CITY AGREEMENT NO. 18,989

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NASA-JPL
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MONK HILL TREATMENT SYSTEM AGREEMENT

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1. PARTIES: The parties to this Agreement are: the City of Pasadena, a charter city duly incorporated under the laws of the State of California ("Pasadena") and the California Institute of Technology, a California non-profit corporation ("Caltech") which manages the Jet Propulsion Laboratory ("JPL"), a Federally Funded Research and Development Center, under a contract between Caltech and the National Aeronautics and Space Administration ("NASA"). Caltech and Pasadena are hereinafter referred to individually as "Party" and collectively as "Parties."

2. RECITALS: The Agreement is made with reference to the following facts, among others:

2.1 Pursuant to its contract with NASA, Caltech performs research, development and related activities at the JPL facility. The JPL facility, which is owned by the United States Government, is located in La Canada Flintridge and Pasadena at 4800 Oak Grove Drive.

2.2 In proximity to JPL, Pasadena owns and operates four groundwater wells. These wells, denominated as Ventura, Arroyo, Windsor and Well 52, are used by Pasadena to provide drinking water for its customers.

2.3 In 1990, the Parties entered into the Devil's Gate Temporary Groundwater Treatment Plant Participation and Settlement Agreement No. 14,061 ("Devil's Gate Agreement"), whereby the Parties agreed, among other things, that a groundwater treatment facility capable of removing trichloroethylene, carbon tetrachloride, tetrachloroethylene, and 1,2-dichloroethane ("VOCs") should be installed under third

party contract(s) to restore Pasadena's groundwater pumping operations on an interim basis for the Ventura, Arroyo, Windsor and Well 52 wells.

2.4 The base term of the Devil's Gate Agreement was originally three years, with provision for two one-year extension periods. However, the Agreement was amended to extend the contract term in 1993, 1997, 2000, 2001, 2004, and 2005. The Parties have agreed to enter into a restated and revised agreement that will supersede the Devil's Gate Agreement, which is set forth herein.

2.5 In 1992, pursuant to Section 120 of Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9601 *et seq.*, the JPL was placed on the National Priorities List ("NPL") of contaminated sites. 57 Fed. Reg., 47187- 47189 (1992). In accordance with CERCLA, NASA signed a Federal Facilities Agreement with the United States Environmental Protection Agency, the California Department of Toxic Substances Control and the California Regional Water Quality Control Board. Pursuant to CERCLA and the Federal Facility Agreement, NASA is undertaking its obligations under Section 120 of CERCLA.

2.6 To facilitate the implementation of NASA's obligations under CERCLA, the groundwater beneath and downgradient of the JPL was divided into two operable units. Operable Unit 1 (OU-1) focuses on the groundwater beneath the JPL (also known as the on-facility groundwater). Operable Unit 3 (OU-3) focuses on the groundwater beyond the boundaries of the JPL (also known as the off-facility groundwater).

2.7 After a treatment plant for volatile organic compounds was installed, perchlorate was detected in the Monk Hill subarea of the Raymond Basin in 1997.

Pasadena subsequently discontinued using the Ventura, Arroyo, Windsor and Well 52 wells.

2.8 In light of the detection of perchlorate at levels in excess of the California Department of Health Services' Public Health Goal, and in order to effectively treat the volatile organic compounds of concern and meet applicable CERCLA requirements, NASA, in consultation with Pasadena, decided that perchlorate treatment capability should be added to the VOC treatment system provided under the Devil's Gate Agreement.

2.9 In order to effectuate such response action, the Parties anticipate that NASA will fund the improvement and refurbishment of Pasadena's Ventura, Arroyo, Windsor and Well 52 wells as necessary so that the wells are capable of meeting a collective groundwater extraction capacity of seven thousand gallons per minute (7,000 gpm). Pasadena desires to make these wells available for the NASA-funded response actions implemented in connection with the investigation and remediation of the JPL CERCLA site.

2.10 In addition, the Parties anticipate that NASA will provide technical advisory assistance regarding design and installation of the perchlorate treatment plant, will assist Pasadena in the engineering designs of this perchlorate treatment plant, will install the foundation pad (including site preparation and infrastructure) on which the proposed treatment system will sit and the infrastructure to connect the perchlorate treatment plant to the rest of the treatment system, and will assist Pasadena with permitting and other regulatory steps required to resume the operation of Pasadena's

Ventura, Arroyo, Windsor and Well 52 wells in the Monk Hill subarea of the Raymond Basin.

2.11 In anticipation of NASA's actions to effectuate the response action described above and Pasadena's need to return the Ventura, Arroyo, Windsor and Well 52 wells to full production to meet its customer demand for potable water, the Parties desire to enter into an agreement by which Pasadena will be compensated for costs it incurs to install and lease the perchlorate treatment plant, and upgrade the treatment plant for VOCs, as necessary, and will be provided payment for operation, maintenance and other specified costs and fees described herein. In addition, the Parties desire that this Agreement act as the vehicle for the continuing payment of specified costs related to the VOC treatment initiated pursuant to the terms of the Devil's Gate Agreement.

3. AGREEMENT: In consideration of the mutual covenants and conditions herein, the Parties agree as follows:

4. EFFECTIVE DATE AND TERM:

4.1 This Agreement shall become effective upon the latest of the two signature dates appearing below ("Effective Date").

4.2 The Agreement shall terminate ninety (90) days following written notice to Pasadena that an event has occurred that results in the Monk Hill Treatment System no longer having to be operated in order for NASA to fulfill its obligations under CERCLA. Such an event includes, but is not limited to, (i) the issuance of a "no further action needed" OU-3 Record of Decision, (ii) approval of a Remedial Action Report for the Monk Hill subarea portion of OU-3 by the U.S. Environmental Protection Agency after

completion of the OU-3 remedial action or (iii) modification of the OU-3 Record of Decision such that no further action is required. The notice referred to above shall describe the event that has occurred. During the ninety (90) days following such notice, the Parties shall meet in good faith and discuss the orderly closeout of the Agreement, including the winding down of the treatment system operations funded pursuant to this Agreement. If termination occurs pursuant to this paragraph prior to the completion of the sixth 12-month period of operation of the Monk Hill Treatment System, the Parties, together with NASA, shall meet and confer and engage in good faith discussions to consider a liquidated sum that reflects the compensation that would have been paid to Pasadena pursuant to Section 8.2 plus reasonable charges Pasadena can demonstrate resulted or will result from the termination of this Agreement.

4.3 Pasadena may terminate this Agreement due to non-payment of any invoice or bill submitted in the manner prescribed in Section 9 by giving written notice to Caltech, provided however, that Pasadena may terminate this Agreement only if Caltech fails, pursuant to Section 9 of this Agreement, to dispute the costs(s) in question and fails to pay such costs(s) within sixty (60) days of receipt of the invoice or bill containing such costs. Notice must be given as prescribed in Section 24 of this Agreement. The Agreement shall be terminated on the date that the notice is received by Caltech.

4.4 If Caltech disputes all or part of any invoice or bill pursuant to the procedures set forth in Section 9 and Pasadena does not accept the explanation provided by Caltech pursuant to Section 9.2, Pasadena shall provide Caltech with a written notice detailing the bases of its disagreement. The parties agree to submit the dispute to NASA

for mediation within a reasonable time after Pasadena's notice. If the Parties, together with NASA, are unable to resolve the dispute, either Party may submit a billing dispute to binding arbitration in cases where the invoices and/or bills in dispute are $25,000 or less. The Parties shall mutually agree on an arbitrator and shall share the costs of the arbitration equally. Nothing in this paragraph shall be deemed to waive any contract rights or remedies under law that Pasadena or Caltech may otherwise have in the case of disputes greater than $25,000.

4.5 Except when United States Government funds are not made available to Caltech pursuant to its contract with NASA, or any successor agency, Caltech's payment obligations under Sections 8 and 9 that arise prior to termination shall survive termination of this Agreement.

4.6 This Agreement may be terminated by the mutual consent of the Parties.

4.7 This Agreement may be terminated by either Party upon written notice to the other Party if United States Government funds are not made available to Caltech in order for Caltech to meet its obligations under this Agreement. Notice must be given as prescribed in Section 24 of this Agreement. The Agreement shall be terminated on the date that the notice is received by the other Party.

4.8 This Agreement may be terminated by either Party upon written notice to the other Party in the event the United States Government fails to improve Pasadena's wells as set forth in paragraph 2.9 and 2.10. Notice must be given as prescribed in Section 24 of this Agreement. The Agreement shall be terminated on the date that the notice is received by the other Party.

4.9 In the event of termination of this Agreement, Sections 10, 12, 13, 14, 17, and 18 shall survive.

5. DEFINITIONS: The following terms, when used in this Agreement with initial capitalization, whether in the singular or the plural, shall have the following meaning:

5.1 Agreement: This document and all amendments hereto.

5.2 Best Efforts: Means a party shall make all reasonable, diligent, and good faith efforts to accomplish a goal or objective.

5.3 Contaminants: Trichloroethylene ("TCE"), carbon tetrachloride ("CTC"), tetrachloroethylene ("PCE"), 1,2-dichloroethane ("1,2-DCA"), and perchlorate ("ClO_4").

5.4 Date of Operation: For purposes of this Agreement, the VOC Treatment Plant's Date of Operation shall be the Effective Date of this Agreement. The Perchlorate Treatment Plant's Date of Operation shall be the date that the Perchlorate Treatment Plant is technically capable of treating extracted water and is permitted by the California Department of Health Services.

5.5 Incremental Costs: All costs of any nature incurred by Pasadena during periods of Plant Shutdown over and above Pasadena's costs associated with pumping the affected wells immediately prior to Plant Shutdown, including without limitation, blending, increased operation of less efficient wells, replacement water from the Metropolitan Water District ("MWD"), including price penalties for inability to produce interruptible water and increased costs associated with Pasadena's right to purchase MWD water at interruptible and/or seasonal storage rates then in effect, and/or increased costs of operating/pumping/boosting water supplies from other Pasadena wells,

laboratory analysis, and staff time directly related to Plant Shutdown. A credit against Incremental Costs shall be given for the net amounts, if any, Pasadena recovers from the Plant contractor(s) pursuant to the Plant Contract, or from the Plant contractor's performance bond, attributable to Plant Shutdown.

5.6 Monk Hill Treatment System: The Monk Hill Treatment System shall be comprised of the VOC Treatment Plant and the Perchlorate Treatment Plant.

5.7 Monk Hill Wells: The wells, denominated as the Ventura, Arroyo, Windsor and Well 52, used by Pasadena to provide drinking water for its customers.

5.8 Other Costs: Except for Plant Contract Costs, Pasadena Plant Installation Work costs and Pasadena Operation and Maintenance Costs, all costs for blending, laboratory analysis, and consultants and staff time incurred by Pasadena in connection with the operation of the Monk Hill Treatment System that relate to the contamination of the Monk Hill Wells by the Contaminants.

5.9 Pasadena Operation and Maintenance Costs: Except for Plant Contract Costs, all labor, equipment, materials, and electricity costs incurred by Pasadena in order to operate and maintain the VOC Treatment Plant at the present location or any future location or the Perchlorate Treatment Plant. This definition includes the cost of lifting treated water from the existing VOC Treatment Plant to the Windsor Reservoir for the existing Monk Hill Wells. This definition does not include costs associated with extracting and transporting the water from the aquifer to the top of the VOC Treatment Plant.

5.10 Pasadena Plant Installation Work: Material and labor provided by Pasadena, or by Persons under contract to Pasadena (other than the Plant Contract), in connection with the installation of the Perchlorate Treatment Plant or the VOC Treatment Plant, including, without limitation, fencing and security, landscaping, controls, power and telecommunications equipment, water mains necessary to transport water from the affected wells to the Perchlorate Treatment Plant or the VOC Treatment Plant and to distribute treated water from the Plant to Pasadena's Windsor Reservoir, fees assessed by the California Department of Health Services for its review of Pasadena's drinking water permit amendment and the California Department of Health Services' Policy 97-005 process for the Monk Hill Wells, and consultants and staff time. Attorney's fees and associated costs are not included within this definition.

5.11 Perchlorate Treatment Plant: The groundwater treatment facility installed pursuant to this Agreement for the purpose of treating perchlorate present in the water pumped via the Monk Hill Wells.

5.12 Person: Any individual or entity, including without limitation, any association, corporation, whether non-profit or for profit, State or any political subdivision thereof or the United States or any of its departments or agencies.

5.13 Plant Contract: The contract or contracts between Pasadena and a third party relating to installation, operation, maintenance, or removal of the Monk Hill Treatment System.

5.14 Plant Contract Costs: All contract payments by Pasadena pursuant to a Plant Contract.

5.15 Plant Shutdown: Any state of operation in which either the VOC Treatment Plant or the Perchlorate Treatment Plant does not function in accordance with all operating criteria specified in the Plant Contract. "Plant Shutdown" includes termination or expiration of the Plant Contract based on the contractor's failure or inability to fully perform any term or condition thereof, and any impairment of Plant operations due to regulatory actions or judicial order.

5.16 VOC Treatment Plant: The groundwater treatment facility installed pursuant to the Devil's Gate Agreement, and as subsequently modified pursuant to this Agreement, for the purpose of treating the specified Contaminants which are volatile organic compounds.

6. PLANT INSTALLATION & OPERATION:

6.1 Pasadena shall have exclusive direction and control of all work activities associated with the Plant Contracts, operations, and Pasadena Plant Installation Work. Pasadena will notify Caltech immediately upon discovery of any event that may result in a shutdown of the Monk Hill Treatment System for the purpose of coordinating such shutdown with NASA. The Parties will work together and with NASA with the intent to mitigate any impact to CERCLA-related activities associated with the Monk Hill Treatment System. In emergency situations, Pasadena will notify Caltech as soon as practicable.

6.2 If Pasadena is considering entering into contracts, contract amendments or change orders, or groups of such contracts, contract amendments or change orders, (a) that will cause the annual Plant Contract Costs for the Monk Hill Treatment System to

increase by more than twenty percent (20%) over the previous year, or (b) that will cause Plant Contract Costs to install the Monk Hill Treatment System to increase by more than twenty percent (20%), Pasadena shall first consult with both Caltech and NASA. Caltech shall review and approve, which approval shall not be unreasonably withheld, such contracts, contract amendments or change orders, or groups of such contracts, contract amendments or change orders, and shall give Pasadena written notification of its decision to approve any contract, contract amendment or change or group of contracts, contract amendments or change orders within fifteen (15) business days of its receipt of Pasadena's written request for approval. If Caltech does not approve such contracts, contract amendments or change orders, or groups of such contracts, contract amendments or change orders, Caltech's written notification shall fully explain Caltech's reason for refusal to approve Pasadena's request. If Caltech does approve such contract, contract amendment, or change order, or group of such contracts, contract amendments or change orders, any Plant Contract Costs associated with such contract, contract amendment, or change order, or group of such contracts, contract amendments or change orders shall be paid with respect to the specific contract, contract amendment or change order or group of such contracts, contract amendments or changes orders only, pursuant to Section 9, notwithstanding the compensation limitation provided for in section 8.1 for any particular year.

6.3 Pasadena agrees that once it starts operating the Monk Hill Treatment System, it will use its Best Efforts to extract at least five thousand (5,000) acre-feet of water on an annual basis via the Monk Hill Wells and transmit that water through the

Monk Hill Treatment System. Consistent with Pasadena's legal obligations under applicable law and regulations, Pasadena shall refrain from taking actions that would, individually or in the aggregate, impair NASA's ability to implement response actions undertaken pursuant to the Federal Facility Agreement or any Record of Decision concerning the JPL National Priorities List site. Nothing in this paragraph shall preclude Pasadena from participating as a member of the public in the remedy selection process being undertaken pursuant to the Federal Facilities Agreement for the Jet Propulsion Laboratory.

7. PERMIT LIMITS, PERFORMANCE LEVEL AND DESIGNATION OF ADDITIONAL SUBSTANCE AS CONTAMINANT:

7.1 Caltech agrees to cooperate fully with, and to neither obstruct, challenge nor encourage obstruction or challenge by other Persons, Pasadena's efforts in complying with the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.) and in obtaining any other permit or authorization required for the construction and operation of the Monk Hill Treatment System, including compliance with any reasonable Pasadena request for information and assistance, such as attendance by Caltech representatives at public hearings.

7.2 The Parties agree that the Monk Hill Treatment System shall be operated such that the treated water leaving the treatment system shall satisfy the treatment levels for the Contaminants established in Pasadena's operating permit for provision of drinking water from water extracted from the Monk Hill Wells. The Parties recognize that as of the Effective Date of this Agreement there is no promulgated maximum contaminant level (MCL) for perchlorate. It is the desire of the Parties that the treatment levels for the

Contaminants established in the drinking water permit obtained by Pasadena for the provision of water from the Monk Hill Treatment System, and any modifications to or renewal of the permit, be consistent with the treatment levels established for CERCLA response actions undertaken by NASA for OU-3. Therefore, the Parties agree to consult and to cooperate with NASA to attempt to conform Pasadena's permit, including any modification thereto or renewal thereof to the treatment levels designated for the CERCLA response actions taken by NASA.

7.3 Designating Additional Substances as a Contaminant

7.3.1 In the event any substance, other than one of the Contaminants identified in 5.3, is detected in any water extracted by wells in the Monk Hill subarea of the Raymond Basin at concentration levels that exceed the MCL, public health goal or any other concentration level that triggers a regulatory action or notice by Pasadena to any Person, Pasadena agrees to notify Caltech within thirty (30) days of such detection.

7.3.2 In the event that any substance other than the Contaminants is detected in water extracted by the Monk Hill Wells and such substance results in the water being in violation of contaminant levels established by any governmental agency having jurisdiction over Pasadena's operations, Pasadena may nominate any such substance for designation as a Contaminant. Pasadena also may nominate any substance if it is required by federal or state law, regulation or order to provide notice to its customers or to the governing body of the local agency in which users of the drinking water reside that the substance is present within its water.

7.3.3 Any substance nominated shall be designated as a Contaminant if Caltech determines that: (a) the same substance is or has been present in one or more of the groundwater monitoring wells located at the JPL; and (b) the substance is migrating from a source located at the JPL. In order to permit Caltech to make the requisite determinations, Pasadena shall grant Caltech access to Pasadena-owned or -controlled property for the purpose of collecting data in accordance with the "Use Agreement and Right-of-Entry for Environmental Actions" (City Contract No. 17,777) executed between Pasadena and NASA. Caltech agrees to make its determination as soon as practicable but in any event no later than ninety (90) days after receipt of Pasadena's request, provided that Pasadena timely provides access to its property and transmits any data requested by Caltech or NASA pursuant to Section 13 of this Agreement.

7.3.4 Once a substance is designated as a Contaminant, Pasadena shall be entitled to compensation as provided by the terms and conditions of this Agreement.

7.3.5 Prior to procuring any treatment system, unit or facility to treat a substance added as a Contaminant, Pasadena shall initiate discussions with Caltech for the purpose of obtaining NASA's approval of the treatment methodology and treatment capacity Pasadena believes is necessary.

8. PAYMENT RESPONSIBILITY:

8.1 Caltech shall pay Pasadena for all Incremental Costs incurred during periods of Plant Shutdown, Other Costs, Pasadena Plant Installation Work, Plant Contract Costs and Pasadena Operation and Maintenance Costs in accordance with the procedures set forth in Section 9; provided, however, that (i) Plant Contract Costs, excluding costs

associated with Plant removal, if any, (ii) Pasadena Operation and Maintenance Costs for the Monk Hill Treatment System, and (iii) fees payable under Paragraph 8.2 or 8.3, as applicable, are payable under this Agreement only to the extent that the total amount of such costs and the fees do not exceed three million five hundred thousand dollars ($3,500,000) in any calendar year. If Pasadena anticipates that the fees and Pasadena's costs will exceed the three million five hundred thousand dollars ($3,500,000) limitation set forth above, Pasadena shall immediately consult with Caltech and NASA and shall provide relevant information regarding the bases for the anticipated increase. Pasadena may request in writing that Caltech approve amounts anticipated to exceed three million five hundred thousand dollars ($3,500,000). The amount or a portion of the amount exceeding the three million five hundred thousand dollars ($3,500,000) limitation shall be payable under this Agreement if Caltech agrees to provide payment, which agreement shall not be unreasonably withheld, for the excess amount consistent with the limitations set forth in Paragraph 8.4. At the second anniversary of the Effective Date of the Agreement and biennial thereafter, the Parties in consultation with NASA shall review Pasadena's ongoing and projected operating costs and NASA's budget projections associated with operating the Monk Hill Treatment System and the ongoing viability of the current annual fees and cost limitation provided by this paragraph. During such review Pasadena may request that this Agreement be amended to increase the amount of the annual fees and costs limitation. If Caltech denies Pasadena's request, Caltech shall provide Pasadena written notification, which notification shall fully explain Caltech's reason(s) for the denial.

8.2 In accordance with procedures set forth in Section 9, Caltech shall pay a fee to Pasadena to compensate Pasadena for allowing NASA to use Pasadena's water system infrastructure as part of the response actions undertaken by NASA. Beginning on the Date of Operation of the Monk Hill Treatment System, Caltech shall pay Pasadena for each of the first six 12-month periods thereafter eighty dollars ($80) per acre foot of groundwater extracted and treated, up to four hundred thousand dollars ($400,000) during each such 12-month period. If NASA requests that Pasadena extract and treat more than five thousand (5,000) acre feet of groundwater from the Monk Hill Wells during any such 12-month period, Pasadena shall use its reasonable efforts to honor the request, and shall be paid under this Agreement at a rate of eighty ($80) per acre foot of groundwater extracted and treated above five thousand (5,000) acre feet for each such 12-month period. Pasadena may elect, without a request from NASA, to extract and treat more than five thousand (5,000) acre feet of groundwater from the Monk Hills Wells during any such 12-month period without further compensation under this Paragraph 8.2.

8.3 In accordance with procedures set forth in Section 9, beginning in the seventh 12-month period of operation of the Monk Hill Treatment System, Pasadena shall be paid at a rate of forty dollars ($40) per acre foot of groundwater extracted and treated up to two hundred thousand dollars ($200,000) for each such 12-month period. If NASA requests that Pasadena extract and treat more than five thousand (5,000) acre feet of water in any given 12-month period Caltech shall pay Pasadena at a rate of eighty dollars ($80) per acre foot for each acre foot of water extracted and treated in excess of five thousand (5,000) acre feet. Pasadena may elect, without a request from NASA, to

extract and treat more than five thousand (5,000) acre feet of groundwater from the Monk Hills Wells during any such 12-month period without further compensation under this Paragraph 8.3.

8.4 The Parties acknowledge that all amounts which Caltech agrees to pay pursuant to this Agreement have been or will be provided by the United States Government under contracts between Caltech and NASA and, accordingly, that all such payment obligations assumed by Caltech hereunder are subject to the availability of United States Government funds for such purpose. Caltech shall use Best Efforts, in a timely fashion, to seek funds from NASA necessary to fund Caltech's payment obligations under this Agreement.

8.5 To the extent that Caltech at any time knows or has reason to believe United States Government funds will not be available to meet its obligations under this Agreement, in whole or in part, Caltech shall immediately notify Pasadena in writing. Such notice shall include a detailed explanation as to Caltech's basis for its knowledge or belief that such funds will not be available and shall include any available supporting documentation. Caltech shall comply with any reasonable request by Pasadena for additional information and documentation regarding the unavailability of such funds.

9. PAYMENTS AND BILLING:

9.1 Pasadena will bill Caltech bi-monthly within thirty (30) days following January 31, March 31, May 31, July 31, September 30, and November 30 for Plant Contract Costs, Pasadena Operation and Maintenance Costs, Other Costs, Incremental Costs, and fees under Sections 8.2 and 8.3 in the previous two-month period. If during

any 12-month period, beginning on the Date of Operation of the Monk Hill Treatment System, Pasadena extracts and treats less than four thousand (4,000) acre feet of water due to its failure to use Best Efforts, Pasadena shall not be entitled to any payments under Sections 8.2 or 8.3 for that 12-month period. In such event, all monies paid to Pasadena pursuant Sections 8.2 or 8.3 for that 12-month period shall be refunded to Caltech within sixty (60) days of the last day of the 12-month period, unless Caltech in its sole discretion, elects to take a credit for all or part of the monies paid toward payments in the next 12-month period. Subject to the terms and conditions set forth in this Agreement, Caltech shall pay Pasadena the full amount stated in the bills submitted within forty-five (45) days of receipt of each bill.

9.2 Except as otherwise provided in this Agreement, Caltech shall have no right to withhold payment with respect to any invoice or bill submitted by Pasadena under this Agreement. If there is a bona fide dispute as to any portion of a bill, the undisputed portion of the bill shall be paid to Pasadena. Within five days after the due date, Caltech shall provide Pasadena a written explanation with respect to all amounts not paid which are disputed.

9.3 Amounts appearing on an invoice or bill submitted by Pasadena pursuant to this Agreement which are not disputed and not paid in full by the due date by Caltech shall thereafter accrue a late payment charge, calculated at the ninety (90) day federal treasury bill discount rate in effect as of the due date, but in no event greater than the amount permitted by law, computed from the date the payment is due until the date such payment is received. If either principal or late payment charges are due, any payment

thereafter received shall first be applied to the late payment charges due, then to the previously outstanding principal due and lastly, to the most current principal due. The late payment charge imposed by this paragraph shall not accrue on amounts for which United States Government funds are not available to satisfy Caltech's payment obligations under this Agreement.

10. SETTLEMENT AND RELEASES:

10.1 In accordance with paragraphs 10.1.1 through 10.1.4, Pasadena releases its rights, claims, and causes of action relating to costs incurred and damages suffered prior to the Date of Operation of the Monk Hill Treatment System. Provided, however, nothing in this Section 10 relating to releases by or from Pasadena shall apply (i) to wastes generated from the operations of the Monk Hill Treatment System or (ii) to basins or subareas of basins other than the Monk Hill subarea of the Raymond Basin.

10.1.1 Pasadena releases Caltech, Caltech's trustees, officers, employees and agents, and the United States and its departments and agencies from any and all claims, rights and causes of action for costs incurred or damages suffered on or before the Effective Date of this Agreement relating to the Contaminants in the groundwater of the Monk Hill subarea of the Raymond Basin.

10.1.2 If this Agreement is terminated prior to the beginning of the seventh 12-month period of operation of the Monk Hill Treatment System, then the release in paragraph 10.1.1 shall be deemed null and void, except that in the event Pasadena, its assignee or any party acting on its behalf, asserts a claim or demand in a civil action or an administrative proceeding against Caltech, Caltech's trustees, officers,

employees or agents, or the United States or any of its departments or agencies with respect to any costs incurred or damages suffered on or before the Effective Date of this Agreement and such claim or demand relates to the Contaminants in the groundwater of the Monk Hill subarea of the Raymond Basin, the defending party(s) shall be entitled to a credit or offset, in an amount equal to any payments made to Pasadena pursuant to paragraphs 4.2 and 8.2 of this Agreement and for amounts expended by NASA on contract(s) for well rehabilitation and infrastructure improvements described in paragraphs 2.9 and 2.10.

10.1.3 Upon the Date of Operation of the Monk Hill Treatment System, Pasadena releases Caltech, Caltech's trustees, officers, employees and agents, and the United States and its departments and agencies from any and all claims, rights and causes of action for costs incurred or damages suffered during the period commencing on the Effective Date of this Agreement and ending on the Date of Operation of the Monk Hill Treatment System relating to the Contaminants in the groundwater of the Monk Hill subarea of the Raymond Basin.

10.1.4 If this Agreement is terminated prior to the beginning of the seventh 12-month period of operation of the Monk Hill Treatment System, then the release in paragraph 10.1.3 shall be deemed null and void, except that in the event Pasadena, its assignee or any party acting on its behalf, asserts a claim or demand in a civil action or an administrative proceeding against Caltech, Caltech's trustees, officers, employees or agents, or the United States or any of its departments or agencies with respect to any costs incurred or damages suffered during the period commencing on the

Effective Date of this Agreement and ending on the Date of Operation of the Monk Hill Treatment System and such claim or demand relates to the Contaminants in the groundwater of the Monk Hill subarea of the Raymond Basin, the defending party(s) shall be entitled to a credit or offset, in an amount equal to any payments made to Pasadena pursuant to paragraphs 4.2 and 8.2 of this Agreement and for amounts expended by NASA on contract(s) for well rehabilitation and infrastructure improvements described in paragraphs 2.9 and 2.10.

10.2 In consideration of Caltech's complete fulfillment of all payment responsibilities pursuant to the Devil's Gate Agreement, which is hereby acknowledged, Pasadena hereby releases Caltech, NASA and the United States from any and all claims, demands and causes of action for reimbursement of costs (i) incurred by Pasadena on or before the Effective Date of this Agreement and (ii) reimbursed as a result of payments under the Devil's Gate Agreement.

10.3 Pasadena hereby releases Caltech, Caltech's trustees, officers, employees and agents, and the United States and its departments and agencies from any and all rights, claims and causes of action for the following costs which are incurred by or on behalf of Pasadena after the Effective Date of this Agreement to the extent such costs are paid by Caltech or the United States (including its departments and agencies): (i) Other Costs; (ii) Pasadena Operation and Maintenance Costs; (iii) Plant Contract Costs; (iv) Incremental Costs; and (v) Pasadena Plant Installation Work.

10.4 Notwithstanding the releases contained in this Section 10, Pasadena reserves any right, claim or cause of action for indemnity or contribution under state law

or federal law against Caltech or the United States (including its departments and agencies) that it might otherwise have in the event of a claim or cause of action by any Person against Pasadena relating to Contaminants in the groundwater of the Monk Hill subarea of the Raymond Basin.

10.5 Except for payments disputed pursuant to Section 9, Caltech hereby waives any right that it may have now or in the future under any provision of law, including CERCLA, to recover from Pasadena, in any future proceeding, any payments made pursuant to this Agreement.

10.6 The running of any limitation period (whether statute of limitations, laches or otherwise) that may be applicable to any claim or cause of action that one Party may now or in the future have against the other Party relating to any contamination of Pasadena's drinking water system or wells shall be deemed suspended or tolled for the period from December 9, 1984 through the duration of this Agreement, and shall begin to run again on the date this Agreement is no longer in effect. Neither Party shall assert or rely upon any such suspended or tolled limitations period as against the other Party in any subsequent proceeding.

11. COVENANT NOT TO SUE:

11.1 For the duration of this Agreement, Pasadena shall not commence, initiate or participate in any manner, in any civil action, whether commenced in an administrative or judicial forum, in which Pasadena alleges that Caltech or one of its trustees, officers, employees or agents or the United States, or any agency or department thereof, is responsible for or liable to Pasadena with respect to any injury, damage,

expense or cost as a result of any contamination of the groundwater in the Monk Hill subarea of the Raymond Basin by the Contaminants, before or after the Effective Date of this Agreement, except that (1) Pasadena shall not be precluded by this Section 11 from asserting a compulsory counterclaim or a compulsory cross-complaint and (2) in the event the United States denies, in whole or in part, the Federal Tort Claim Act claim submitted by Pasadena on January 13, 2004 to the United States (specifically the letters and attachments dispatched to NASA and the U.S. Army, copies of which are attached as Exhibit A and referred to herein as the "January 13, 2004 correspondence"), and after such denial Pasadena must commence an action in order to avoid the running of any limitation period, Pasadena shall not be precluded by this Section 11 from commencing such a civil action, whether in a judicial or administrative forum, against the United States or any of its departments or agencies concerning the claim described in the January 13, 2004 correspondence. If Pasadena commences such an action, whether in an administrative or judicial form, against the United States and any of its agencies or departments concerning the claim described in the January 13, 2004 correspondence, the United States and Caltech shall be entitled to a credit or offset in an amount equal to the amount expended by NASA for well rehabilitation and infrastructure improvements for Pasadena's wells to the same extent as provided for the termination of this Agreement under paragraph 10.1. Nothing in this Section constitutes a waiver or release of any right, claim or defense that the defending party has or might have in the future with respect to any action commenced by Pasadena.

11.2 For the duration of this Agreement, Caltech shall not commence any civil action, whether commenced in an administrative or judicial forum, against Pasadena relating to any contamination of the groundwater in the Monk Hill subarea of the Raymond Basin by the Contaminants, before or after the Effective Date of this Agreement.

12. CHANGE IN PRIME CONTRACTOR:

Pasadena agrees that if and when Caltech is no longer the prime contractor at JPL, then Caltech shall have no further obligations to perform under this Agreement and NASA has the right, without further consent from Pasadena, to either substitute a new contractor or assume the obligations of the Agreement itself. Pasadena agrees that it will cooperate fully with NASA to amend the Agreement as may be necessary in such circumstance. In no event shall the Agreement be amended, without Caltech's consent, to remove Caltech from the scope of Sections 10, 11, 16, 17, 18 and 23.

13. ACCESS TO DATA AND MEETINGS:

13.1 Pasadena agrees to provide to Caltech, on request, the following:

13.1.1 Analytical sampling results received by Pasadena or provided by its agents, employees or contractors on wells supplying water to the Monk Hill Treatment System.

13.1.2 Analytical sampling results on plant influent, effluent and internal intermediate processes taken by Pasadena or their agents at any time.

13.1.3 All Monk Hill Treatment System operating logs and summary management reports.

13.1.4 All nonprivileged reports and study results generated by Pasadena or its employees, agents or contractors pertaining to Monk Hill Treatment System efficiency or operations.

13.2 Each Party shall promptly provide the other Party with copies of all data and all nonprivileged reports and investigations relating to the concentration, types, levels or duration of actual or potential contaminants in the aquifer from which Pasadena pumps its water allocation.

13.3 The Parties agree to meet at least quarterly with NASA to discuss the status of the Monk Hill Treatment System operation and other issues relating to the operation and performance of the Monk Hill Treatment System.

14. LIABILITY: Pasadena, its directors, officers, and employees shall not be liable to Caltech for any loss, damage, claim, cost, charge, or expense of any kind or nature incurred by Caltech (including direct, indirect or consequential loss, damage, claim, cost, charge or expense; and whether or not resulting from the negligent actions or omissions of Pasadena, its directors, officers, employees, contractors or any person or entity whose negligence would be imputed to such) arising from Monk Hill Treatment System installation, operation, maintenance and removal.

15. SEVERABILITY: In the event that any term, covenant, or condition of this Agreement or the application of any such term, covenant, or condition shall be held invalid as to any Person or circumstance by any court having jurisdiction, such term, covenant, or condition shall remain in force and effect, to the maximum extent permitted by law, and all other terms, covenants, or conditions of this Agreement and their

application shall not be affected thereby but shall remain in force and effect unless a court holds that such provisions are not separable from all other provisions of this Agreement.

16. NON-WAIVER: None of the provisions of this Agreement shall be considered waived by a Party except when such waiver is given in writing. Neither Party's waiver of one term or condition of this Agreement shall be deemed a waiver or breach of others, nor of a subsequent breach of the one waived.

17. NO DEDICATION OF FACILITIES: Nothing in this Agreement, nor the existence of this Agreement, nor operations of any treatment facility in consequence of this Agreement shall act expressly or impliedly to invest Caltech or the United States and its departments and agencies with the status or role of a purveyor of potable water. All responsibility for the potability of water delivered to its customers shall remain with Pasadena.

18. NO ADMISSION OF LIABILITY: Nothing in this Agreement, nor the existence of this Agreement, shall act expressly or impliedly as an acknowledgement or admission of liability on the part of either Party or the United States and its department and agencies.

19. INTEGRATION: This Agreement constitutes the complete and final expression of the agreement between the Parties and is intended as a complete and exclusive statement of the terms of their agreement which supersedes all prior and contemporaneous offers, promises, representations, negotiations, discussion, communications, and contracts, except as otherwise provided herein, which may have

been made in connection with the subject matter of this Agreement. This Agreement supersedes and replaces the Devil's Gate Agreement.

20. AMENDMENT: This Agreement may be amended only by a written instrument duly executed by the Parties.

21. TITLES: The captions and headings in this Agreement are inserted to facilitate reference and shall have no bearing upon the interpretation of any of the terms and provisions of this Agreement.

22. GOVERNING LAW: This Agreement shall be interpreted, governed by and construed under the laws of the State of California or the laws of the United States, as applicable.

23. RELATIONSHIP OF THE PARTIES:

23.1 The covenants, obligations, rights, and liabilities, of the Parties, under this Agreement are intended to be several and not joint or collective, and nothing herein is intended to be construed to create an association, joint venture, trust, or partnership, or to impose a trust or partnership covenants, obligation or liability on or with regard to any of the Parties.

23.2 Each Party shall be individually responsible for its own covenants, obligations, and liabilities under this Agreement. Neither Party shall be under the control of the other Party nor be deemed to control the other Party.

23.3 No Party shall be the agent of or have the right or power to bind the other Party without its written consent, except as expressly provided for in this Agreement.

24. NOTICES: Except as otherwise provided in this Agreement, any notice, billing, payment, demand, or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be deemed properly served given or made if delivered in person, or by courier services, or sent by United States mail, postage prepaid, to the following address and person:

To: Pasadena
General Manager, Department of Water and Power
City of Pasadena
150 S. Los Robles, #200
Pasadena, CA 91101

To: Caltech
Manager, Environmental Affairs Office
Jet Propulsion Laboratory
Mail Stop 171-225
4800 Oak Grove Drive
Pasadena, CA 91109

With a copy to:

OFFICE OF GENERAL COUNSEL
Mail Stop 180-305
4800 Oak Grove Drive
Pasadena, CA 91109

Either Party may at any time, by written notice to the other Party, change the designation or address of the Person specified herein.

25. SIGNATURE CLAUSE: The signatories hereto represent that they have been appropriately authorized to execute this Agreement on behalf of the Party for whom they sign.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be signed on the dates appearing below.

CALIFORNIA INSTITUTE OF TECHNOLOGY

Dated: 1/23/06 By: _____

Name: CHARLES ELACHI
Title: Vice President, California Institute of Technology and,
Director, Jet Propulsion Laboratory

CITY OF PASADENA

Dated: 1/17/06 By: _____

Name: CYNTHIA J. KURTZ
Title: City Manager
City of Pasadena

ATTEST:

1/17/06

_____

for City Clerk

APPROVED AS TO FORM:

_____

Scott D. Rasmussen
Assistant City Attorney

Exhibit A

City of Pasadena
100 NORTH GARFIELD AVENUE
P.O. BOX 7115, PASADENA, CA 91109-7215

OFFICE OF THE CITY ATTORNEY
ROOM 228, CITY HALL
(626) 744-4141
FAX (626) 744-4190

January 13, 2004

Via Federal Express

Paul G. Pastorek, Esq.
National Aeronautics & Space Administration
300 East Street, SW
Washington, DC 20546-0001

Timothy S. Howell, Esq.
Chief Counsel
NASA/JPL
NASA Management Office
4800 Oak Grove Drive
M/S 180-801
Pasadena, CA 91109

Re: Federal Tort Claims Act
City of Pasadena's Claim

Dear Sirs:

The City of Pasadena ("City") hereby submits the enclosed Claim in the amount of $2,045,992.13. This Claim consists of this letter, the attached executed Standard Form 95 ("SF 95"), a more detailed description of the City's Claim and resulting costs (Attachment A to the SF 95), and supporting exhibits. As the City Attorney, I am duly authorized by the City to sign the Claim, as set forth in the attached statement of authorization.

This Claim is submitted under the Federal Tort Claims Act ("FTCA"), 28 U.S.C. §§ 2671-2680, 28 C.F.R. §§ 14.1-14.11, and the National Aeronautics and Space Act of 1958, as amended, 42 U.S.C. § 2473(c)(13), 28 C.F.R. § 1261.3. The City's Claim is for injury, damages, and loss of property caused by the negligence, wrongful acts, and omissions of the United States, acting through the National Aeronautics Space Administration ("NASA"), in its contamination of groundwater in and around the Jet Propulsion Laboratory ("JPL") with perchlorate and other emerging chemicals, from which the City obtains a water supply. Damages beyond those included in this Claim are not foreseeable based on information and facts currently known to the City. The City reserves its right to amend this Claim upon the discovery of evidence or additional facts relating to the amount of damages.

The City is a public water purveyor, regulated by the California Public Utility District and the California Department of Health Services. The City's water supply system is comprised of sixteen wells, eighteen booster stations, and two reservoirs connected via an underground pipeline distribution system. Water produced from the wells is stored in one of two reservoirs prior to distribution.

The City's wells are down-gradient of JPL. JPL is an operating division within the California Institute of Technology's ("Caltech") organizational structure. JPL is owned by NASA and managed by Caltech under contract with NASA. Caltech began operating JPL as early as 1936 as a research laboratory for the Army, focusing on jet propulsion and liquid rocket propellants. The Army contracted with Caltech to study jet propulsion from 1940 through 1958. The Army provided the funding for the first permanent structures on the land that became JPL. Beginning in 1945, the Army purchased the majority of the parcels that comprise JPL. In 1959, NASA took over ownership of JPL from the Army Air Corp, but Caltech remained under contract with the Army until 1961 when NASA entered its own contract. Contaminants, including perchlorate, have been and continue to be released into the groundwater, polluting the City's drinking water supply.

Perchlorate is an inorganic chemical used in solid rocket and missile propellants, like those used in studies at JPL. Perchlorate is highly mobile in water, and can persist in groundwater for decades. Perchlorate poses human health risks to the developing nervous system and in the form of thyroid tumors.

On January 18, 2002, EPA released a draft revised risk assessment for perchlorate, concluding that the health risks associated with perchlorate were greater than previously determined. In response, also on January 18, 2002, DHS lowered its action level for perchlorate from 18 ppb to 4 ppb.

Under the new action level, eight of the City's thirteen active drinking supply wells became inoperable—three in the Monk Hill Subarea, and five in the Pasadena Subarea. As a result, the City has incurred substantial costs, set forth in the attached SF 95, due to perchlorate contamination in its wells. Based on the foregoing contamination, the City's claims against NASA include, but are not limited to negligence, nuisance, and trespass.

As a result of the shutdown of wells, the City has incurred and continues to incur significant costs due to the perchlorate contamination from JPL, including consulting fees, monitoring and evaluation costs, and water transfer and replacement costs. As of June 30, 2003, these costs amount to $2,045,992.13.

The City has been pursuing negotiations with NASA to work toward a settlement of its claims.

The City prefers to resolve this matter out of court. To that end, I look forward to hearing from you shortly.

Sincerely yours,

Michele Beal Bagneris
City Attorney
City of Pasadena

cc: Scott D. Rasmussen, Esq., Assistant City Attorney
James J. Dragna, Esq., Bingham McCutchen, LLP

Enclosures

CLAIM FOR DAMAGE, INJURY, OR DEATH	INSTRUCTIONS: Please read carefully the instructions on the reverse side and supply information requested on both sides of the form. Use additional sheet(s) if necessary. See reverse side for additional instructions.	FORM APPROVED OMB NO. 1105-0008

1. Submit To Appropriate Federal Agency:	2. Name, Address of claimant and claimant's personal representative, if any. *(See instructions on reverse.)* *(Number, street, city, State and Zip Code)*
Timothy S. Howell, NASA/JPL 4800 Oak Grove Drive M/S 180-801 Pasadena, CA 91109	The City of Pasadena 100 North Garfield Avenue, Room 237 Pasadena, CA 91109 (see attachment for representative's information)

3. TYPE OF EMPLOYMENT	4. DATE OF BIRTH	5. MARITAL STATUS	6. DATE AND DAY OF ACCIDENT	7. TIME *(A.M. or P.M.)*
☐ MILITARY ☒ CIVILIAN	N/A	N/A	See Attachment A and claim cover letter	N/A

8. Basis of Claim *(State in detail the known facts and circumstances attending the damage, injury, or death, identifying persons and property involved, the place of occurrence and the cause thereof) (Use additional pages if necessary.)*

The Jet Propulsion Laboratory ("JPL") in Pasadena, California is an operating division within the California Institute of Technology's ("Caltech") organizational structure. JPL is owned by NASA and managed by Caltech under contract with NASA. Caltech began operating JPL as early as 1936 as a research laboratory for the United States Army, focusing on jet propulsion and rocket propellants. JPL has contaminated the City of Pasadena's ("City") subsurface drinking water source with perchlorate and related chemicals. Perchlorate contamination in the City's drinking water supply exceeds the regulatory action level. The contamination has forced the City to shut down numerous production wells and currently threatens closure of additional wells. To date, the City has incurred significant costs related to well closure, reduced production capacity, replacement water costs, and staff costs, and will incur additional costs until a remediation plan is implemented. As of June 2003, these costs are $2,045,992.13. (See Attachment A and claim cover letter).

9. PROPERTY DAMAGE

NAME AND ADDRESS OF OWNER, IF OTHER THAN CLAIMANT *(Number, street, city, State, and Zip Code)*

BRIEFLY DESCRIBE THE PROPERTY, NATURE AND EXTENT OF DAMAGE AND THE LOCATION WHERE PROPERTY MAY BE INSPECTED. *(See instructions on reverse side.)*

Contamination of City of Pasadena municipal production wells and reservoirs, including Arroyo, Well 52, Ventura, Windsor, Bangham, Copelin, Garfield, Sunset, and Villa Wells, and Windsor and Sunset reservoirs. (See Attachment A).

10. PERSONAL INJURY/WRONGFUL DEATH

STATE NATURE AND EXTENT OF EACH INJURY OR CAUSE OF DEATH, WHICH FORMS THE BASIS OF THE CLAIM. IF OTHER THAN CLAIMANT, STATE NAME OF INJURED PERSON OR DECEDENT.

11. WITNESSES

NAME	ADDRESS *(Number, street, city, State, and Zip Code)*
See Attachment A	

12. *(See instructions on reverse)* AMOUNT OF CLAIM *(In dollars)*

12a. PROPERTY DAMAGE	12b. PERSONAL INJURY	12c. WRONGFUL DEATH	12d. TOTAL *(Failure to specify may cause forfeiture of your rights.)*
2,045,992.13			2,045,992.13

I CERTIFY THAT THE AMOUNT OF CLAIM COVERS ONLY DAMAGES AND INJURIES CAUSED BY THE ACCIDENT ABOVE AND AGREE TO ACCEPT SAID AMOUNT IN FULL SATISFACTION AND FINAL SETTLEMENT OF THIS CLAIM.

13a. SIGNATURE OF CLAIMANT *(See instructions on reverse side.)*	13b. Phone number of signatory	14. DATE OF CLAIM
Michele Beal Bagneris, City Attorney	(626) 744-4141	1/13/04

CIVIL PENALTY FOR PRESENTING FRAUDULENT CLAIM	CRIMINAL PENALTY FOR PRESENTING FRAUDULENT CLAIM OR MAKING FALSE STATEMENTS
The claimant shall forfeit and pay to the United States the sum of $2,000 plus double the amount of damages sustained by the United States. *(See 31 U.S.C. 3729.)*	Fine of not more than $10,000 or imprisonment for not more than 5 years or both. *(See 18 U.S.C. 287, 1001.)*

PRIVACY ACT NOTICE

This Notice is provided in accordance with the Privacy Act, 5 U.S.C. 552a(e)(3), and concerns the information requested in the letter to which this Notice is attached.

A. *Authority:* The requested information is solicited pursuant to one or more of the following: 5 U.S.C. 301, 38 U.S.C. 501 et seq., 28 U.S.C. 2671 et seq., 28 C.F.R.

B. *Principal Purpose:* The information requested is to be used in evaluating claims.

C. *Routine Use:* See the Notices of Systems of Records for the agency to whom you are submitting this form for this information.

D. *Effect of Failure to Respond:* Disclosure is voluntary. However, failure to supply the requested information or to execute the form may render your claim

INSTRUCTIONS

Complete all items - insert the word NONE where applicable

A CLAIM SHALL BE DEEMED TO HAVE BEEN PRESENTED WHEN A FEDERAL AGENCY RECEIVES FROM A CLAIMANT, HIS DULY AUTHORIZED AGENT, OR LEGAL REPRESENTATIVE AN EXECUTED STANDARD FORM 95 OR OTHER WRITTEN NOTIFICATION OF AN INCIDENT, ACCOMPANIED BY A CLAIM FOR MONEY DAMAGES IN A SUM CERTAIN FOR INJURY TO OR LOSS OF PROPERTY, PERSONAL INJURY, OR DEATH ALLEGED TO HAVE OCCURRED BY REASON OF THE INCIDENT. THE CLAIM MUST BE PRESENTED TO THE APPROPRIATE FEDERAL AGENCY WITHIN TWO YEARS AFTER THE CLAIM ACCRUES.

Any instructions or information necessary in the preparation of your claim will be furnished, upon request, by the office indicated in Item #1 on the reverse side. Complete regulations pertaining to claims asserted under the Federal Tort Claims Act can be found in Title 28, Code of Federal Regulations, Part 14. Many agencies have published supplemental regulations also. If more than one agency is involved, please state each agency.

The claim may be filed by a duly authorized agent or other legal representative, provided evidence satisfactory to the Government is submitted with said claim establishing express authority to act for the claimant. A claim presented by an agent or legal representative must be presented in the name of the claimant. If the claim is signed by the agent or legal representative, it must show the title or legal capacity of the person signing and be accompanied by evidence of his/her authority to present a claim on behalf of the claimant as agent, executor, administrator, parent, guardian or other representative.

If claimant intends to file claim for both personal injury and property damage, claim for both must be shown in Item 12 of this form.

The amount claimed should be substantiated by competent evidence as follows:

(a) In support of the claim for personal injury or death, the claimant should submit a written report by the attending physician, showing the nature and extent of injury, the nature and extent of treatment, the degree of permanent disability, if any, the prognosis, and the period of hospitalization, or incapacitation, attaching itemized bills for medical, hospital, or burial expenses actually incurred.

(b) In support of claims for damage to property which has been or can be economically repaired, the claimant should submit at least two itemized signed statements or estimates by reliable, disinterested concerns, or, if payment has been made, the itemized signed receipts evidencing payment.

(c) In support of claims for damage to property which is not economically repairable, or if the property is lost or destroyed, the claimant should submit statements as to the original cost of the property, the date of purchase, and the value of the property, both before and after the accident. Such statements should be by disinterested competent persons, preferably reputable dealers or officials familiar with the type of property damaged, or by two or more competitive bidders, and should be certified as being just and correct.

(d) Failure to completely execute this form or to supply the requested material within two years from the date the allegations accrued may render your claim "invalid". A claim is deemed presented when it is received by the appropriate agency, not when it is mailed.

Failure to specify a sum certain will result in invalid presentation of your claim and may result in forfeiture of your rights.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden,

to Director, Torts Branch
Civil Division
U.S. Department of Justice
Washington, DC 20530

and to the
Office of Management and Budget
Paperwork Reduction Project (1105-0008)
Washington, DC 20503

INSURANCE COVERAGE

In order that subrogation claims may be adjudicated, it is essential that the claimant provide the following information regarding the insurance coverage of his vehicle or property.

15. Do you carry accident insurance? ☐ Yes, If yes, give name and address of insurance company *(Number, street, city, State, and Zip Code)* and policy number. ☐ No

No subrogation of claims are involved in this matter.

16. Have you filed claim on your insurance carrier in this instance, and if so, is it full coverage or deductible?

17. If deductible, state amount

18. If claim has been filed with your carrier, what action has your insurer taken or proposes to take with reference to your claim? *(It is necessary that you ascertain these facts)*

19. Do you carry public liability and property damage insurance? ☐ Yes, If yes, give name and address of insurance company *(Number, street, city, State, and Zip Code)* ☐ No

FEDERAL TORT CLAIMS ACT

AUTHORIZED REPRESENTATIVE

I, Michele Beal Bagneris, am the City Attorney of the City of Pasadena and have the power and authority to file, adjust, and settle claims for and on behalf of the City of Pasadena as its duly authorized agent. Evidence supporting my authority to file this claim is set forth in the declaration of Scott D. Rasmussen, attached as Exhibit A. In such capacity, I also have access to the books and records of the City of Pasadena.

Date: January 13, 2004

Michele Beal Bagneris
City Attorney
City of Pasadena

EXHIBIT A

DECLARATION OF SCOTT D. RASMUSSEN
ASSISTANT CITY ATTORNEY

I, Scott D. Rasmussen, hereby declare:

1. At all times pertinent hereto, I was serving as the duly appointed Assistant City Attorney of the City of Pasadena ("City") assigned to provide legal services to the City in connection with perchlorate contamination of the City's groundwater supplies.

2. Pasadena Municipal Code section 2.30.020(5), a copy of which is attached hereto as Exhibit 1 for your reference, provides that the City Attorney may commence any action on behalf of the City for more than a gross amount of $50,000, exclusive of court costs, with the prior approval of the City Council.

3. On August 11, 2003, the Pasadena City Council convened a closed session pursuant to California Government Code section 54956.9 to confer with legal counsel regarding potential litigation.

4. Acting in my capacity of Assistant City Attorney, I was present at the August 11, 2003 closed session.

5. The City Council by motion approved the filing of a claim under the Federal Torts Claims Act against federal agencies in connection with perchlorate contamination of the City's groundwater supplies, and authorized the City Attorney to submit this claim.

6. All legally necessary authorizations and approvals under the laws of the City of Pasadena have been obtained for the filing of this claim.

I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct.

January 13, 2004
Date

Scott D. Rasmussen
Scott D. Rasmussen
Assistant City Attorney
City of Pasadena

Title 2 ORGANIZATION AND ADMINISTRATION

Chapter 2.30 CITY ATTORNEY'S DEPARTMENT*

2.30.020 City attorney--Powers and duties.

A. As the city's civil legal advisor, the city attorney shall:

1. Attend all meetings of the city council;

2. Advise the city council and all city officers and employees in all matters of law pertaining to their offices or duties or shall select outside counsel to so advise such persons unless a different selection procedure has been adopted by the city council;

3. Have charge and control of all outside counsel engaged to advise the city council and any officer or employee in all matters pertaining to their offices or duties, except as otherwise provided by law;

4. Represent and appear for the city and all city officers and employees and all former city officers or employees in any or all civil actions or proceedings in which the city, or any officer or employee or former officer or employee thereof by reason of an act or omission in the scope of his/her employment is concerned or is a party, or shall select outside counsel to so represent and appear for such persons;

5. Have charge and control of all civil actions and proceedings in which the city or any officer or employee, or former officer or employee, is concerned or is a party by reason of an act or omission in the scope of his/her employment. The city attorney may commence any action or settle any claim or action of a gross amount of $50,000 or less, exclusive of court costs; provided, however, that any such commencement of action or settlement in excess of $25,000 exclusive of court costs, shall be with the approval of the city manager. No action or claim of more than a gross amount of $50,000, exclusive of court costs, shall be commenced or settled without the prior approval of the city council;

6. Approve the form of all bonds given to the city and all specifications, requests for proposals and contracts made by the city;

7. Draft any and all proposed ordinances and resolutions for the city when required by the city council or at the request of the city manager; and

8. Perform such other duties relating to the office as shall be required of him/her by law, ordinance, or the city council.

B. As the city prosecutor, the city attorney shall:

1. Prosecute all misdemeanor and infraction offenses committed within the city arising out of violations of the laws of the state, ordinances of the city and provisions of the Charter of the city which are within the jurisdiction of the municipal court;

2. Handle all appeals arising as a consequence;

3. Draw complaints for such misdemeanors and prosecute all recognizances of bail bond forfeitures arising from or resulting from the commission of such offenses;

4. Perform such other duties relating to such office as shall be required by law, ordinance, or the city council.

5. If there is no qualified or acting city prosecutor or assistant or deputy city prosecutor, an assistant or deputy city attorney shall perform the duties of city prosecutor. (Ord. 6841 § 2, 2000: Ord. 6637 § 1, 1995; Ord. 6608 § 1 (part), 1994)

EXHIBIT 1

ATTACHMENT A

Below is an explanation of the City's damages due to the perchlorate groundwater contamination, which are summarized on the chart attached hereto as Exhibit 1.

I. Factual Background

A. Overview of the City's Water Supply System

The City of Pasadena ("City") is a charter city and public water purveyor. Pasadena Water and Power ("PWP"), a department of the City, operates the public water system. The City's water supply system is comprised primarily of fifteen wells, eighteen booster stations, and thirteen reservoirs connected via an underground pipeline distribution system. (*See* map of the City's production wells and booster stations attached as Exhibit 2 hereto.) Booster stations are electrical-operated facilities that lift water by means of pumps at one or more points in the system. Water produced from the City's wells are distributed directly into the water system and/or stored in reservoirs prior to distribution. Reservoirs serve specific pressure zones that provide water to specified areas of the City and adjacent areas along the City boundaries. A pressure zone is an area that is served water fed from a single or multiple reservoir sources which operate at a relatively constant pressure (*i.e.*, elevation). There are twenty-three pressure zones throughout the City's distribution system.

The City's wells produce approximately 40 percent of the annual water demand of its customers. The remaining approximately 60 percent of the demand is purchased from the Metropolitan Water District ("MWD"). Until fiscal year 2003,[1] it was not necessary for the City to purchase any additional water from MWD due to the impacts of perchlorate. However, starting in fiscal year 2003 (*i.e.*,

---

[1] The City's operations run on a fiscal year calendar from July 1 to June 30 of the following year.

in the year starting July 1, 2002), the City began purchasing more than it traditionally had from MWD in order to make up for groundwater it was unable to pump due to perchlorate impacts.

The City's wells are located in the Raymond Basin ground water aquifer, which is divided into three sub-aquifers: Monk Hill Basin, Pasadena Sub-Area, and the Santa Anita Sub-Area. The City's annual allocated share of water (or water right) from the Raymond Basin is 4,464 acre-feet per year in the Monk Hill Basin, and another 8,343 acre-feet per year in the Pasadena Sub-Area. To increase the amount of groundwater the City can pump in a given year, the City also receives "spreading credits," which then translate into an additional volume of groundwater that the City can pump over and above the 12,807 acre feet per year that it was adjudicated. The City creates credits by collecting surface water flow and then spreading this surface water onto land (recharge basins) and allowing the water to percolate into the groundwater aquifers. Recharge basins used by the City for this purpose include the Arroyo Seco Spreading Grounds, which are immediately down gradient of the Jet Propulsion Laboratory ("JPL").

The City is also regulated by the State of California, Department of Health Services ("DHS"). DHS regulates the provision of drinking water to the public and establishes and enforces water quality standards for the state.

B. Proximity to JPL and Related Water Quality Impacts

The City's wells are down-gradient of JPL. JPL is an operating division within the California Institute of Technology's ("Caltech") organizational structure. JPL is owned by NASA and managed by Caltech under contract with NASA. Caltech began operating JPL as early as 1936 as a research laboratory for the United States Army ("Army"). The research conducted at JPL required the use of various chemicals, including solvents, solid and liquid rocket propellants, and cooling tower chemicals. (*See* Final Remedial Investigation Report for Operable Units 1 and 3: On-Site and Off-Site Groundwater ("RI") at xxiv.) Perchlorate is commonly found in solid rocket and missile propellant fuels, like those studied at JPL. Waste from this research was disposed of in cesspools in the Arroyo Seco, up

gradient of the City's wells, during the 1940s and 1950s at a minimum. (*See id.*) At some point in the 1960s, NASA began disposing its waste in a sanitary sewer system.

In January 1980, the City detected volatile organic compounds ("VOCs") in its drinking water wells in the Monk Hill Basin. In February 1990, the City entered into a settlement agreement with Caltech, who was acting on behalf of NASA. Under the Settlement Agreement, NASA funded the installation of a water treatment plant in the Arroyo Seco to remove VOCs ("VOC Plant") so that the City could resume supplying water from its impacted wells. (*See* Draft Engineering Evaluation/Cost Analysis for JPL Operable Unit 3, dated September 2002 ("EE/CA"), at ES-1.) DHS allows the City to operate the VOC Plant and serve treated water to its customers under a permit.

In October 1992, the United States Protection Agency ("EPA") placed the JPL site on the National Priority List ("NPL") in order to characterize the nature and extent of the contamination at JPL and, ultimately, to remediate the site. (*See* RI at xxxiv.)

C. Detections of Perchlorate in the City's Water System

In early January 2002, EPA released a risk assessment report in which EPA concluded that the potential human health risks of perchlorate exposures include effects on the developing nervous system and thyroid tumors.

Following publication of EPA's risk assessment report, on or about January 18, 2002, DHS reduced the state's action level for perchlorate in drinking water from 18 ppb to 4 ppb. As a result of this change, the City was forced to shutdown eight wells that were impacted with perchlorate above the new action level; including the following wells: Well 32, Ventura, Windsor, Bangham, Copelin, Garfield,

Sunset, and Villa. Perchlorate has also been detected in the City's Windosr and Sunset Reservoirs.[2] As such, blending with other water was not a feasible solution and would have forced the City's water supply to exceed the action level. The City had no choice but to stop using the eight wells.

As a result, the City has incurred significant costs due to the perchlorate contamination, including consulting fees, monitoring and evaluation costs, and water transfer and replacement costs. The bulk of the costs relate to (1) the City's efforts to shift production from its impacted wells to its remaining wells, resulting in increased energy consumption (due to additional pumping and boosting), and (2) lost MWD discounts attributable to perchlorate impacts on the City's overall production capacity. As of June 30, 2003, these costs amount to $2,045,992.13.

II. Explanation of Costs Attributable to Perchlorate Contamination

A. Increased Well Pumping Costs

Increased pumping costs are directly attributable to the shut down of the City's wells impacted by perchlorate. Pumping costs are calculated based on the cost of electricity necessary to pump the water from the well: the deeper the water table, the higher the utility costs to pump water from the wells. As perchlorate impacts took wells in the Monk Hill Basin out of service, the City had to make up this production by pumping the lost volumes from deeper wells in the Pasadena Sub-Area. The cost of using the Pasadena Sub-Area wells was greater because pumping water from the Pasadena Sub-Area aquifer is deeper than the Monk Hill aquifer.

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[2] The City has tested its water supply and submitted monthly Perchlorate Compliance Reports ("PCR") to DHS per its request. Copies of these reports and a summary of the sampling schedule are attached hereto as Exhibit 3. Monitoring records are available upon request.

In order to calculate this differential pumping cost, actual historical data on the unit electrical costs to pump water from the remaining Monk Hill Wells, Windsor and Well 52,[3] was compared to the unit cost of pumping the same amount of water from wells in the Pasadena Sub-Area. (*See* Summaries of Net Well Pumping for FY1998 to FY2003, attached hereto as Exhibit 4.) The actual cost data from the remaining Monk Hill Wells was used to calculate the equivalent unit cost of operating the Arroyo Well, which resulted in a number representing what the costs would have been had there not been perchlorate impacts. Then the cost of pumping water from wells in the Pasadena Sub-Area was summed, using actual data. The difference between the cost to pump water from the Arroyo Well had there not been perchlorate impacts, and the actual cost to pump an equal volume from the Pasadena Sub-Area is the City's resulting damages related to pumping. A more detailed description of the City's methodology in calculating its increased pumping costs is attached hereto as Exhibit 5.

B. Increased Boosting Costs

As the wells in the Monk Hill Basin were shut down, including those time periods when only the Arroyo Well was shut down, it became necessary to boost more water from the lower Sunset Pressure Zone fed from elevation 945 feet to the Calaveras Pressure Zone at 1209 feet. (*See* a schematic diagram illustrating the increased boosting costs due to perchlorate required water transfer is attached hereto as Exhibit 6.) This meant boosting water over 264 feet, rather than 55 feet directly from the Monk Hill Basin. The result was large increases in electrical costs to elevate the water through the distribution system. In order to calculate this differential cost, the City compared historical actual data on the utility costs to boost water directly through the Atlanta Booster to the increased costs of boosting the same amount of water from three booster stations consisting of seven boosters in the Pasadena Sub-Area. (*See*

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[3] The Ventura Well, also in the Monk Hill Basin, was not used in deriving the projected unit cost of the Arroyo Well because it utilizes natural gas and thus is not comparable to for the purpose of calculating electricity costs.

Summaries of Net Boosting Costs for FY1998 to FY2003, Exhibit 4.) A more detailed description of the City's methodology in calculating its increased boosting costs is attached hereto as Exhibit 7. The City will provide copies of utility bill data upon request.

C. Loss in MWD Seasonal Shift Storage Benefits

As mentioned briefly above, the City derived a direct economic benefit from the MWD seasonal shift storage program. Under the program, an agency can qualify for Seasonal Shift Storage incentives by producing a higher percentage of its demands from local sources in the summer months (May 1 to September 30) than it did in the winter (October 1 to April 30). The purveyor then could augment its production with MWD deliveries in the winter. The additional water purchased from MWD during the winter because of this change in operation may be purchased at the Seasonal Storage rate.

From MWD's fiscal year 1994 to December 30, 2002, MWD provided a discounted rate ranging from $275 to $345 per acre foot. During the same period, the non-discounted rate was $431 per acre foot. A summary of MWD's relevant water rates is attached hereto as Exhibit 8.

Since the fiscal year beginning in 1994, the City has taken full advantage of this program, and has historically saved a significant amount in MWD water costs by qualifying for the reduced unit rate. However, as the perchlorate impacts reduced the City's overall pumping capacity, the City's operational flexibility was even more dramatically harmed. The City was not able to choose when to operate its wells, as it had to operate the wells year-round in order to pump its entire water right. With a full well field, the City could allow most of the wells to be idle in the winter and then pump them all during the summer to maximize the seasonal shift discount. However, when initially one and later eight wells went out of service, the flexibility to pump all of the water rights in the summer was eliminated.

As a result of decreased pumping capacity, the City was not capable of extracting all of its annual groundwater rights only during the summer months. The City had to continue pumping during

the winter months to maximize its local water rights and purchase more MWD water in the summer months because of its decreased pumping capacity. The combination of pumping less during the summer and more during the winter is counteractive to MWD's seasonal program, and significantly reduces the benefits available to the City from MWD's seasonal shift program. A schematic diagram illustrating the loss of seasonal shift is attached hereto as Exhibit 9. The net result is that the City's seasonal shift benefit has decreased each year since 1997. MWD's certifications setting forth the City's calculated volume of seasonal shift, *i.e.*, the volume of water that the City receives at discounted rates for shifting its water demand from MWD, for FY1998 to FY2003[4] are attached hereto as Exhibit 10.

D. Increased Demand for MWD Imported Water

Finally, commencing in fiscal year 2002, the City was forced to purchase 200 additional acre-feet of water during fiscal year 2002 and 300 acre-feet during fiscal year 2003 from MWD as a result of its loss of pumping capacity due to perchlorate impacts to the City's wells. The City also incurred additional boosting costs to deliver the additional 500 acre feet of MWD water from the Sunset Pressure Zone to the Calaveras Pressure Zone for distribution.

In order to mitigate these damages and to avoid losing its allocated water rights, the City leased to Lincoln Avenue Water Company ("LAWC") 500 acre feet of ground water from its Raymond Basin allocation that it was unable to pump from its own wells. LAWC paid the City $250 per acre-foot for the right to pump this allocation from the Raymond Basin. Thus, the City's damages were offset by $250 per acre-foot. However, because MWD water cost over $400 per acre-foot, the increased demand for MWD imported water cost the City $42,316 and $56,574 in fiscal years 2002 and 2003 respectively. A summary of these calculated damages is attached hereto as Exhibit 4 (FY2003 calculations regarding

[4] The received no seasonal shift credits for fiscal year 2003 because of the perchlorate impacts on the City's system.

Groundwater Lease Agreements). The City anticipates increased need for costly imported MWD water as perchlorate impacts to the City's wells persist.

E. Anticipate Increase in Damages Due to MWD Rate Changes

The City anticipates that its damages will greatly increase due to MWD's new rate structure, which became effective January 1, 2003. (*See* copies of MWD's Historic Water Rate Table and new Water Rate Table, Exhibit 8.)[5] Historically, MWD's rates were structured to allow member agencies to pay a flat per acre-foot rate for the amount of water actually purchased. However, under the new rate structure, MWD "unbundled" the price components into numerous, more complex categories (*e.g.*, Tier 1 and Tier 2 supply rates, water stewardship rate, treatment surcharge rate, power rate, system access rate, capacity reservation rate, and readiness-to-serve charge).

With the closure of so many of its wells and uncertainty as to the viability of the remaining wells, the City has no operational flexibility left. It is running its remaining wells, as it must, non-stop and at full remaining production capacity. Without operational flexibility and with the increasing impacts of perchlorate on the City's well, it is virtually impossible for the City to project its ten year demand and avoid purchasing more expensive MWD water. If any of the City's wells experience problems that require them to be shut down for repairs, the City will be forced to purchase more costly MWD water than it currently anticipates, rather than shifting to other wells, as it would have prior to the advent of perchlorate impacts limiting its operational flexibility.

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[5] Copies of MWD's historic and new water rate schedules and a Rate Structure Detailed Report are publicly available on MWD's website at http://www.mwd.dst.ca.us/mwdh2o/pages/finance/finance01.html.

F. Inability to Increase Spreading Credits

As referenced above, to the extent that the City is unable to use or increase its spreading credits in the Monk Hill Basin and Pasadena Sub-Area due to perchlorate contamination, the resulting cost is considered a part of the City's damages.

Currently, the City receives "spreading credits" from the Raymond Basin Watermaster that translate into an additional volume of groundwater that the City can pump over and above the 12,807 acre feet per year that it was adjudicated. (*See* Raymond Basin Management Board, Watermaster Service in the Raymond Basin July 1, 2002 – June 30, 2003, dated September 2003, at 19, Table 8, a copy of which is attached hereto as Exhibit 11.) As mentioned above, the City is granted additional groundwater rights (*i.e.*, spreading credits) by diverting its surface water flow and then spreading this surface water onto the Arroyo Seco Spreading Grounds and other recharge basins and allowing the water to percolate into the groundwater aquifers.

To date, the City has continued to use its allotted spreading credits each year and thus has not yet incurred damages from this cause. However, perchlorate impacts on the Arroyo Seco Spreading Grounds, which are immediately down gradient of JPL, have already prevented the City and other water purveyors in the area from increasing their spreading credits. The City had hoped to increase the number of spreading basins and maximize the benefit of such credits. However, because of concerns by NASA and others over the impact of increased recharge on the perchlorate plume in the Raymond Basin,[6] plans for additional spreading basins are now on hold. Because increased spreading credits would have provided the City with additional water rights, the monetary value of this lost opportunity is significant.

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[6] *See, e.g.*, NASA's Comments on the Draft Master Environmental Impact Report for the Proposed Arroyo Seco Master Plan Project, dated August 28, 2002, a copy of which is attached hereto as Exhibit 12.

III. Summary

In sum, the Army's and NASA's release of perchlorate into the City's water supply have forced the City to incur damages in the amount of $2,045,992.13. The City's cost will continue until the contamination is remediated.

City of Pasadena

100 NORTH GARFIELD AVENUE
P.O. BOX 7115, PASADENA, CA 91109-7215

OFFICE OF THE CITY ATTORNEY
ROOM 228, CITY HALL
(626) 744-4141
FAX (626) 744-4190

January 13, 2004

Via Federal Express

OSJA Claims
ATTN: Torts, Bldg. 275
1336 Plummer St.
Monterey, CA 93944-3327

Re: Federal Tort Claims Act
City of Pasadena's Claim

Dear Sir or Madam:

The City of Pasadena ("City") hereby submits the enclosed Claim in the amount of $2,045,992.13. This Claim consists of this letter, the attached executed Standard Form 95 ("SF 95"), a more detailed description of the City's Claim and resulting costs (Attachment A to the SF 95), and supporting exhibits. As the City Attorney, I am duly authorized by the City to sign this Claim, as set forth in the attached statement of authorization.

This Claim is submitted under the Federal Tort Claims Act ("FTCA"), 28 U.S.C. §§2671-2680, 28 C.F.R. §§14.1-14.11, and Department of Army Regulation 27-20, Chapter 4. The City's Claim is for injury, damages, and loss of property caused by the negligence, wrongful acts, and omissions of the United States, acting through the Department of the Army ("Army"), in its contamination of groundwater in and around the Jet Propulsion Laboratory ("JPL") with perchlorate and other emerging chemicals, from which the City obtains a water supply. Damages beyond those included in this Claim are not foreseeable based on information and facts currently known to the City. The City reserves its right to amend this Claim upon the discovery of evidence or additional facts relating to the amount of damages.

The City is a public water purveyor, regulated by the California Public Utility Division and the California Department of Health Services. The City's water supply system is comprised of sixteen wells, eighteen booster stations, and two reservoirs connected via an underground pipeline distribution system. Water produced from the wells is stored in one of two reservoirs prior to distribution.

The City's public drinking water wells are down gradient of JPL, which is operated by the California Institute of Technology ("Caltech"). Caltech began operating JPL as early as 1936 as

a research laboratory for the Army, focusing on jet propulsion and liquid rocket propellants. The Army contracted with Caltech to study jet propulsion from 1940 through 1958. The Army provided the funding for the first permanent structures on the land that became JPL. Beginning in 1945, the Army purchased the majority of the parcels that comprise JPL. In 1959, NASA took over ownership of JPL from the Army Air Corp, but Caltech remained under contract with the Army until 1961 when NASA entered its own contract. During the Army's tenure, hazardous wastes were disposed of in cesspools and directly in the channel of the Arroyo Seco, overlying the groundwater basin from which the City derives the majority of its public drinking water supply. Contaminants, including perchlorate, have been and continue to be released into the groundwater, polluting the City's drinking water supply.

Perchlorate is an inorganic chemical used in solid rocket and missile propellants, like those used in studies at JPL. Perchlorate is highly mobile in water, and can persist in groundwater for decades. Perchlorate poses human health risks to the developing nervous system and in the form of thyroid tumors.

On January 18, 2002, EPA released a draft revised risk assessment for perchlorate, concluding that the health risks associated with perchlorate were greater than previously determined. In response, also on January 18, 2002, DHS lowered its action level for perchlorate from 18 ppb to 4 ppb.

Under the new action level, eight of the City's thirteen active drinking supply wells became inoperable—three in the Monk Hill Subarea, and five in the Pasadena Subarea. As a result, the City has incurred substantial costs, set forth in the attached SF 95, due to perchlorate contamination in its wells. Based on the foregoing contamination, the City's claims against the Army include, but are not limited to negligence, nuisance, and trespass.

As a result of the shutdown of wells, the City has incurred and continues to incur significant costs due to the perchlorate contamination from JPL, including consulting fees, monitoring and evaluation costs, and water transfer and replacement costs. As of June 30, 2003, these costs amount to $2,045,992.13.

The City has been pursuing negotiations with NASA to work toward a settlement of its claims. The City prefers to resolve this matter out of court. To achieve a comprehensive settlement of the claims arising out of contamination from JPL, the Army's participation in a settlement is necessary. To that end, I look forward to hearing from you shortly.

Sincerely yours,

Michele Beal Bagneris
City Attorney
City of Pasadena

cc: Scott D. Rasmussen, Esq., Assistant City Attorney
James J. Dragna, Esq., Bingham McCutchen, LLP
Enclosures

CLAIM FOR DAMAGE, INJURY, OR DEATH	INSTRUCTIONS: Please read carefully the instructions on the reverse side and supply information requested on both sides of the form. Use additional sheet(s) if necessary. See reverse side for additional instructions.	FORM APPROVED OMB NO. 1105-0008

1. Submit To Appropriate Federal Agency:	2. Name, Address of claimant and claimant's personal representative, if any. (See instructions on reverse.) (Number, street, city, State and Zip Code)
OSJA Claims ATTN: Torts-B, Bldg 275 1336 Plummer St. Monterey, CA 93944-3327	The City of Pasadena 100 North Garfield Avenue, Room 237 Pasadena, CA 91109 (see attachment for representatives information)

3. TYPE OF EMPLOYMENT	4. DATE OF BIRTH	5. MARITAL STATUS	6. DATE AND DAY OF ACCIDENT	7. TIME (A.M. or P.M.)
☐ MILITARY ☒ CIVILIAN	N/A	N/A	See Attachment A and claim cover letter	N/A

8. Basis of Claim (State in detail the known facts and circumstances attending the damage, injury, or death, identifying persons and property involved, the place of occurrence and the cause thereof) (Use additional pages if necessary.)

The California Institute of Technology ("Caltech") began operating the Jet Propulsion Laboratory ("JPL") in Pasadena, California as early as 1936 as a research laboratory for the United States Army, focusing on jet propulsion and rocket propellants. Historic waste handling and disposal by the U.S. Army of chemicals in seepage pits at JPL has contaminated the City of Pasadena's ("City") subsurface drinking water source with perchlorate and related chemicals. Perchlorate contamination in the City's drinking water supply exceeds the regulatory action level. The contamination has forced the City to shut down numerous production wells and currently threatens closure of additional wells. To date, the City has incurred significant costs related to well closure, reduced production capacity, replacement water costs, and staff costs, and will incur additional costs until a remediation plan is implemented. As of June 2003 these costs are $2,045,992.13. (See Attachment A and claim cover letter).

9. PROPERTY DAMAGE

NAME AND ADDRESS OF OWNER, IF OTHER THAN CLAIMANT (Number, street, city, State, and Zip Code)

BRIEFLY DESCRIBE THE PROPERTY, NATURE AND EXTENT OF DAMAGE AND THE LOCATION WHERE PROPERTY MAY BE INSPECTED. (See instructions on reverse side.)

Contamination of City of Pasadena municipal production wells and resevoirs, including Arroyo, Well 52, Ventura, Windsor, Bangham, Copelin, Garfield, Sunset, and Villa Wells, and Windsor and Sunset resevoirs. (See Attachment A).

10. PERSONAL INJURY/WRONGFUL DEATH

STATE NATURE AND EXTENT OF EACH INJURY OR CAUSE OF DEATH, WHICH FORMS THE BASIS OF THE CLAIM. IF OTHER THAN CLAIMANT, STATE NAME OF INJURED PERSON OR DECEDENT.

11. WITNESSES

NAME	ADDRESS (Number, street, city, State, and Zip Code)
See Attachment A.	

12. (See instructions on reverse) AMOUNT OF CLAIM (in dollars)

12a. PROPERTY DAMAGE	12b. PERSONAL INJURY	12c. WRONGFUL DEATH	12d. TOTAL (Failure to specify may cause forfeiture of your rights.)
2,045,992.13			2,045,992.13

I CERTIFY THAT THE AMOUNT OF CLAIM COVERS ONLY DAMAGES AND INJURIES CAUSED BY THE ACCIDENT ABOVE AND AGREE TO ACCEPT SAID AMOUNT IN FULL SATISFACTION AND FINAL SETTLEMENT OF THIS CLAIM.

13a. SIGNATURE OF CLAIMANT (See instructions on reverse side.)	13b. Phone number of signatory	14. DATE OF CLAIM
Michele Beal Bagneris, City Attorney	(626) 744-4141	1/13/04

CIVIL PENALTY FOR PRESENTING FRAUDULENT CLAIM	CRIMINAL PENALTY FOR PRESENTING FRAUDULENT CLAIM OR MAKING FALSE STATEMENTS
The claimant shall forfeit and pay to the United States the sum of $2,000 plus double the amount of damages sustained by the United States. (See 31 U.S.C. 3729.)	Fine of not more than $10,000 or imprisonment for not more than 5 years or both. (See 18 U.S.C. 287, 1001.)

95-109
Previous editions not usable.

NSN 7540-00-634-4046

STANDARD FORM 95 (Rev. 7-85) (EG)
PRESCRIBED BY DEPT. OF JUSTICE
28 CFR 14.2

PRIVACY ACT NOTICE

This Notice is provided in accordance with the Privacy Act, 5 U.S.C. 552a(e)(3), and concerns the information requested in the letter to which this Notice is attached.

A. *Authority:* The requested information is solicited pursuant to one or more of the following: 5 U.S.C. 301, 28 U.S.C. 501 et seq., 28 U.S.C. 2671 et seq., 28 C.F.R.

B. *Principal Purpose:* The information requested is to be used in evaluating claims.

C. *Routine Use:* See the Notices of Systems of Records for the agency to whom you are submitting this form for this information.

D. *Effect of Failure to Respond:* Disclosure is voluntary. However, failure to supply the requested information or to execute the form may render your claim

INSTRUCTIONS

Complete all items - insert the word NONE where applicable

A CLAIM SHALL BE DEEMED TO HAVE BEEN PRESENTED WHEN A FEDERAL AGENCY RECEIVES FROM A CLAIMANT, HIS DULY AUTHORIZED AGENT, OR LEGAL REPRESENTATIVE AN EXECUTED STANDARD FORM 95 OR OTHER WRITTEN NOTIFICATION OF AN INCIDENT, ACCOMPANIED BY A CLAIM FOR MONEY DAMAGES IN A SUM CERTAIN FOR INJURY TO OR LOSS OF PROPERTY, PERSONAL INJURY, OR DEATH ALLEGED TO HAVE OCCURRED BY REASON OF THE INCIDENT, THE CLAIM MUST BE PRESENTED TO THE APPROPRIATE FEDERAL AGENCY WITHIN TWO YEARS AFTER THE CLAIM ACCRUES.

Any instructions or information necessary in the preparation of your claim will be furnished, upon request, by the office indicated in item #1 on the reverse side. Complete regulations pertaining to claims asserted under the Federal Tort Claims Act can be found in Title 28, Code of Federal Regulations, Part 14. Many agencies have published supplemental regulations also. If more than one agency is involved, please state each agency.

The claim may be filed by a duly authorized agent or other legal representative, provided evidence satisfactory to the Government is submitted with said claim establishing express authority to act for the claimant. A claim presented by an agent or legal representative must be presented in the name of the claimant. If the claim is signed by the agent or legal representative, it must show the title or legal capacity of the person signing and be accompanied by evidence of his/her authority to present a claim on behalf of the claimant as agent, executor, administrator, parent, guardian or other representative.

If claimant intends to file claim for both personal injury and property damage, claim for both must be shown in item 12 of this form.

The amount claimed should be substantiated by competent evidence as follows:

(a) In support of the claim for personal injury or death, the claimant should submit a written report by the attending physician, showing the nature and extent of injury, the nature and extent of treatment, the degree of permanent disability, if any, the prognosis, and the period of hospitalization, or incapacitation, attaching itemized bills for medical, hospital, or burial expenses actually incurred.

(b) In support of claims for damage to property which has been or can be economically repaired, the claimant should submit at least two itemized signed statements or estimates by reliable, disinterested concerns, or, if payment has been made, the itemized signed receipts evidencing payment.

(c) In support of claims for damage to property which is not economically repairable, or if the property is lost or destroyed, the claimant should submit statements as to the original cost of the property, the date of purchase, and the value of the property, both before and after the accident. Such statements should be by disinterested competent persons, preferably reputable dealers or officials familiar with the type of property damaged, or by two or more competitive bidders, and should be certified as being just and correct.

(d) Failure to completely execute this form or to supply the requested material within two years from the date the allegations accrued may render your claim "invalid". A claim is deemed presented when it is received by the appropriate agency, not when it is mailed.

Failure to specify a sum certain will result in invalid presentation of your claim and may result in forfeiture of your rights.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden,

to Director, Torts Branch
Civil Division
U.S. Department of Justice
Washington, DC 20530

and to the
Office of Management and Budget
Paperwork Reduction Project (1105-0008)
Washington, DC 20503

INSURANCE COVERAGE

In order that subrogation claims may be adjudicated, it is essential that the claimant provide the following information regarding the insurance coverage of his vehicle or property.

15. Do you carry accident insurance? ☐ Yes, If yes, give name and address of insurance company *(Number, street, city, State, and Zip Code)* and policy number. ☐ No

No subrogation of claims are involved in this matter.

16. Have you filed claim on your insurance carrier in this instance, and if so, is it full coverage or deductible?

17. If deductible, state amount

18. If claim has been filed with your carrier, what action has your insurer taken or proposes to take with reference to your claim? *(It is necessary that you ascertain these facts)*

19. Do you carry public liability and property damage insurance? ☐ Yes, If yes, give name and address of insurance company *(Number, street, city, State, and Zip Code)* ☐ No

FEDERAL TORT CLAIMS ACT

AUTHORIZED REPRESENTATIVE

I, Michele Beal Bagneris, am the City Attorney of the City of Pasadena and have the power and authority to file, adjust, and settle claims for and on behalf of the City of Pasadena as its duly authorized agent. Evidence supporting my authority to file this claim is set forth in the declaration of Scott D. Rasmussen, attached as Exhibit A. In such capacity, I also have access to the books and records of the City of Pasadena.

Date: January 13, 2004

Michele Beal Bagneris
City Attorney
City of Pasadena

EXHIBIT A

DECLARATION OF SCOTT D. RASMUSSEN
ASSISTANT CITY ATTORNEY

I, Scott D. Rasmussen, hereby declare:

1. At all times pertinent hereto, I was serving as the duly appointed Assistant City Attorney of the City of Pasadena ("City") assigned to provide legal services to the City in connection with perchlorate contamination of the City's groundwater supplies.

2. Pasadena Municipal Code section 2.30.020(5), a copy of which is attached hereto as Exhibit 1 for your reference, provides that the City Attorney may commence any action on behalf of the City for more than a gross amount of $50,000, exclusive of court costs, with the prior approval of the City Council.

3. On August 11, 2003, the Pasadena City Council convened a closed session pursuant to California Government Code section 54956.9 to confer with legal counsel regarding potential litigation.

4. Acting in my capacity of Assistant City Attorney, I was present at the August 11, 2003 closed session.

5. The City Council by motion approved the filing of a claim under the Federal Torts Claims Act against federal agencies in connection with perchlorate contamination of the City's groundwater supplies, and authorized the City Attorney to submit this claim.

6. All legally necessary authorizations and approvals under the laws of the City of Pasadena have been obtained for the filing of this claim.

I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct.

January 13, 2004
Date

Scott D. Rasmussen
Scott D. Rasmussen
Assistant City Attorney
City of Pasadena

Title 2 ORGANIZATION AND ADMINISTRATION

Chapter 2.30 CITY ATTORNEY'S DEPARTMENT*

2.30.020 City attorney--Powers and duties.

A. As the city's civil legal advisor, the city attorney shall:

1. Attend all meetings of the city council;

2. Advise the city council and all city officers and employees in all matters of law pertaining to their offices or duties or shall select outside counsel to so advise such persons unless a different selection procedure has been adopted by the city council;

3. Have charge and control of all outside counsel engaged to advise the city council and any officer or employee in all matters pertaining to their offices or duties, except as otherwise provided by law;

4. Represent and appear for the city and all city officers and employees and all former city officers or employees in any or all civil actions or proceedings in which the city, or any officer or employee or former officer or employee thereof by reason of an act or omission in the scope of his/her employment is concerned or is a party, or shall select outside counsel to so represent and appear for such persons;

5. Have charge and control of all civil actions and proceedings in which the city or any officer or employee, or former officer or employee, is concerned or is a party by reason of an act or omission in the scope of his/her employment. The city attorney may commence any action or settle any claim or action of a gross amount of $50,000 or less, exclusive of court costs; provided, however, that any such commencement of action or settlement in excess of $25,000 exclusive of court costs, shall be with the approval of the city manager. No action or claim of more than a gross amount of $50,000, exclusive of court costs, shall be commenced or settled without the prior approval of the city council;

6. Approve the form of all bonds given to the city and all specifications, requests for proposals and contracts made by the city;

7. Draft any and all proposed ordinances and resolutions for the city when required by the city council or at the request of the city manager; and

8. Perform such other duties relating to the office as shall be required of him/her by law, ordinance, or the city council.

B. As the city prosecutor, the city attorney shall:

1. Prosecute all misdemeanor and infraction offenses committed within the city arising out of violations of the laws of the state, ordinances of the city and provisions of the Charter of the city which are within the jurisdiction of the municipal court;

2. Handle all appeals arising as a consequence;

3. Draw complaints for such misdemeanors and prosecute all recognizances of bail bond forfeitures arising from or resulting from the commission of such offenses;

4. Perform such other duties relating to such office as shall be required by law, ordinance, or the city council.

5. If there is no qualified or acting city prosecutor or assistant or deputy city prosecutor, an assistant or deputy city attorney shall perform the duties of city prosecutor. (Ord. 6841 § 2, 2000: Ord. 6637 § 1, 1995; Ord. 6608 § 1 (part), 1994)

EXHIBIT 1