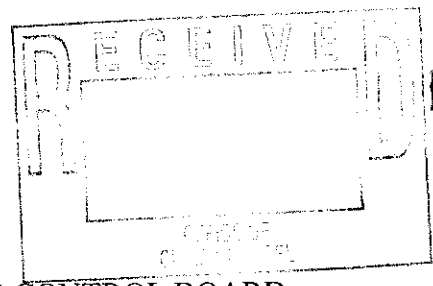


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*Hand
delivered
1/28/88*

BEFORE THE STATE WATER RESOURCES CONTROL BOARD

STATE OF CALIFORNIA

In Re: Petition to Revise Declaration of)
Fully Appropriated Stream Systems)
Designation of American River,)
Sacramento County)

AEROJET-GENERAL
CORPORATION'S
CLOSING STATEMENT

TABLE OF CONTENTS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Page

I. INTRODUCTION..... 1

II. ARGUMENT 2

A. Aerojet’s Discharge Of Treated Groundwater Began Long After The Water Right Decisions Providing The Basis For The American River FAS Declaration, So There Is A Change In Circumstances Meriting Revision Of The Declaration..... 2

1. The River was declared fully appropriated in 1989, and Aerojet began discharges in 1998 2

2. Aerojet now discharges approximately 2,000 gallons per minute of treated groundwater into the Lower American River system, and a pending NPDES permit revision and future expansion of pump-and-treat facilities will increase these discharges 3

B. Aerojet’s Discharge Of Treated Groundwater Adds New Water To The American River That Was Not Considered When The River Was Declared Fully Appropriated 4

1. There is no dispute that Aerojet is pumping percolating groundwater, and is not pumping from a subterranean stream flowing in a known and definite channel that is part of the Lower American River 4

2. It is clear that the FAS Declaration was not based on any water right decision describing past, current or future groundwater pumping as a basis for finding no unappropriated water available in the Lower American River..... 6

3. Aerojet’s groundwater pumping does not reduce American River instream flows by inducing greater River recharge to groundwater 6

a. Most of the groundwater Aerojet pumps originates from local precipitation percolating through highly permeable dredge tailings and as groundwater flowing down-gradient from the Sierra Nevada mountain front and foothills 7

b. The zone between the River and uppermost groundwater elevation is not fully saturated 8

c. The Lower American River does not function as a hydraulic barrier to contaminant migration or to hydraulic responses on one side of the River from pumping groundwater on the opposite side of the River..... 9

(1) A contaminant plume has migrated beneath, and transverse to, the American River..... 10

TABLE OF CONTENTS
(continued)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Page

(2) Extracting groundwater on the south side of the American River draws down groundwater elevations on the north side of the river 11

4. Conclusion: There is more than substantial evidence that Aerojet's discharges of treated groundwater add new water to the Lower American River 12

C. The Fully Appropriated Stream Declaration Should Be Revised Without Any Limitation On Who May Apply For The Right To Use The New Water 13

 a. SCWC cites no authority that would support the permanent earmarking of Aerojet's discharges for use by any party other than Aerojet..... 13

 b. The Board should reject Sacramento County's request to permanently characterize Aerojet's surface water discharges as percolating groundwater subject to the County's exclusive right of use 14

III. CONCLUSION 16

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

I.
INTRODUCTION

Aerojet-General Corporation ("Aerojet") submits this Closing Statement in support of a revision to the Fully Appropriated Stream System ("FAS") Declaration to allow applications to appropriate water from the Lower American River, based on Aerojet's discharges of treated groundwater into an American River tributary called Buffalo Creek.

The evidence presented by Aerojet was distilled from more than 1,000 on-site and off-site borings, monitor wells, extraction wells, hydraulic pump tests and groundwater elevation measurements collected in the vicinity of Aerojet's property, Buffalo Creek and the Lower American River above Sunrise Avenue. *See* AGC-1 at 6-7. Based on these data, and on his ten years of hydrogeologic investigations and experience related to the Aerojet site, Thomas M. Johnson, Sr. Vice President, Chief Technical Officer, and Principal Hydrogeologist, LFR Levine-Fricke, testified that Aerojet's pumping and discharge of water adds to the flow in the lower American River. 6/13 Trans. at 173-174. His testimony and evidence, and the testimony and evidence of other parties, admitted in the hearings held May 31, and June 13, 2002, clearly and convincingly demonstrates that changed circumstances have resulted in more water becoming available in the lower American River than when the State Water Resources Control Board ("SWRCB" or "State Board") declared it to be a fully appropriated stream. The FAS Declaration should be revised to reflect these changed circumstances. 23 Cal. Code Regs. § 871(b).

The first and second key issues¹ are addressed by indisputable evidence demonstrating that there has been a material change in circumstances since the water right decisions giving rise to the FAS Declaration. Aerojet's discharges began decades after the State Board's most recent water right decision providing the basis for declaring the Lower American River to be fully appropriated. Therefore, it cannot be disputed that the discharges were not

¹ / The first key issue identified by the Norix hearing notice was: "Has adequate information been provided to demonstrate that there is a change in circumstances since the American River system was included in the FAS Declaration?" The second key issue was: "How much, if any, of the water discharged by groundwater treatment operations is water that was not considered at the time the American River system was included in the FAS Declaration?"

1 D-1108 and D-1211. The most recent of these decisions, D-1211, was issued in 1965, and its
2 finding of no unappropriated water available is based upon the same findings made in prior
3 decisions, the earliest of which is the 1958 decision, D-893.

4 Undisputed evidence establishes that Aerojet's discharges of treated groundwater
5 began in 1998. Aerojet-General Corporation Exhibit 1 ("AGC-1")⁵ at 6 (first sentence of last full
6 paragraph); Southern California Water Company ("SCWC" or "Southern California") Exhibit 18
7 at 1 (last sentence of first full paragraph). That was more than 30 years after the most recent
8 decision providing the basis for declaring the Lower American River to be fully appropriated and
9 40 years after the earliest decision finding no unappropriated water in the River. Given these
10 indisputable facts, there can be no question that Aerojet's discharges to the Lower American
11 River are a material change in circumstances supporting a revision to the FAS Declaration.

- 12 2. Aerojet now discharges approximately 2,000 gallons per minute of treated
13 groundwater into the Lower American River system, and a pending NPDES permit
14 revision and future expansion of pump-and-treat facilities will increase these
15 discharges

16 The groundwater pumping at issue in this proceeding is focused in three areas,
17 based on groundwater extraction and treatment systems being planned and carried out pursuant to
18 order of the United States Environmental Protection Agency ("U.S. EPA") and action by the
19 California Department of Toxic Substances Control ("DTSC") and the Central Valley Regional
20 Water Quality Control Board ("CVRWQCB" or "Regional Board").

21 The American River Groundwater Extraction and Treatment ("ARGET") system is
22 located in the east portion of the area involved in groundwater investigation, characterization and
23 remediation activities in the vicinity of the Aerojet property. The ARGET system operates west
24 of Nimbus Dam on the north and, primarily, the south side of the Lower American River. The
25 current National Pollutant Discharge Elimination System ("NPDES") permit for the ARGET
26 system authorizes the discharge of up to 3,450 gallons per minute ("gpm") into Buffalo Creek.

27 ⁵ Unless otherwise indicated, all further references to Aerojet exhibits employ the acronym
28 "AGC", followed by the exhibit identification number assigned in Aerojet's Exhibit Identification
Index, filed May 10, 2002. Similarly, all further references to exhibits of other parties employ an
acronym or other short-form reference to the party's name, followed by the exhibit identification
number assigned in that party's Exhibit Identification Index.

1 Currently, the ARGET system discharges an average of 2,047 gpm, which equates to approxi-
2 mately 3,300 acre feet of water per year. AGC-1 at 6, 17. The recent addition of two new wells
3 to the ARGET system is projected to raise the average discharge rate to 2,500 gpm.

4 The GET E/F system is located in the central portion of the overall study area in
5 the vicinity of the Aerojet property. AGC-1 at 20. The GET E/F system currently discharges an
6 average of 3,360 gpm to ground on the Aerojet site. AGC-1 at 20. The pending expansion of this
7 system is projected to raise this rate to approximately 6,000 gpm. *Id.* An amendment to the
8 ARGET NPDES permit now pending before the CVRWQCB would increase Aerojet's permitted
9 discharge rate to include the additional 6,000 gpm discharge from the GET E/F expansion. AGC-
10 1 at 20-21.

11 The Western Groundwater Operable Unit ("WGOU") area is located west of GET
12 E/F. AGC-1 at 25. The groundwater extraction and treatment facilities now planned for the
13 WGOU area are projected to discharge an average of 4,150 gpm. AGC-1 at 25, 28.

14 **B. Aerojet's Discharge Of Treated Groundwater Adds New Water To The American**
15 **River That Was Not Considered When The River Was Declared Fully Appropriated**

- 16 1. There is no dispute that Aerojet is pumping percolating groundwater, and is not
17 pumping from a subterranean stream flowing in a known and definite channel that
18 is part of the Lower American River

19 It is undisputed that the geological formation from which Aerojet pumps the water
20 at issue in this proceeding is not a subterranean stream flowing in a known and definite channel.
21 *See* AGC-1 at 11 (first full paragraph under "Aquifer Continuity" heading). Although the
22 California Department of Fish and Game ("DFG") ambiguously asserts that Aerojet is pumping
23 groundwater from "a discrete, isolated and finite feature," DFG-32 at 5-6, no party provided any
24 evidence of geological features forming the relatively impermeable bed and banks required for
25 there to be a subterranean stream within the meaning of Water Code section 1200. On cross-
26 examination, DFG expert witness Stephen D. Reynolds admitted that his geological description of
27 formations underlying the region are of historical, rather than hydrological, significance. *See*
28 6/13 Trans. at 223-229 (admitting no subterranean bed or banks).

Clear, uncontroverted evidence from the extensive geological investigations of

1 Aerojet's remediation program demonstrates that Aerojet's groundwater is pumped from layers of
2 permeable sand and gravel alternating with layers of less permeable silts and clays, which were
3 deposited over thousands of years by the ancestral meanderings of alluvial streams eroding the
4 Sierra Nevada Mountain Range. AGC-1 at 4-5. These deposits are laterally continuous
5 throughout Sacramento County, forming a "a wedge of alluvial sediments" that is approximately
6 100 feet thick at the far eastern edge of the Aerojet site and more than 2,000 feet to the west of
7 the site. 6/13 Trans. at 157, lines 6-16; *see also* 5/31 Trans. at 45, lines 10-22. These sediments
8 form laterally continuous, distinct aquifers of highly permeable sand, gravel and cobbles
9 separated by less permeable clay and silt aquitards. AGC-1 at 9.

10 In the American River Study Area ("ARSA"), four aquifers have been identified,
11 starting with the shallowest, Aquifer A, underlain by Aquifer B, Aquifer C and the deepest,
12 Aquifer D. AGC-1 at 9-11. These same aquifers extend into the GET E/F area immediately to
13 the west of the ARSA, which includes the additional, deeper Aquifer E, AGC-1 at 21-24, and also
14 are present in the Western Groundwater Operable Unit ("WGOU") to the west of GET E/F,
15 AGC-1 at 25-28. All of these aquifers are identified in geological cross-sections that were
16 admitted into evidence without dispute. *See* AGC-1(e)-(j)⁶ (ARSA, GET E/F hydrostratigraphy);
17 AGC-1(u)-(v) (WGOU hydrostratigraphy); *see also* 6/13 Trans. at 157-160 (unobjected testimony
18 of Aerojet witness Thomas M. Johnson re hydrostratigraphy) and at 171 (admission of all Aerojet
19 exhibits without objection).

20 Groundwater in the vicinity of the Lower American River flows, or percolates,
21 through these laterally extensive, permeable sediment layers beneath the River, in a direction that
22 is nearly perpendicular to the River. 6/13 Trans. at 163-164; *see also* SCWC-9a at 10-11. This
23 groundwater flow dynamic is confirmed by substantial evidence discussed below, including
24 groundwater contour maps reflecting major groundwater recharge sources, the migration of a
25 contaminant plume underneath and transverse to the River, and by tests showing that pumping
26 groundwater on the south side of the River causes groundwater elevations to fall on the north side

27 ⁶ References to attachments to AGC-1 are denoted by the parenthetical letter citation
28 originally assigned to each attachment. As indicated in Aerojet's Exhibit Identification Index,
these attachments are excerpts from other AGC exhibits.

1 of the river.

2 The evidence is substantial and uncontroverted that all of the water that Aerojet
3 now pumps, and may pump after the pending expansion of its GET E/F facilities and the
4 development of the WGOU, is percolating groundwater, and not water from any subterranean
5 extension of the Lower American River flowing through a known and definite channel.⁷

6 2. It is clear that the FAS Declaration was not based on any water right decision
7 describing past, current or future groundwater pumping as a basis for finding no
8 unappropriated water available in the Lower American River

9 D-893, D-1045, D-1082, D-1098, D-1108 and D-1211 provide the basis for
10 declaring the American River to be fully appropriated. Order WR 89-25; Order WR 98-08.
11 These water right decisions expressly allocate flows needed for fish conservation, salinity control,
12 navigation and existing *surface* water rights. *See, e.g.*, D-893 at 18-21. It is indisputable,
13 however, that not one of these decisions states that the Lower American River is fully
14 appropriated even partly because a certain amount of stream flow is allegedly required to
15 recharge local groundwater. Simply put, no water right decision underlying the FAS Declaration
16 describes past, current or future groundwater pumping as a basis for finding that no
17 unappropriated water is available in the Lower American River.

18 3. Aerojet's groundwater pumping does not reduce American River instream flows
19 by inducing greater River recharge to groundwater

20 Four factors demonstrate that Aerojet's groundwater pumping does not reduce
21 flow in the River by reducing recharge from the Lower American River. First, the sources of
22 groundwater recharge and the direction of groundwater flow show that Aerojet's groundwater
23 comes primarily from percolation of local precipitation and groundwater flowing down-gradient
24 from the Sierra Nevada mountain front and foothills. Second, the zone between the River bottom
25 and uppermost aquifer is not fully saturated in areas west of Nimbus Dam. Third, if the
26 groundwater pumping induced River recharge, a contaminant plume would not have migrated

26 ⁷ Absent evidence to the contrary, groundwater is presumed to be percolating groundwater,
27 not a subterranean stream. *Los Angeles v. Pomeroy*, 124 Cal. 597, 628 (1899). The burden of
28 proof is on the person who asserts that the groundwater is in a subterranean stream flowing
through a known and definite channel. *Id.*; *Arroyo Ditch & Water Co. v. Baldwin*, 155 Cal. 280,
284 (1909).

1 from the south side of the River to the north side of the River. Fourth, if pumping induced
2 recharge, pumping on the one side of the River would not have caused a hydraulic response on
3 the other side of the River. Each of these factors constitutes compelling evidence that Aerojet's
4 groundwater pumping does not, and will not, induce groundwater recharge from the Lower
5 American River.

- 6 a. Most of the groundwater Aerojet pumps originates from local precipitation
7 percolating through highly permeable dredge tailings and as groundwater
8 flowing down-gradient from the Sierra Nevada mountain front and foothills

9 The groundwater beneath the Aerojet site and surrounding area is directly
10 recharged by groundwater flowing down gradient from the Sierra Nevada mountain front and
11 foothills, and by local precipitation percolating through highly permeable dredge tailings. 6/13
12 Trans. at 161, lines 15-23. An average of approximately 3,600 acre feet per year of groundwater
13 moving down gradient from the Sierra Nevada mountain front and foothills recharges ground-
14 water at the Aerojet site. AGC-1 at 5, 15 (second to last full paragraph). An average of approxi-
15 mately 2,285 acre feet of water per year comes from percolation of local rainfall into the large
16 area of highly permeable dredged gold mining spoils located to the immediate east and southeast
17 of the Aerojet site. AGC-1 at 15 (last full paragraph).

18 The large amount of rainfall recharge is the result of extensive gold dredging
19 operations that ceased in 1961, leaving a maze of giant windrows comprising highly permeable
20 sand, gravel and cobble tailings. These tailings created closed drainage patterns that funnel
21 rainfall into the permeable geologic layers underlying the Aerojet site. See AGC-1 at 3, 5, 13, 15
22 (describing site geology and primary groundwater sources); see also 6/17 Trans. at 164-165
23 (describing dredge tailings evident in aerial photograph, Figure ES-1, in AGC-3). The
24 importance of local precipitation to groundwater recharge is corroborated by hydrogeological
25 studies prepared by the United States Bureau of Reclamation ("Reclamation") in connection with
26 development of the American River Division of the Central Valley Project ("CVP"). They
27 conclude that the largest single source of groundwater recharge in this area is percolation of
28 precipitation. See DFG-31 at 39. Thus, the evidence is both uncontroverted and corroborated

1 that the source of Aerojet's nearly 6,000 acre feet per year of groundwater recharge is local
2 precipitation and mountain front groundwater.

3 The major sources of groundwater recharge influence the overall direction of
4 groundwater flow through the Aerojet site. Contour maps depicting groundwater elevations at
5 and around the Aerojet site show a large "mound" of high-elevation groundwater centered at the
6 dredge tailings east of the site. *Compare* "Layer 4" in AGC-1(n)(groundwater elevations/flow
7 gradients) to Figure ES-1 of AGC-3 (aerial photo with dredge tailings); *see* 6/13 Trans. at 163-
8 164 (describing same). These contour maps demonstrate that groundwater flows into the Aerojet
9 site primarily from recharge areas to the east, *not* from the Lower American River to the north—a
10 fact corroborated by the migration of a contaminant plume from the south side of the Lower
11 American River, beneath and perpendicular to the River (discussed below).

12 b. The zone between the River and uppermost groundwater elevation is not
13 fully saturated

14 No one disputes that the Lower American River is, and long has been, a "losing"
15 stream that recharges the permeable sediments immediately adjacent to the River. *See, e.g.,*
16 DFG-32 at 7, lines 15-17 (American River was losing water before Aerojet began extracting
17 groundwater); 5/31 Trans. at 55, lines 5-25 (losing River from 1955 to present); 5/31 Trans. at 81-
18 82 (American River bed seepage recharges groundwater in immediate vicinity of River).
19 However, the characterization of the River as a losing stream does not resolve the key issue here.
20 The real question is whether Aerojet's groundwater pumping causes the River to lose more water
21 through leakage than it otherwise would lose. The evidence clearly and convincingly shows that
22 it does not.

23 It is elementary that a decline in groundwater elevation in an aquifer separated
24 from a stream by an unsaturated, or vadose, zone does not increase stream recharge to
25 groundwater.⁸ *See* AGC-1 at 19 (expert witness testimony of Thomas Johnson); SCWC-9 at 4,

26 ⁸ A corollary of this general principle is that groundwater pumping in the vicinity of a
27 losing stream does not intercept groundwater that is tributary to, and would otherwise augment,
28 the stream's flow. In Aerojet's case, groundwater elevations at the two A Aquifer extraction
wells located below Nimbus Dam (4325 and 4330), suggest that at *some times some* of the
groundwater in this immediate location might be tributary to the Lower American River. As

1 lines 7-16 (expert witness testimony of Stephen Ross). The zone between the Lower American
2 River and uppermost groundwater elevation along significant portions of the River is not fully
3 saturated. Substantial, uncontroverted evidence demonstrates that the elevation of the uppermost
4 groundwater surface is below the Lower American River, except in the small portion of the
5 American River Study Area closest to Lake Natoma. Groundwater level measurements taken in
6 April 2001, when groundwater levels were high and the River elevation was low, show the
7 vertical distance separating the River from the underlying groundwater increased from
8 approximately 6 feet near A Aquifer extraction well 4370 to more than 25 feet in the area of A
9 Aquifer extraction well 4340. AGC-1 at 12 (citing ACG-6, Figure A-5). In addition to the
10 vertical separation between the Lower American River and underlying groundwater downstream
11 from Lake Natoma, there is generally a significant difference in groundwater levels between the
12 A Aquifer and the underlying B, C and D aquifers in the vicinity of the River. *Id.* These
13 significant vertical hydraulic gradients reflect the presence of lower-permeability aquitard layers
14 separating the aquifers, and separating the lower portions of the A Aquifer from the overlying
15 American River. *Id.*

16 The vertical depth of the unsaturated zone between the River and uppermost
17 groundwater surface elevation increases as one moves west, or downstream, from Nimbus Dam.
18 *See* SCWC-9a at 33 (section under heading "American River as a Source of Groundwater
19 Recharge"); SCWC-9a at 30-32 (describing groundwater elevations at wells in western, central
20 and eastern sections of overall Aerojet site depicted in Figure 1-1 of SCWC-9a). For example,
21 the vadose zone in the northern half of the GET E/F area consists of more than 100 feet of
22 unsaturated sediments. AGC-1 at 22 (Layer A).

23 c. The Lower American River does not function as a hydraulic barrier to
24 contaminant migration or to hydraulic responses on one side of the River
25 from pumping groundwater on the opposite side of the River

26 The River does not function as a hydraulic barrier to the flow of groundwater from

27 noted by Southern California, however, even the *total amount* of groundwater pumped by these
28 two wells is an insignificant portion of the overall amount of water pumped, treated and
discharged by Aerojet into the Lower American River system. *See* 5/31 Trans. at 57, lines 1-14,
at 60-62, and at 93-94 (98 percent of extracted water not tributary to River).

1 the south side of the River to the north side of the River. See SCWC-9a at 32-33 (defining
2 characteristics of stream as hydraulic barrier). The absence of a hydraulic barrier is evidenced by
3 two factors. The first is the migration of a contaminant plume from the area north of the Aerojet
4 site, beneath the River, to the north side of the River. See AGC-1 at 13-15; AGC-1(o), (p) (plume
5 migration maps from AGC-4). The second is a series of pump tests showing that extracting
6 groundwater from aquifers on the one side of the River causes a hydraulic response (drawdown)
7 in the same aquifer on the other side of the River. See AGC-1 at 18-20. If the groundwater
8 pumping induced River recharge, the contaminant plume would not have migrated across the
9 River, and pumping on one side of the River would not have caused a hydraulic response on the
10 other side of the River. SCWC-9 at 4, lines 10-16; AGC-1 at 29 (fifth bullet), at 30 (first and
11 fourth bullets).

- 12 (1) A contaminant plume has migrated beneath, and transverse to, the
13 American River

14 The most compelling evidence that Lower American River leakage does not
15 saturate the sediments between the River and underlying aquifers is the migration of a plume of
16 trichloroethene ("TCE") beneath the River. AGC-1 at 14. This plume migrated beneath the
17 River, through the shallowest A Aquifer and through the underlying B, C and D aquifers,
18 showing that the River is not a barrier to groundwater flow or contaminant migration. *Id.* If the
19 sediments beneath the River were saturated by significant River leakage, a hydraulic divide, or
20 barrier, would have prevented the contaminant plume from migrating. See SCWC-9a at 44
21 (Distribution of Contaminants). Contaminant sampling data confirm that the plume migrated
22 beneath the River in a direction transverse to the River, and that the River did not significantly
23 affect the movement of the plume. *Id.* AGC-1 at 14. Thus, the migration of the plume from one
24 side of the Lower American River to the other side clearly and convincingly demonstrates that the
25 significant River leakage is not occurring and that the River does not form a hydraulic boundary
26 to plume migration.

27
28

1 (2) Extracting groundwater on the south side of the American River
2 draws down groundwater elevations on the north side of the river

3 The hydraulic response on one side of the Lower American River to groundwater
4 pumping on the opposite side of the River is further evidence that the sediments beneath the River
5 are not saturated by River leakage functioning as a hydraulic barrier. No party disputes that
6 pumping from each aquifer, including the shallowest A Aquifer closest to the River, caused a
7 hydraulic response from the same aquifer on the opposite side of the American River. *See* AGC-
8 1 at 18-20 (citing AGC-4, Appendix G)). For example, pumping from A Aquifer extraction well
9 4370 caused a measured drawdown response of 0.15 foot in monitoring well 1469, located 2,500
10 feet east of extraction well 4370 on the same side of the River, and caused a corresponding
11 drawdown of 0.18 foot in monitoring well 1481 located 1,700 feet away on the opposite side of
12 the River. AGC-1 at 18. The increased head, or pressure, in deeper aquifers B and C resulted in
13 even larger hydraulic pumping responses. Pumping groundwater from Aquifer B at extraction
14 well 4330 caused a measured drawdown in Aquifer B of 2.25 feet in Aquifer B in monitoring
15 well 1479 on the north side of the River. *Id.* at 20. Pumping groundwater from Aquifer C at
16 extraction well 4335 caused a measured drawdown in Aquifer C of 3.24 feet in monitoring well
17 1510 on the north side of the River. *Id.* at 19.

18 These hydraulic responses are not disputed. *See* 6/13 Trans. at 218, lines 16-21
19 (admission by DFG expert witness Reynolds that “every aquifer test . . . submitted along with
20 [his] testimony where [he] examined impacts of pumping on the one side of the river, on the other
21 side or the opposite side that there was drawdown identified”). The undisputed hydraulic
22 responses corroborate what the plume migration clearly shows: River leakage from the Lower
23 American River in the vicinity of Aerojet’s groundwater pumping facilities does not form a
24 hydraulic barrier between the River and underlying aquifers. DFG’s expert witness confirmed
25 that hydraulic responses demonstrate that the River does not create a hydraulic boundary. 6/13
26 Trans. at 215, lines 5-24.

27 DFG’s expert witness also confirmed that if the water table is below the River
28 bottom, the rate of River recharge would not increase if the water table dropped another 10 feet.

1 6/13 Trans. at 235, lines 9-12. Thus, DFG concedes that it is not correct to say that a declining
2 water table necessarily increases the head differential between a river and underlying
3 groundwater, and that this necessarily increases the driving force moving water from the river
4 into the aquifer. See DFG-32 at 8, lines 18-22 (incorrect written expert testimony).⁹ DFG's
5 concession corroborates the expert witness testimony of Aerojet and Southern California that
6 when the sediments between a losing stream and the underlying groundwater are not fully
7 saturated, lowering the water table does not cause the stream to lose more water from induced
8 groundwater recharge. See AGC-1 at 19 (expert witness testimony of Thomas Johnson); SCWC-
9 9 at 4, lines 7-16 (expert witness testimony of Stephen Ross).

10 The weight of all this evidence is substantial and undiminished by DFG's
11 reference to the flattening of selected pump-test drawdown curves that were based on tests which,
12 according to the text book relied upon by DFG's own expert, were too short to provide
13 meaningful results. See DFG-32 at 13, lines 1-14; DFG-17, -18 and -19 (drawdown curves for
14 extraction wells 4325 and 4330, 4335 showing test periods less than 24 hours); 6/13 Trans. at
15 233, lines 17-20 (pump tests must be run for at least 24 hours to account for delayed yield).

16 4. Conclusion: There is more than substantial evidence that Aerojet's discharges of
17 treated groundwater add new water to the Lower American River

18 It is not disputed that Aerojet's discharges of treated groundwater into the Lower
19 American River began decades after the most recent water right decision giving rise to the FAS
20 Declaration. It is not disputed that Aerojet is pumping percolating groundwater and discharging it
21 into a river that was a losing stream before the discharges began. It cannot genuinely be disputed
22 that Aerojet's groundwater pumping does not reduce American River instream flows by inducing
23 additional groundwater recharge. The River is not a hydraulic barrier to contaminant migration or
24 to hydraulic responses in tests where pumping from an aquifer on one side of the River lowers

25
26 ⁹ Accordingly, DFG also is incorrect when it asserts that as more groundwater is pumped,
27 more water is removed from the River where groundwater levels are below the River. DFG-32 at
28 9, lines 15-16. And DFG also is incorrect when it asserts that because regional groundwater
levels have dropped since D-893 was issued in 1958, "there are greater losses of American River
flows to groundwater recharge today than at the time the FAS Declaration was made in 1958." *Id*
at lines 17-19.

1 groundwater levels in the same aquifer on the opposite side of the River. Simply put, the
2 evidence is more than sufficient to justify a revision of the FAS Declaration based on Aerojet's
3 discharges of treated groundwater into the Lower American River system.

4 **C. The Fully Appropriated Stream Declaration Should Be Revised Without Any**
5 **Limitation On Who May Apply For The Right To Use The New Water**

6 Southern California and the County of Sacramento, in different ways, both ask the
7 State Board to earmark Aerojet's discharges for their exclusive use, even though the State Board
8 has repeatedly declared that the purpose of the present proceeding is not to allocate water to any
9 particular user.¹⁰ The State Board already has enforced the noticed scope of this proceeding by
10 sustaining objections and excluding evidence relating to water allocation claims of Southern
11 California and the County.¹¹ The State Board should continue to enforce the noticed scope of—
12 and the purpose of—this proceeding by rejecting the attempts by some parties to have Aerojet's
13 discharges earmarked for their exclusive use.

- 14 a. SCWC cites no authority that would support the permanent earmarking of
15 Aerojet's discharges for use by any party other than Aerojet

16 The State Board should continue to enforce the noticed scope of this proceeding by
17 rejecting Southern California's request to limit the revision of the FAS Declaration to allow only
18 the processing of Southern California's water right application. *See* Petition for Limited Revision
19 of the Declaration of Full Appropriation of the Lower American River at 1, 5 (November 7,
20 2001).¹² The effect of granting Southern California's request would be to earmark Aerojet's
21 discharges for Southern California's exclusive use, when the State Board already has decided,
22 appropriately, that the sole issue in this proceeding is whether "new" water may be available
23

24 ¹⁰ SWRCB Notice of Pre-hearing Conference, Public Hearing and Petition to Revise
25 Declaration of Fully Appropriated Stream Systems Regarding the American River, Sacramento
26 County at 4 (March 6, 2002); SWRCB Notice after Pre-hearing Conference at 2 (April 26, 2002).

27 ¹¹ Petition to Revise Declaration of Fully Appropriated Stream Systems Regarding the
28 American River Sacramento County—Ruling on Evidentiary Motions at 3 (June 12, 2002).

¹² The State Board similarly should reject Southern California's request in its closing oral
argument that "the status of the FAS petition be treated as such that it was only requesting a
lifting for the benefit of those parties, Southern California Water Company, the County, Cal-Am
and potentially others that were, in fact, injured by the contamination." 6/5 Trans. at 315, lines 5-
10.

1 without regard to how it should be allocated.

2 The “authority” Southern California cites in support of its earmarking request is
3 inapposite. *In the Matter of Petitions to Revise Declaration of Fully Appropriated Streams to*
4 *Allow Processing Specified Applications to Appropriate Water From the Santa Ana River*, Order
5 WR 2000-12, stands for the proposition that revisions to the FAS Declaration should be limited to
6 parties that develop or salvage water that otherwise would not be available for appropriation from
7 a surface stream. In this case, the only such party is Aerojet—the party that is spending tens of
8 millions of dollars to find, pump, treat and discharge groundwater contaminated during the
9 development of massive rocket motors that America needed to win the space race and Cold War.

10 b. The Board should reject Sacramento County’s request to permanently
11 characterize Aerojet’s surface water discharges as percolating groundwater
subject to the County’s exclusive right of use

12 Sacramento County’s bid to have Aerojet’s discharges earmarked for the County’s
13 exclusive use is based solely on its claim that Aerojet’s “groundwater is still groundwater and the
14 fact that it is discharged into the American River does not change this fact.” County of
15 Sacramento and Sacramento County Water Agency’s Opening Statement (“County Statement”) at
16 8, lines 13-14. (June 12, 2002); *see also* County Statement at 6, lines 7-8 (“water at issue is, in
17 fact and law, not new surface water, but groundwater for which parties have a current right”).
18 The problem with the County’s imaginative theory is that it is so contrary to fact and law that to
19 accept it would wreak chaos on the administration of water rights across California.

20 The County cites no legal basis to adopt its proffered fiction that groundwater
21 remains subject to the law of groundwater rights after it is discharged into a stream and becomes
22 part of that stream’s surface flow. That is because it has never been disputed that, as between
23 rights in surface water and rights in percolating groundwater, the character of a water right
24 depends on the water’s physical circumstances at the time of its diversion and use. *See* 2 Scott S.
25 Slater, *California Water Law and Policy*, § 11-03 at 11-10 (percolating groundwater loses
26 character as such when it joins, and commingles with, a surface stream, citing 1 Wells A.
27 Hutchins, *Water Rights Laws in the Nineteen Western States* at 59 (1973)). Water diverted from
28 a stream is surface water because it is flowing *in the stream*, regardless of where the water may

1 have originated (snow-melt flowing down mountainsides as diffused surface water; surface water
2 from a tributary creek; or tributary groundwater originating as rainfall). No statute, judicial
3 decision or other law provides that water is to be characterized by its previous status as either
4 groundwater or surface water, rather than by its present status.¹³

5 The rule that the character of water changes when its physical setting changes is
6 fundamental to a legal regime that distinguishes groundwater from surface water. For example, it
7 would be utterly at odds with the history and structure of California water law to suggest that
8 where a farmer pumps percolating groundwater from an aquifer to irrigate her field, and the
9 irrigation tailwater runs off and commingles with the surface waters flowing in a nearby stream,
10 that the tailwater retains its character as percolating groundwater and is subject to claims of right
11 by landowners overlying the aquifer. To adopt any such notion would cause utter chaos in the
12 administration of water rights in California. Some indeterminate quantity of the water coming
13 down any river or stream, which has always been available for use by appropriators or for
14 instream beneficial purposes like recreation and environmental protection, would be burdened by
15 potential claims from upstream overlying landowners or groundwater appropriators. California's
16 water rights system—and the cities, industries and millions of lives it sustains—would be
17 irreparably harmed by the reallocation of water based on claims arising from some nexus with an
18 earlier point in the hydrologic cycle.

19 In the end, perhaps the simplest response to the County is that the State Board
20 lacks the legal power to administratively invent a new specie of water right to address what the
21 County decries as unique circumstances. Unique circumstances requiring an adjustment to
22 California's water rights system is a subject for the Legislature, not the State Board. *See, e.g.,*
23 *Water Code § 1210 et seq. (treated waste water).*

24 ///

25 ///

26 ///

27 _____
28 ¹³ Such a rule would invite a never-ending cycle of water right claims based on alleged
connections with some paramount point in the hydrologic cycle.

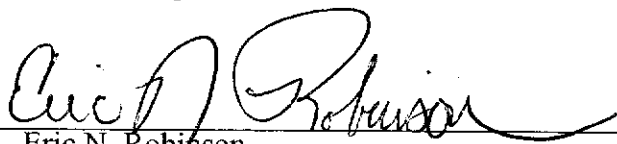
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III.
CONCLUSION

For all the preceding reasons, the State Board should find Aerojet's discharges of treated groundwater to be "new" water added to the Lower American River.

Dated: August 5, 2002

KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD
A Professional Corporation

By 
Eric N. Robinson
Attorneys for AEROJET-GENERAL
CORPORATION

1 **PROOF OF SERVICE**

2 I, Do Gentry, declare:

3 I am a resident of the State of California and over the age of eighteen years, and
4 not a party to the within action; my business address is 400 Capitol Mall, 27th Floor, Sacramento,
CA 95814-4416. On August 5, 2002, I served the within documents:

5 **AEROJET GENERAL CORPORATION'S CLOSING STATEMENT**

- 6 by transmitting via facsimile from (916) 321-4555 the above listed document(s)
7 without error to the fax number(s) set forth below on this date before 5:00 p.m. A
8 copy of the transmittal/confirmation sheet is attached.
- 9 by placing the document(s) listed above in a sealed envelope with postage thereon
10 fully prepaid, in the United States mail at Sacramento, California addressed as set
11 forth below.
- 12 by causing personal delivery by messenger of the document(s) listed above to the
13 person(s) at the address(es) set forth below.
- 14 by placing the document(s) listed above in a sealed Federal Express envelope and
15 affixing a pre-paid air bill, and causing the envelope to be delivered to a Federal
16 Express agent for delivery
- 17 by personally delivering the document(s) listed above to the person(s) at the
18 address(es) set forth below.

19 *Please see attached Service List*

20 I am readily familiar with the firm's practice of collection and processing
21 correspondence for mailing. Under that practice it would be deposited with the U.S. Postal
22 Service on that same day with postage thereon fully prepaid in the ordinary course of business. I
23 am aware that on motion of the party served, service is presumed invalid if postal cancellation
24 date or postage meter date is more than one day after date of deposit for mailing in affidavit.

25 I declare under penalty of perjury under the laws of the State of California that the
26 above is true and correct.

27 Executed on August 5, 2002, at Sacramento, California.

28 
Do Gentry

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