



BEFORE THE DIRECTOR OF THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

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In the Matter of:

Universal Propulsion Co., Inc. located at
25401 North Central Avenue, Phoenix,
Maricopa County, Arizona

CONSENT ORDER

Docket No. P-136-04

To: Universal Propulsion Co., Inc. ("UPCO"), in its capacity as owner and operator of the facility located at 25401 North Central Avenue, Phoenix, Maricopa County, Arizona.

RECITALS

UPCO acknowledges that no promise of any kind or nature whatsoever, was made to induce it to enter into this Consent Order, and UPCO has done so voluntarily.

UPCO acknowledges that by entering into this Consent Order, it does not resolve any liability it may have for civil penalties for violations of any State or Federal environmental law except as may be provided in a civil settlement under section V.D. of this Order.

By entering into this Consent Order, UPCO does not admit to any civil or criminal liability, or waive any right including but not limited to the assertion of any defense available to UPCO under applicable law. Further, UPCO does not admit, and both the Arizona Department of Environmental Quality ("ADEQ") and UPCO retain the right to controvert in any subsequent proceeding except a proceeding to implement or enforce this Consent Order, the validity of any Findings of Fact or Conclusions of Law contained in this Consent Order.

Initial

- 1 b. Off-specification devices and igniter containing propellant and explosives;
2 c. Waste Water Bore propellant; and
3 d. Waste Water Bore oxidizer residue and polyethylene tank liners removed
4 from Water Bore tanks.

5 2. According to the RCRA Permit, Part IV.C, Solid Waste Management Unit 11
6 (SWMU-10 and SWMU-11, Water Bore area) consisted of two units (pit A and pit B) which
7 contained water discharge generated during propellant water bore operations. The units began
8 operating in 1983 and ceased operation in 1988. The pits were in-ground, lined impoundments
9 constructed to a depth of three (3) feet and were located only eight (8) feet from a wash to the
10 east. According to the RCRA Permit, these liners were of "garbage bag" quality and they had low
11 berms in poor condition.

12 3. From 1983 to 1988, propellant and waste cutting water were discharged into the
13 two Water Bore area pits. Ammonium perchlorate and potassium perchlorate oxidizers along
14 with fine particles of waste propellant were contained in the waste material.

15 4. The presence of perchlorate has been detected in the soils of the Water Bore area at
16 concentrations ranging from non-detect to 1,800 milligrams per kilogram (mg/kg) at the surface.
17 From one foot to 67 feet below ground surface (bgs), concentrations of perchlorate were detected
18 ranging from 390 mg/kg to 0.10 mg/kg.

19 5. During the week of December 16 through 23, 2003, two monitoring wells were
20 voluntarily installed at the UPCO facility in accordance with the December 10, 2003 ADEQ and
21 City of Phoenix approved Monitor Well Construction Work Plan, revision 1.0. The wells were
22 developed in accordance with Construction Work Plan, one month after construction.

23 6. On February 13, 2004, March 19, 2004, and April 16, 2004, the two monitoring
24 wells were sampled by UPCO. ADEQ was present at the April 16, 2004, sampling and took split
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1 samples, however the February and March sampling was performed without prior notification to
2 ADEQ.

3 7. On March 23, 2004, UPCO informed ADEQ that the water samples taken on
4 February 13, 2004, indicated the presence of perchlorate in the aquifer ranging from 43 to 130
5 micrograms per liter ($\mu\text{g/L}$).

6 8. In a June 11, 2004, report submitted to ADEQ, UPCO reported that subsequent
7 samples taken on March 19, 2004, and April 16, 2004, indicated the presence of perchlorate
8 ranging from 39 to 120 $\mu\text{g/L}$ and 40 to 88 $\mu\text{g/L}$, respectively.

9 9. Perchlorate is soluble in water. If water containing sufficient concentrations of
10 perchlorate is ingested, it can interfere with iodide uptake into the thyroid gland and disrupt
11 thyroid function. The Arizona Department of Health Services has established a current Health
12 Based Guidance Level ("HBGL") for water used as drinking water for perchlorate of 14 $\mu\text{g/L}$.
13 The HBGL has not been adopted as a numeric aquifer water quality standard. HBGL's may
14 change from time to time as new information is obtained. According to sampling performed as of
15 the date of this Consent Order, there is no evidence of any human ingestion of groundwater
16 containing perchlorate in excess of the HBGL in the vicinity of the UPCO facility.

17 10. On September 8, 2004, UPCO submitted a RCRA Investigation ("RI") Work Plan
18 for the Water Bore area to ADEQ. ADEQ is currently reviewing this RI Work Plan to determine
19 if it meets the requirements of Part IV.H of the RCRA Permit.

20 11. Under Part IV.A.5(c) of the RCRA Permit, ADEQ may require the Permittee to
21 conduct new or more extensive assessments, investigations, or studies, as needed, based on
22 information provided in progress reports or other supporting information.

23 B. Conclusions of Law

24 1. By failing to prevent discharges to the soil that have resulted in perchlorate levels
25 in excess of the 14 $\mu\text{g/L}$ HBGL for perchlorate in the underlying groundwater, UPCO may have

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1 violated A.A.C. R18-11-405(A) which states that a discharge shall not cause a pollutant to be
2 present in an aquifer classified for a drinking water protective use in a concentration which
3 endangers human health. The level at which ingestion of perchlorate endangers human health has
4 not been conclusively determined.

5 2. By failing to prevent discharges to the soil that have resulted in perchlorate levels
6 in excess of the HBGL established for perchlorate, UPCO has violated A.A.C. R18-11-405(C)
7 which states that a discharge shall not cause a pollutant to be present in an aquifer which impairs
8 existing or reasonably foreseeable uses of water in an aquifer.

9 3. A.A.C. R18-11-405 has been adopted pursuant to Article 2 of Chapter 2 of Title 49
10 of the Arizona Revised Statutes.

11 4. Under A.R.S. § 49-261, ADEQ may issue an order requiring compliance within a
12 reasonable time period for violations of rules adopted pursuant to Article 2 of Chapter 2 of Title
13 49 of the Arizona Revised Statutes

14 **III. COMPLIANCE SCHEDULE**

15 **THE DIRECTOR HEREBY ORDERS** and UPCO agrees to comply with the provisions of this
16 Consent Order as follows:

17 A. UPCO shall investigate and remediate soils and groundwater to levels necessary to
18 protect human health and the environment for contaminants including, but not limited to,
19 perchlorate by performing the following activities:

20 B. Within thirty (30) calendar days of the effective date of this Order, UPCO shall
21 submit to ADEQ for review and approval a Groundwater Monitoring Plan (“GWMP”) that meets
22 the requirements of Title 40, Part 264, Subpart F of the Code of Federal Regulations (“CFR”). At
23 a minimum, the GWMP shall include provisions for monitoring for the presence of perchlorates,
24 volatile organic chemicals (“VOCs”), metals, and nitrates in the aquifer. The GWMP must
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1 include the basic requirements outlined in 40 CFR § 264.97 and establish a schedule for periodic
2 sampling.

3 C. Within fifteen (15) calendar days after receiving written approval from ADEQ of
4 the GWMP, UPCO shall implement the GWMP according to the schedules and procedures
5 specified in the approved GWMP.

6 D. Within fifteen (15) calendar days after receiving written approval or approval with
7 modifications from ADEQ of the submitted RI Work Plan for the Water Bore area, UPCO shall
8 implement the RI Work Plan according to the schedules and procedures specified in the approved
9 RI Work Plan.

10 E. Within sixty (60) calendar days after the completion of the RI Work Plan, UPCO
11 shall submit the following documents: 1) an RI Final Report; and 2) an RI Summary Report as
12 referenced in Part IV.H of the RCRA Permit. The contents of these reports shall conform with the
13 requirements of the RCRA Permit.

14 F. Following ADEQ's approval of the RI Final Report and the RI Summary Report,
15 UPCO shall submit to ADEQ for review and approval a Corrective Measures Study ("CMS") Plan
16 within forty-five (45) calendar days after notification of the requirement to conduct a CMS in
17 accordance with Part IV.I. of the RCRA Permit. The CMS Plan shall, at a minimum, include the
18 corrective measures necessary to meet: 1) all applicable soil remediation requirements, as
19 described in A.A.C. R18-7-201 *et. seq.*; and 2) all aquifer water quality standards, including
20 A.A.C. R18-11-405. The content of the CMS Plan shall conform with the requirements of the
21 RCRA Permit. With respect to compliance with the narrative aquifer water quality standards in
22 A.A.C. R18-11-405, the CMS plan shall include a proposal to establish remedial action objectives
23 and/or cleanup goals in accordance with the RCRA Permit and applicable guidance. In addition,
24 the CMS plan shall contain a proposal for the location or locations at which compliance with the

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1 standards in A.A.C. R18-11-405 should be measured and shall be consistent with the
2 requirements of the RCRA permit and applicable regulations.

3 G. Within fifteen (15) calendar days after UPCO receives written approval from
4 ADEQ of the CMS Plan, UPCO shall begin to implement the CMS Plan according to the
5 schedules and procedures specified in the CMS Plan.

6 H. Within sixty (60) calendar days after the completion of the CMS tasks, UPCO shall
7 submit to ADEQ a draft CMS Final Report as referenced in Part IV.I. of the RCRA Permit . The
8 contents of this report shall conform with the requirements of the RCRA Permit. The Draft Final
9 Report shall be subject to review in accordance with Part IV.I.6. of the RCRA Permit.

10 I. Based on results of the CMS and any further evaluations of additional remedies,
11 ADEQ will select a remedy from the remedial alternatives evaluated in the CMS as provided in
12 Part IV.I. and J. of the RCRA Permit..

13 J. Within forty-five (45) calendar days of receipt of ADEQ's remedy selection under
14 paragraph I, UPCO shall submit to ADEQ for review and approval a draft Corrective Measures
15 Implementation (CMI) Program Plan. The contents of the CMI Program Plan shall conform with
16 the requirements of the RCRA Permit. All Corrective Action requirements of 40 CFR §§
17 264.99(h) and 264.100 shall be addressed in the CMI Plan.

18 K. Within forty-five (45) calendar days of receipt of ADEQ's written approval, or
19 approval with modifications, of the proposed corrective measure(s), UPCO shall submit to ADEQ
20 a final CMI Program Plan consistent with ADEQ's written approval and the RCRA Permit.

21 L. Upon receipt of ADEQ approval of the final CMI Program Plan UPCO shall
22 implement the CMI tasks according to the schedule of implementation contained in the CMI
23 Program Plan.

24 M. Draft RI Work Plans for other potential source areas of the UPCO facility shall be
25 submitted to ADEQ in accordance with the following schedule:

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1	<u>Potential Source Area</u>	<u>Date Due to ADEQ</u>
2	C-Complex	09/30/04
3	Old Burn Area	11/15/04
4	F-Complex	01/07/05
5	New Burn Area	02/04/05

6 Each RI Work Plan must meet the requirements of Part IV.H of the RCRA Permit. Each RI Work
7 Plan shall be designed to include the information needed to determine potential or actual impacts
8 on human health and the environment including, but not limited to, perchlorate under A.A.C.
9 R18-11-405. UPCO may supplement existing or submit additional work plans following the
10 effective date of this order to reflect any requirements of this order including the proposed GWMP
11 or Risk Assessment. UPCO shall submit a work plan for B-Complex. Once submitted to ADEQ
12 the compliance schedule requirements outlined in Sections III.D through III.M, above, will be in
13 effect for each RI Work Plan.

14 N. UPCO agrees to respond to any ADEQ request to modify a submittal due to ADEQ
15 under this Consent Order in accordance with the RCRA Permit or within a reasonable time frame
16 as specified by ADEQ.

17 O. Within fifteen (15) calendar days of the effective date of this Order, UPCO shall
18 notify the residents along Yearling Road from Central Avenue to 7th Street in writing that UPCO
19 is willing to perform testing for perchlorate in their well(s) once every six months for two years, if
20 requested to do so in writing by the resident within fifteen (15) calendar days of the resident's
21 receipt of UPCO's notice.

22 P. Within forty-five (45) calendar days of the effective date of this Order, and within
23 thirty (30) calendar days of the bi-annual anniversary thereof for two years, UPCO shall sample
24 and analyze the private wells of the residents requesting testing along Yearling Road from Central
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1 Avenue to 7th Street for the presence of perchlorate and shall report the results of the sampling to
2 the respective resident(s) and ADEQ.

3 Q. If perchlorate is found in excess of the HBGL or numeric aquifer water quality
4 standard in effect at the time of sampling (currently 14 ppb), in any well tested by UPCO along
5 Yearling Road from Central Avenue to 7th Street, UPCO shall provide the same type of notice
6 specified in paragraph O to the residents owning private wells in the area bounded by Central
7 Avenue, 7th Street, Yearling Road, and Jomax Road, shall sample within thirty (30) calendar days
8 of receipt of a written request of any private well owner in the area, and shall continue sampling
9 the well on the schedule set under paragraph P if requested by the well owner.

10 R. If perchlorate is found in excess of the HBGL or numeric aquifer water quality
11 standard in effect at the time of sampling (currently 14 ppb) in any well tested by UPCO, or
12 confirmed by ADEQ in any other active private domestic well in the area bounded by Central
13 Avenue, 7th Street, Yearling Road, and Jomax Road, UPCO will supply an alternative drinking
14 water source to the private well owner at the request of the private well owner. The alternative
15 drinking water shall be supplied to the private well owner's residence from a bottled water
16 distributor agreed upon by the private well owner and UPCO, at no cost to the private well owner.
17 The amount to be provided will be the amount requested by the private well owner, but shall not
18 exceed 40 gallons per week. UPCO agrees to provide the alternative water source until
19 perchlorate levels within the well being replaced are beneath the HBGL or numeric aquifer water
20 quality standard in effect at the time of sampling (currently 14 ppb).

21 **IV. STATUS REPORTS**

22 A. UPCO agrees to submit a written status report to ADEQ every thirty (30) calendar
23 days beginning thirty (30) days from the effective date of this Consent Order, until termination of
24 this Consent Order. Each written status report shall describe what measures have been taken
25 under Section III, of this Consent Order, and shall certify when compliance with the requirements

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1 of Section III of this Order has been achieved. Each report shall be accompanied by evidence of
2 compliance including, as appropriate, submittal of documents, photographs or copies of any other
3 supporting information that UPCO deems necessary.

4 B. ADEQ will review the status reports and relay any disputes in writing to UPCO.
5 UPCO shall incorporate all required modifications, changes or other alterations, as requested by
6 ADEQ, within a reasonable time specified by ADEQ.

7 **V. VIOLATIONS OF ORDER/STIPULATED PENALTIES**

8 A. Under A.R.S. § 49-262, violation of this Consent Order subjects UPCO to civil
9 penalties of up to \$25,000 per day per violation. ADEQ and UPCO agree to establish penalty
10 amounts for any violations of this Consent Order to avoid disputes and potential litigation over the
11 appropriate amount of a penalty.

12 B. ADEQ and UPCO therefore agree that if UPCO fails to comply with any
13 requirement of this Consent Order, UPCO shall pay a stipulated penalty pursuant to the schedule
14 below:

<u>Period of Failure to Comply</u>	<u>Penalty Per Day of Violation</u>
15 1 st to 30 th day	\$1,000 per day per violation
16 31 st to 60 th day	\$1,500 per day per violation
17 After 60 days	\$3,000 per day per violation

18 C. Except as otherwise provided herein, stipulated penalties shall begin to accrue on
19 the day that performance is due or that a violation of this Consent Order occurs and shall continue
20 to accrue until correction of the act of noncompliance is completed. Neither issuance by ADEQ
21 nor receipt by UPCO of a Notice of Violation of the terms and conditions of this Consent Order
22 are conditions precedent to the accrual of stipulated penalties.

23 D. ADEQ shall notify UPCO in writing of any claim for stipulated penalties under
24 this section. Stipulated penalty payments shall be made pursuant to a civil settlement (e.g.,
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1 Consent Judgment) with ADEQ filed in a court of competent jurisdiction. If ADEQ and UPCO
2 are unable to reach agreement for payment of stipulated penalties under a civil settlement within a
3 reasonable time after UPCO receives written notice of a claim for stipulated penalties, or if UPCO
4 fails to make payment of stipulated penalties due under a civil settlement, ADEQ may file a civil
5 action seeking up to the maximum civil penalty allowed under Federal or State law for violation
6 of this Consent Order.

7 E. The stipulated penalties required by this Consent Order shall be in addition to other
8 remedies or sanctions available to ADEQ by reason of any failure by UPCO to comply with the
9 requirements of Federal or State laws. The payment of stipulated penalties shall not relieve
10 UPCO from compliance with the terms and conditions of this Consent Order or Federal or State
11 laws, nor limit the authority of the State to require compliance with the Consent Order or State
12 law, except as may be provided by the terms of any civil settlement filed under paragraph D of
13 this section.

14 **VI. COMPLIANCE WITH OTHER LAWS**

15 A. This Consent Order does not encompass issues regarding releases, contamination,
16 sources, operations, facilities or processes not expressly covered by the terms of this Consent
17 Order, and is without prejudice to the rights of the State of Arizona or UPCO, arising under any
18 federal or Arizona statutes and rules with regard to such issues.

19 B. Nothing in this Consent Order shall constitute a permit of any kind, or a
20 modification of any permit of any kind, or an agreement to issue a permit of any kind under
21 federal, state or local law, or relieve UPCO in any manner of its obligation to apply for, obtain,
22 and comply with all applicable permits. Nothing in this Consent Order shall in any way alter,
23 modify or revoke federal, state, or local law, or relieve UPCO in any manner of its obligation to
24 comply with such laws. Compliance with the terms of this Consent Order shall not be a defense
25 to any action to enforce any such permits or laws.

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1 **VII. FORCE MAJEURE**

2 A. UPCO shall perform all the requirements of this Consent Order according to the
3 time limits set forth herein, unless performance is prevented or delayed by events which constitute
4 a *force majeure*. *Force majeure*, for the purposes of this Consent Order, is defined as any event,
5 arising from causes beyond the control of UPCO or its authorized representatives which delays or
6 prevents the performance of any obligation under this Consent Order and which could not have
7 been overcome or prevented by UPCO. The financial inability of UPCO to comply with the terms
8 of this Consent Order, shall not constitute a *force majeure*.

9 B. In the event of a *force majeure*, the time for performance of the activity affected by
10 the *force majeure* shall be determined by ADEQ and extended for a period no longer than the
11 delay caused by the *force majeure*. The time for performance of any activity dependent on the
12 delayed activity shall be similarly extended. In the event of a *force majeure*, UPCO shall notify
13 ADEQ in writing within five (5) calendar days after UPCO or its agents become aware of the
14 occurrence. The written notice provided to ADEQ shall describe in detail the event, the
15 anticipated delay, the measures taken and to be taken by UPCO to prevent or minimize delay, and
16 a proposed timetable under which those measures will be implemented. UPCO shall take all
17 reasonable measures to prevent or minimize any delay caused by the *force majeure*. Failure of
18 UPCO to comply with any requirements of this paragraph for a particular event, shall preclude
19 UPCO from asserting any claim of *force majeure* for that event.

20 **VIII. SITE ACCESS**

21 ADEQ may at any time, upon presentation of credentials to authorized personnel on duty,
22 enter upon the premises at the Facility for the purpose of observing and monitoring compliance
23 with the provisions of this Consent Order. This right of entry shall be in addition to, and not in
24 limitation of or substitution for, ADEQ's rights under applicable law.

25 **IX. CORRESPONDENCE**

1 All documents, materials, plans, notices, or other items submitted as a result of this
2 Consent Order shall be transmitted to the addresses specified below:

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4 To ADEQ:

5 Arizona Department of Environmental Quality
6 Office of Administrative Counsel
7 Attention: Denise McConaghy, Senior Enforcement Officer
8 1110 West Washington Street
9 Phoenix, Arizona 85007-2935
10 Telephone: 602-771-4110
11 E-mail: dlm@azdeq.gov

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13 To UPCO:

14 Larry Lopez, Manager EH&S
15 Universal Propulsion Company
16 25401 North Central Avenue
17 Phoenix, Arizona 85027
18 Telephone: 623-515-3340

19 Submissions to ADEQ as a result of this Consent Order shall be deemed submitted upon receipt.

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21 **X. RESERVATION OF RIGHTS**

22 A. This Consent Order is based solely upon currently available information. If
23 additional information is discovered, which indicates that the actions taken under this Consent
24 Order are or will be inadequate to protect human health, safety, or the environment, or to conform
25 with applicable federal or state laws, ADEQ shall have the right to seek further action in
26 accordance with applicable law.

27 B. ADEQ shall have the right: to pursue civil penalties for violations of any and all
28 violations of A.R.S. Title 49, or the rules promulgated thereunder, occurring before entry of this
Consent Order; to disapprove of work performed by UPCO that fails to comply with this Consent
Order; to take enforcement action for any and all violations of this Consent Order; and to take

1 enforcement action for any and all violations of A.R.S. Title 49, or the rules promulgated
2 thereunder, occurring after the entry of this Consent Order.

3 C. UPCO expressly reserves all defenses and the right to contest the validity of any
4 Finding of Fact or Conclusion of Law in any action or proceeding other than an action or
5 proceeding to enforce this Consent Order.

6 **XI. SEVERABILITY**

7 The provisions of this Consent Order are severable. If any provision of this Consent Order
8 is declared by a court of law to be invalid or unenforceable, all other provisions of this Consent
9 Order shall remain in full force and effect.

10 **XII. MODIFICATIONS**

11 Any modifications of this Consent Order shall be in writing and must be approved by both
12 UPCO and ADEQ.

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14 **XIII. EFFECTIVE DATE**

15 The effective date of this Consent Order shall be the date this Consent Order is signed by
16 ADEQ and UPCO. If such signatures occur on different dates, the later date shall be the effective
17 date of this Consent Order.

18 **XIV. PARTIES BOUND**

19
20 No change in ownership, corporate status, or partnership status relating to the subject of
21 this Consent Order will in any way alter the responsibilities of UPCO under this Consent Order.
22 UPCO will be responsible, and will remain responsible, for carrying out all activities required
23 under this Consent Order.

24 **XV. TERMINATION**

1 The provisions of this Consent Order shall be deemed satisfied and this Consent Order shall be
2 terminated upon receipt of written notification from ADEQ that UPCO has demonstrated, to the
3 satisfaction of ADEQ, that all of the terms of this Consent Order have been completed. Any
4 denial of a request for termination from UPCO will be in writing and describe which terms of the
5 Consent Order have not been completed to the satisfaction of ADEQ. ADEQ reserves the right to
6 terminate this Consent Order unilaterally at any time for any reason. Any termination will include
7 a written explanation of the reason(s) for termination.

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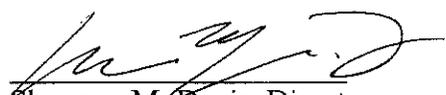
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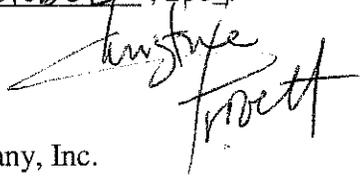
1 ISSUED this 12th day of October, 2004.

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4 Shannon M. Davis, Director
5 Waste Programs Division
6 Arizona Department of Environmental Quality

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8 Karen L. Smith, Director
9 Water Quality Division
10 Arizona Department of Environmental Quality

11 **CONSENT TO ORDER**

12 The undersigned, on behalf of UPCO, hereby acknowledges that she has read the foregoing
13 Consent Order in its entirety, agrees with the statements made therein, consents to its entry and
14 issuance by the Arizona Department of Environmental Quality, agrees that UPCO will abide by
15 the same and waive any right to appeal therefrom.

16
17 DATED this 12th day of October, 2004
18 
19 Christine Probett, President
20 Universal Propulsion Company, Inc.

1 ORIGINAL of the foregoing Consent Order was filed this 13 day of October, 2004 with:

2 Judith Fought, Hearing Administrator
3 Office of Special Counsel
4 Arizona Department of Environmental Quality
5 1110 West Washington Street
6 Phoenix, Arizona 85007-2935

7 COPY of the foregoing Consent Order was sent certified mail, return receipt requested, this 13
8 day of October, 2004 to:

9 Christine Probett, President
10 Universal Propulsion Company, Inc.
11 25401 North Central Avenue
12 Phoenix, Arizona 85027

13 COPIES of the foregoing Consent Order were sent by regular/interdepartmental mail, this 13
14 day of October, 2004, to the following:

- 15 Tamara Huddleston, Chief Counsel
- 16 Environmental Enforcement Section, Office of the Attorney General
- 17 Karen O'Regan, City of Phoenix
- 18 Maricopa County Environmental Services

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