability for the implementation of the TARP. DX contamination from AFP 44 was unknown and unanticipated at the time of the 1991 consent decree. Additionally, the TARP is designed to rely on the continued operation of the Respondents' extraction and treatment system south of Los Reales Road to prevent additional contamination from migrating north of Los Reales Road toward the TARP.
- 16) DX has a low Henry's Law constant (4.88×10^{-6} atmosphere-meter³/mole), a moderate vapor pressure (38.0 millimeters of mercury at 25 °C) and a tendency to volatilize slowly, and is fully miscible in water. Because of these characteristics, DX is highly mobile in soil and does not significantly adsorb onto suspended sediments,

and therefore is not effectively removed by groundwater treatment systems with air stripping and carbon adsorption.

17) AFP 44 is the source of DX within the Site, as demonstrated by DX sample data from the monitoring well fields and treatment plants at AFP 44, TARP and the Tucson International Airport. As of 2006, the highest concentration of DX was detected in well M-98 at AFP 44, showing 298 ppb. The Respondents' extraction and treatment system has an average DX influent concentration of 7 ppb, with a high average of 11 ppb in 2006, and a present Site-wide average of 5 ppb. Prior to the discovery of DX in the AFP 44 groundwater contamination, Respondents sent water treated by the Respondents' extraction and treatment system to up gradient wells within the TARP system. Because Respondents' extraction and treatment system did not mitigate DX contamination, this practice spread DX into the groundwater contamination north of Los Reales Road. Respondents stopped this practice in January 2004 after the discovery of DX contamination.

18) The City of Tucson has publicly stated that it will not serve water with DX concentrations above 3 ppb. The City of Tucson is obligated under the 1991 Consent Decree to take and serve to the public water from TARP as long as it is below MCLs; however, there is no MCL for DX. In order to keep concentrations below 3 ppb, the City of Tucson is blending DX-contaminated water (from the South Field, averaging 8 ppb) with water from another extraction well field that is not contaminated with DX (the North Field, presently less than the one ppb detection limit). Because of this engineered blending strategy, if a North Field extraction well shuts down for any reason, including routine maintenance, then a South Field extraction well also must

shut down. This balancing of extraction fields reduces the efficiency of the TARP to extract and treat groundwater.

- 19) When installed, the Respondents' extraction and treatment system was designed with an operating lifetime of ten years. The operation of the extraction and treatment system has continued for approximately twenty years and continues to this day. With the Respondents' modifications in pumping strategy in January 2004 to minimize the introduction of DX into the TARP system, the Respondents' extraction and treatment system is not effective at containing the contaminated groundwater plume from AFP 44, allowing TCE and DX to migrate north into the TARP system.

V. ENDANGERMENT AND RESPONSE

- 20) The detection of DX and TCE in groundwater samples from the aquifer underlying AFP 44, which provides drinking water through TARP to the City of Tucson, demonstrates the release or threat of release of contaminants from AFP 44. The aquifer underlying AFP 44 is an underground source of drinking water because it supplies a public drinking water system and currently supplies water for human consumption, and it is not an exempted aquifer. TCE has been identified in the underground source of drinking water in concentrations ranging from non-detect to 3,400 ppb. DX has been identified in the underground source of drinking water in concentrations ranging from non-detect to 298 ppb.
- 21) EPA and the International Agency for Research on Cancer ("IARC") have determined that DX is a Probable Human Carcinogen (Group 2B), based on sufficient evidence in carcinogenicity in animals. DX has been shown to produce carcinomas of the nasal cavity and liver in multiple strains of rats, liver carcinomas in mice, and

gall bladder carcinomas in guinea pigs. The National Institute of Environmental Health Sciences has determined that DX is reasonably anticipated to be a human carcinogen. Damage to the liver and kidneys has been observed in rats chronically exposed to DX in drinking water. At 1% concentration of DX in drinking water, 26% of exposed rats developed liver cancer. EPA has determined that lifetime exposure to DX at a concentration greater than 3 ppb in drinking water is associated with an excess cancer risk of greater than 1×10^{-6} .

22) IARC has determined TCE to be a Probable Human Carcinogen (Group 2B), based on sufficient evidence in experimental animals of carcinogenicity. The National Toxicology Program determined that TCE is “reasonably anticipated to be a human carcinogen.” Effects to the liver, kidneys and immune and endocrine systems have been seen in humans exposed to TCE in their drinking water. Neurological, liver and kidney effects have been reported in animals chronically exposed to TCE. EPA has found TCE to potentially cause vomiting and abdominal pain from acute exposures of TCE in drinking water above the MCL of 5 ppb.

23) The response actions specified in the SOW will include, but not be limited to, the following: the acquisition, installation and operation of an Advanced Oxidation Process treatment system to replace Respondents’ present extraction and treatment system that shall be capable of adequately treating TCE and DX. This work is necessary to prevent, minimize, or mitigate the threat of an imminent and substantial endangerment to the health of persons posed by the actual or potential releases of TCE, DX and other contaminants into the groundwater at and emanating from AFP

44.

VIII. CONCLUSIONS OF LAW

Based on the foregoing, EPA makes the following Conclusions of Law:

- 24) Respondents are each a "person" as that term is defined in Section 1401(12) of the SDWA, 42 U.S.C. § 300f(12).
- 25) The TCE and DX found in the groundwater from AFP 44 are "contaminants," as that term is defined in Section 1401(6) of SDWA, 42 U.S.C. § 300f(6).
- 26) The TCE and DX found in the groundwater beneath or near AFP 44 are present in or likely to enter the aquifer that serves water through TARP and the public water system to the City of Tucson.
- 27) The groundwater beneath or near AFP 44 is an "underground source of drinking water," as that term is defined in 40 C.F.R. § 144.3.
- 28) Contamination in the groundwater from AFP 44 may present an imminent and substantial endangerment to the health of persons receiving water through TARP and the public drinking water system in the City of Tucson.

IX. DETERMINATIONS

Based on the foregoing and the EPA Administrative Record for this Order, EPA has determined that:

- 29) Concentrations of TCE above 5 ppb may endanger the health of persons. Concentrations of DX above 3 ppb may endanger the health of persons. These contaminants present in or likely to enter the underground source of drinking water at AFP 44 may present an imminent and substantial endangerment to the health of persons, within the meaning of Section 1431(a) of SDWA, 42 U.S.C. § 300i(a).

- 30) Respondents have caused or contributed to the endangerment described immediately above.
- 31) In accordance with the requirements of Section 1431 of the SDWA, EPA determines that the state of Arizona and local authorities have not taken the actions necessary to protect the health of persons whose source of drinking water is the groundwater beneath or near AFP 44 (i.e., they have not ordered the steps required by this Order).
- 32) The actions required by this Order are necessary to protect the health of persons who are or may be users of the groundwater aquifer beneath or near AFP 44, including those served by the public water system that utilizes that water. Based on the endangerment described above, the response actions in this Order are necessary. The response actions will consist of Respondents' implementation of a Work Plan as required in the SOW attached and incorporated into this Order. The SOW is designed to prevent, minimize, or mitigate damage to the health that may otherwise result from the release or threat of release of contaminants.

X. ORDER

- 33) Based on EPA's jurisdiction, Findings of Fact, Conclusions of Law set forth above, the Administrative Record supporting issuance of this Order, and in order to abate or prevent any imminent and substantial endangerment to health, the Respondents are **ORDERED** to perform all work required under this Order. The Respondents shall comply with the following provisions and perform all actions required by the terms and conditions of this Order.

XI. DESIGNATION OF SUPERVISING CONTRACTOR AND PROJECT COORDINATOR

- 34) Within **seven (7) days** after the effective date of this Order, the Respondents shall retain the services of a qualified and experienced Supervising Contractor for the purpose of performing the work required by this Order in accordance with the terms and conditions of the Scope of Work. Within the same **seven (7) day** period, the Respondents shall notify EPA in writing of the name, address, and qualifications of the proposed Supervising Contractor and the name and telephone number of the Supervising Contractor's primary contact person. The Respondents shall also notify EPA of the identity and qualifications of any other contractor(s) or subcontractor(s) to be used at least **seven (7) days** in advance of their performing any work under this Order.
- 35) The Supervising Contractor shall be a qualified professional with substantial expertise and experience in the investigation and cleanup of hazardous waste sites and contaminated groundwater. EPA reserves the right to disapprove, based on professional qualifications, conflicts of interest, or deficiencies in previous similar work, any contractor or subcontractor or other person engaged directly or indirectly by the Respondents to conduct work activities under this Order. If EPA disapproves the selection of any proposed contractor, Respondents shall notify EPA in writing of the name, address, and qualifications of another contractor within **seven (7) days** after receipt of the notice of disapproval.
- 36) The Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants retained in connection with this Order within **seven (7) days** after the Order's effective date or of such retention, whichever

is later. The Respondents shall ensure that all such contractors, subcontractors, laboratories and consultants will perform all work in conformity with SDWA, and the terms and conditions of this Order. Respondents shall nonetheless be responsible for ensuring that its contractors and subcontractors perform the Work in accordance with this Order.

- 37) Within **seven (7) days** after the effective date of this Order, the Respondents shall designate a Project Coordinator who shall be responsible for administration of all of the Respondents' actions called for by this Order, and shall submit the designated Project Coordinator's name, address, and telephone number to EPA. EPA will deem the Project Coordinator's receipt of any notice or communication from EPA relating to this Order as receipt by the Respondents.

XII. NOTICE OF INTENT TO COMPLY

- 38) Respondents shall provide, within **five (5) days** after the effective date of this Order, written notice to EPA stating whether Respondents will comply with the terms of this Order. If Respondents do not unequivocally commit to perform the work required by this Order, Respondents shall be deemed to have violated this Order and to have failed or refused to comply with this Order. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondents' assertions.

XIII. EPA TECHNICAL PROJECT COORDINATOR

- 39) The EPA Technical Project Coordinator ("TPC") will administer EPA's responsibilities and receive all written notices, reports, plans and other documents

required by this Order. Unless EPA otherwise informs Respondents in writing, the TPC shall be, and all submissions required by this Order shall be sent to:

Matthew Jefferson
United States Environmental Protection Agency, Region IX
75 Hawthorne Street (SFD 8-2)
San Francisco, CA 94105

- 40) EPA's TPC shall have the authority to modify the SOW in writing. Absence of the TPC from the response site shall not be cause for stoppage of work by the Respondents unless specifically directed by the TPC.

XIV. WORK TO BE PERFORMED; WORK COMPLETION

- 41) Immediately after retention of the Supervising Contractor, Respondents shall commence the activities detailed in the SOW. All such activities performed by the Respondents shall be conducted in accordance with SDWA, applicable EPA guidance documents, and the provisions of this Order including any standards, specifications, and time schedules contained in the SOW or specified by the TPC.
- 42) Within **forty-five (45) days** after completing all activities required to complete the SOW, the Respondents shall submit for EPA approval a Remedial Action Report summarizing the activities conducted pursuant to the SOW. The Remedial Action Report shall include a summary of the activities to comply with this Order and a summary of all analytical data generated during the response action. The Remedial Action Report shall be certified by the Supervising Contractor, to the effect that all response activities have been completed in full satisfaction of the requirements of this Order.
- 43) When EPA determines that the SOW has been fully performed in accordance with this Order, and that all goals and objectives of this Order and the SOW have

been satisfied, EPA will provide written notice to the Respondents. If EPA determines that the SOW has not been completed in accordance with the provisions of this Order, it will so notify the Respondents and provide a list of the tasks remaining and a schedule for their completion. Respondents shall perform all remaining tasks and shall submit an amended Completion of Work Report in accordance with the EPA notice. If EPA determines that the remaining tasks have not been completed in accordance with the provisions of the EPA notice and this Order, the Respondents shall be in violation of this Order.

EPA's issuance of the notice referred to in the paragraph immediately above shall not preclude it from later determining, based upon new information or otherwise, that the Respondents have not completed all response activities in accordance with the provisions of this Order.

XV. SUBMISSIONS REQUIRING EPA APPROVAL: RESPONDENTS' OBLIGATION TO PROCEED

- 44) After review of any deliverable, plan, report or other item (“submission”) that the Respondents are required to submit for review and approval pursuant to this Order, EPA may: (i) approve the submission; (ii) conditionally approve the submission with required modifications; (iii) disapprove the submission and notify the Respondents of deficiencies; or (iv) disapprove the submission and modify the deliverable, plan, report, or other item itself to cure any deficiencies. In the event that EPA approves or conditionally approves the submission, or disapproves and modifies the submission itself, the Respondents shall perform all actions required by the submission, as approved, conditionally approved, or modified by EPA.

45) On receipt of a notice of disapproval with deficiencies ((iii) above), the Respondents shall correct the deficiencies and resubmit the submission within **seven (7) days** or such other time period specified in the notice of disapproval.

Notwithstanding a notice of disapproval, the Respondents shall proceed to take any action required by any non-deficient portion of the submission. If EPA does not approve the submission as resubmitted, Respondents shall be in violation of the Order.

46) For each submission provided to EPA, the Respondents shall submit such copies as specified by the TPC. Any deliverable, plan, or report submitted to EPA pursuant to this Order shall be dated and shall include, in a prominent location in the document, the following disclaimer: "Disclaimer: This document has been prepared pursuant to a government administrative order (U.S. EPA Region IX, Docket No. PWS-AO 2007-007) and is subject to approval by the U.S. Environmental Protection Agency. The opinions, findings, and conclusions expressed are those of the authors and not necessarily those of the U.S. Environmental Protection Agency." In addition, any such deliverable, plan, or report that has not received final approval from EPA shall be marked "Draft" on each page.

XVI. INCORPORATION AND ENFORCEABILITY OF DOCUMENTS

47) On approval by EPA, all contracts, deliverables, plans, reports, specifications, schedules, or other items required by or developed under this Order shall be deemed incorporated into, and made an enforceable part of, this Order. In the event of conflict between this Order and any document incorporated into, or enforceable hereunder, the provisions of this Order shall control.

XVII. SITE ACCESS

- 48) To the extent Respondents own, occupy, lease or control property at AFP 44, or property other than AFP 44 to which access is required in order to properly carry out the terms of this Order, Respondents shall grant access to EPA, the state of Arizona, and their officers, employees, agents, contractors, consultants, and other authorized representatives for purposes of implementing and monitoring work to be performed under this Order.
- 49) To the extent access to, use or ownership of, or easements over property other than AFP 44 is required for the proper and complete implementation of this Order, the Respondents shall use their best efforts to obtain access agreements or other interests in the property, in writing, sufficient to allow implementation of this Order within **twenty-one (21) days** after the Order's effective date or when such need for access is identified, whichever is later. For purposes of this paragraph, "best efforts" include but are not limited to the payment of money, consistent with the Anti-Deficiency Act, in consideration of access to property.
- 50) Such written access agreements or other interests obtained pursuant to the preceding paragraph shall provide EPA, the state of Arizona, and their officers, employees, agents, contractors, consultants and other authorized representatives access to AFP 44 at all times for purposes of implementing and monitoring work under this Order. Such written access agreements or other interests shall specify that the Respondents are not EPA's representative or agent with respect to liability associated with AFP 44.

51) In the event that access agreements or other interests sufficient for implementation and monitoring of work under this Order are not obtained within the time period specified above, the Respondents shall notify EPA in writing within **three (3) days** thereafter regarding the lack of such agreements and the efforts made by the Respondents to obtain them. Lack of access shall not excuse or justify failure to perform any activity or to meet any deadline not requiring or directly dependent upon such access.

XVIII. QUALITY ASSURANCE/SAMPLING

52) Immediately upon receipt, Respondents shall submit to EPA and the state of Arizona the results of all sampling or tests and all other data generated by the Respondents, their contractor(s), or on the Respondents' behalf in the course of implementing this Order. The Respondents shall also provide the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

53) On request, the Respondents shall allow EPA, the state of Arizona, or their authorized representatives to take split or duplicate samples of any samples collected by the Respondents while performing work under this Order. The Respondents shall notify EPA and the state of Arizona not less than five (5) days in advance of any sample collection activity. In addition, EPA shall have the right to take any additional samples that it deems necessary.

54) The Respondents shall assure that EPA and its authorized representatives are allowed access to any laboratory utilized by the Respondents in implementing this

Order. On request, the Respondents shall have a designated laboratory analyze samples submitted by EPA for quality assurance monitoring.

**XIX. ACCESS TO INFORMATION: RECORD PRESERVATION
CONFIDENTIALITY CLAIMS**

- 55) On request, the Respondents shall provide EPA with copies of all records, documents, and other information generated by the Respondents and their contractor(s) that relates in any way to contamination from AFP 44 or to the implementation of this Order, including but not limited to, sampling and analysis records, field sheets and field notes, engineering logs, chain of custody records, contracts, bills of lading, trucking logs, manifests, receipts, reports, and correspondence. In addition, the Respondents' employees, agents, or representatives with knowledge of facts concerning the conditions at AFP 44 or performance of work under this Order shall be made available to EPA to provide such information.
- 56) For a period of at least five (5) years following completion of all work conducted by the Respondents pursuant to this Order, the Respondents shall preserve all documents, records, and information of whatever kind, nature or description in their possession or control or that of their employees, agents, accountants, contractors, attorneys, successors and assigns, that relate in any way to the performance of work under this Order, or relate in any way to releases or threatened releases of contaminants from AFP 44. After this five (5) year period has expired, the Respondents shall provide EPA with thirty (30) days advance written notice prior to the destruction of any such records, documents, or information. The Respondents shall send such notice, accompanied by a copy of this Order, to the TPC. On request,

Respondents shall provide to EPA copies of all such records, documents or information.

- 57) The Respondents may assert a confidentiality claim, if appropriate, covering the information required by or requested under this Order, pursuant to Section 1445(d)(1) of SDWA, 42 U.S.C. § 300j-4(d)(1). However, no documents, reports, or other information generated or created pursuant to the requirements of this Order shall be withheld from EPA on the grounds of privilege. In addition, pursuant to Section 1445(d)(2) of SDWA, 42 U.S.C. § 300j-4(d)(2), any information shall be disclosed to the public to the extent that it deals with the level of contaminants in drinking water.

XX. CREATION OF DANGER: EMERGENCY RESPONSE

- 58) On the occurrence of any incident or change of conditions during the activities conducted pursuant to this Order that causes or threatens a release of hazardous substances from the facility or an endangerment to the public health or welfare or the environment, the Respondents shall immediately take all appropriate action to prevent, abate or minimize such release or endangerment. The Respondents shall also immediately notify the TPC or, in the event of his/her unavailability, shall notify the National Response Center, telephone (800) 424-8802. In taking any actions under this paragraph, the Respondents shall act in accordance with all applicable provisions of the Health and Safety Plan prepared pursuant to the SOW.
- 59) The Respondents shall submit a written report to EPA within **seven (7) days** after each incident specified above, setting forth the events that occurred and the

measures taken and to be taken to mitigate any release or endangerment caused or threatened by the incident and to prevent the reoccurrence of such an incident.

- 60) Nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, 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 on, at, or from the facility.

XXI. AMENDMENTS

- 61) This Order, other than the SOW, may only be amended in writing by signature of the Water Division Director of EPA Region IX. Amendments to the SOW may be made in writing by the TPC.

- 62) No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by the Respondents shall be construed as relieving the Respondents of their obligation to obtain such formal approval as may be required by this Order.

XXII. OTHER APPLICABLE LAWS

- 63) All actions required pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations, including but not limited to, the laws relating to occupational health and safety and worker's compensation.

XXIII. ENFORCEMENT: PENALTIES FOR NONCOMPLIANCE

- 64) Violation of this Order, or failure or refusal to comply with this Order, may subject the Respondents, as appropriate, to:

- i. civil action under Section 1431(b) of the SDWA, 42 U.S.C. § 300i(b), for civil penalties of up to sixteen thousand five hundred dollars (\$16,500) for each day in which such violation occurs or failure to comply continues, as provided in Section 1431(b) of SDWA, 42 U.S.C. § 300i(b);
- ii. for federal agencies, a civil action under Section 1447(b) of SDWA, 42 U.S.C. § 300j-6, for civil penalties of up to sixteen thousand five hundred dollars (\$16,500) for each day in which such violation occurs or failure to comply continues; or
- iii. a citizen's civil action under Section 1449 of SDWA, 42 U.S.C. § 300j-8.

XXIV. DISCLAIMER OF LIABILITY BY EPA

- 65) By issuance of this Order, EPA assumes no liability for injuries or damages to persons or property resulting from acts or omissions by the Respondents, their officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out activities pursuant to this Order. EPA shall not be held as a party to any contract entered into by the Respondents or their employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out activities pursuant to this Order.

XXV. NO RELEASE FROM LIABILITY

- 66) Nothing in this Order shall constitute or be construed as a satisfaction or release from any claim, cause of action, or demand in law or equity against the Respondents or any other person, whether or not a party to this Order, for any liability such person may have for any conditions or claims arising out of or relating in any

way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site, including but not limited to any and all claims of the United States for money damages and interest under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), or under any other applicable statute or the common law.

XXVI. RESERVATION OF RIGHTS BY EPA

- 67) The United States reserves all rights it may have to take any further civil or criminal enforcement action against the Respondents and all other persons pursuant to any available legal authority, including the right to seek injunctive relief, the recovery of money expended or to be expended (plus interest), monetary penalties, criminal sanctions, or punitive damages regarding: (i) any violation of this Order; or (ii) any actual or potential threat to human health or welfare or the environment, or any release or threat of release of hazardous substances on, at, in, or near AFP 44. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, or additional actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to SDWA, or any other applicable law.
- 68) EPA further expressly reserves the right both to disapprove work performed by the Respondents and to request or order the Respondents to perform tasks in addition to those detailed in this Order. In addition, EPA reserves all rights it may have to undertake response actions at any time and to perform any and all portions of the work activities that the Respondents have failed or refused to perform properly or

promptly, and to seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

- 69) Notwithstanding any other provision of this Order, EPA shall retain all of its information gathering, entry, inspection, and enforcement authorities and rights under any applicable law, regulation, or permit.

XXVII. OPPORTUNITY TO CONFER

- 70) Within **three (3) days** after receipt of this Order by Respondents, the Respondents may request a conference with the Water Division Director of EPA Region IX or her designee to be held no later than **six (6) days** after Respondents' receipt of this Order. Requests for a conference should be submitted to:

J. Andrew Helmlinger
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street (ORC-3)
San Francisco, CA 94105
(415) 972-3904

- 71) The purpose and scope of the conference shall be to discuss the issue(s) that Respondents would like the Water Division Director to consider in connection with this Order. Respondents should submit copies of all necessary information regarding the issue(s) to be discussed. The conference is not an evidentiary or adversarial hearing and is not part of any proceeding to enforce or challenge the Order. At any conference held pursuant to this Section, the Respondents may appear in person or by attorney or other representative.

XXVIII. EXCUSED DELAY - FORCE MAJEURE

- 72) Respondents' activities under this Order shall be performed within the time limits set forth herein, or otherwise established or approved by EPA, unless

performance is delayed or prevented by events which constitute "force majeure." For purposes of this Order, "force majeure" is defined as any event arising from causes beyond Respondents' control. "Force majeure" shall not include any inability of Respondents to pay the costs or expenses associated with complying with this Order, or increases in such costs or expenses, except as provided below in Section XXX, Anti-Deficiency Act. When an event constituting "force majeure" occurs, Respondents shall perform the affected activities within a time period not to exceed the time provided in this Order and the period of delay attributable to "force majeure." Respondents shall use their best efforts to avoid or minimize any delay or prevention of its performance of their obligations under this Order, and to discover and keep apprised of any and all circumstances which may result in a delay or prevention of the work required under this Order. A delay caused by EPA, and otherwise conforming with the terms of this Section, shall be treated as beyond the Respondents' control.

- 73) Respondents shall verbally notify the TPC as soon as possible, and not later than forty-eight (48) hours, after the discovering that circumstances have occurred or are likely to occur that may delay or prevent the performance of any activity required by this Order, regardless of whether or not those circumstances constitute a "force majeure." If the TPC cannot be reached, Respondents shall leave a telephone message at the TPC's office. Respondents also shall notify EPA in writing within seven (7) days after the date Respondents first became aware of the circumstances which may delay or prevent any performance of any activity required by this Order. Such written notice shall be accompanied by all available pertinent documentation including, but not limited to, third-party correspondence, and shall contain: 1) a

description of the circumstances and the Respondents' rationale for interpreting such circumstances as being beyond their control; 2) the actions (including pertinent dates) Respondents have taken or intend to take to minimize any delay; and, 3) the date or time period Respondents propose to complete the delayed activities. Such notification shall not in and of itself relieve Respondents of any obligations under this Order. Respondents' failure to timely and properly notify EPA as required by this paragraph shall nullify any claim of "force majeure" and resulting entitlement to any extension of time therefore. Respondents shall have the burden of proving to EPA's satisfaction that an event constituting "force majeure" has occurred.

XXIX. EFFECTIVE DATE - COMPUTATION OF TIME

- 74) This Order constitutes a final agency action and shall become effective within seven (7) calendar days of receipt of this Order if no conference with the Water Division Director for EPA Region IX is requested pursuant to Section XXVII of this Order. If a conference with the Water Division Director is requested in the time and manner provided in Section XXVII, this Order shall become effective within five (5) calendar days of Respondents' receipt of the Water Division Director's decision. All times for performance of Work under this Order shall be calculated from the effective date. When computing any period of time under this Order, if the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the next working day.

XXX. ANTI-DEFICIENCY ACT

- 75) Nothing in this Order shall require the Respondent USAF to violate the Anti-Deficiency Act.

XXXI. SEVERABILITY

- 76) If a court issues an order that invalidates any provision of this Order, or finds that any Respondent has sufficient cause not to comply with one or more provisions of this Order, such Respondent shall remain bound to comply with all provisions of this Order not invalidated by such court's order.
- 77) The provisions of this Order shall remain in full force and effect until all actions required by this Order have been completed and EPA has notified the Respondents, in writing, that the actions required by this Order have been completed. Respondents shall notify EPA in writing at such time as they believe that all such actions have been completed. EPA shall have sole discretion in determining whether all such actions have in fact been completed. Failure to complete all actions required hereunder as directed by EPA shall be deemed a violation of this Order. EPA's provision of written notice to Respondents pursuant to this paragraph shall not be construed as a waiver of any of EPA's rights to take further enforcement action under SDWA or any other laws.

IT IS SO ORDERED. Issued at San Francisco, California this _____ day of May, 2007.

Alexis Strauss
Water Division Director
U.S. Environmental Protection Agency, Region IX
San Francisco, CA