

AMENDMENT NO. 5 TO THE OCTOBER 29, 2002
INTERIM AGREEMENT FOR THE REMOVAL OF PERCHLORATE FROM WATER
EXTRACTED FROM FOUR CITY OF RIVERSIDE WELLS

This Amendment No. 5 to the 2002 Interim Perchlorate Agreement is entered into between the City of Riverside, a California charter city (the "City"), and Lockheed Martin Corporation, a Maryland Corporation ("Lockheed Martin") (collectively, the "parties") on the 16th day of March, 2020.

RECITALS

A. On November 10, 1998, the City and Lockheed Martin entered into an agreement for the remediation of trichloroethylene ("TCE") from certain drinking water production wells owned and operated by the City (the "1998 TCE Agreement"). Pursuant to their obligations under paragraph 17 of the TCE Agreement, the parties have met and conferred concerning remediation of perchlorate from certain of the City's drinking water wells.

B. As a result of the meet and confer process, on October 29, 2002, the City and Lockheed Martin entered into an Interim Agreement for the Removal of Perchlorate From Water Extracted From Four City of Riverside Wells (the "2002 Interim Perchlorate Agreement") for the treatment of perchlorate contamination in groundwater that will be extracted to meet a portion of the City's drinking water needs from four City drinking water wells, Gage 51-1, 29-3, 29-2, and 92-1.

C. As a result of the meet and confer process, the City and Lockheed Martin entered into Amendment No. 1 to the 2002 Interim Perchlorate Agreement to provide for the treatment of perchlorate contamination in groundwater that will be extracted to meet a portion of the City's drinking water needs from four (4) additional City drinking water wells, Gage wells 26-1, 27-1, 46-1 and 66-1 (creating a total of eight (8) wells to be treated for perchlorate) and to provide access to Raub wells 2, 3, and 4 for evaluation and engineering of potential temporary, pilot treatment of such wells.

D. As a result of the meet and confer process, the City and Lockheed Martin entered into Amendment No. 2 to the 2002 Interim Perchlorate Agreement to provide for the treatment of perchlorate contamination in groundwater that will be extracted to meet a portion of the City's drinking water needs from three (3) additional City drinking water wells, Raub wells 2, 3, and 4 (creating a total of eleven (11) wells to be treated for perchlorate.)

E. As a result of the meet and confer process, the City and Lockheed Martin entered into Amendment No. 3 to the 2002 Interim Perchlorate Agreement to provide for the treatment of perchlorate contamination in groundwater that will be extracted to meet a portion of the City's drinking water needs from City drinking water well Raub 5 and, if necessary, City drinking water wells Raub 6 and 8.

F. In or around 2007, in order to improve containment and mass removal performance, and to improve system reliability, Lockheed Martin proposed replacement of Raub Wells 2, 3, and 4 with a single larger capacity well (Raub 7) at the location of Raub 2. Raub Wells 2 and 3 had been plugged and abandoned. Raub 4 was being used as a standby/backup well. It was anticipated that the Raub 7 well may, at times, require treatment for perchlorate to meet the City's water quality objectives at the Point of Compliance described in the 2002 Interim Perchlorate Agreement.

G. In 2007, the City had constructed a new well in the Gage wellfield (Tippecanoe New well) which was constructed according to designs coordinated with Lockheed Martin. The Tippecanoe New well would, at times, require treatment for perchlorate to meet the City's water quality objectives at the Point of Compliance described in the 2002 Interim Perchlorate Agreement.

H. As a result of the meet and confer process, on May 18, 2010, the City and Lockheed Martin entered into Amendment No. 4 to the 2002 Interim Perchlorate Agreement to provide for the treatment, as necessary, of perchlorate contamination in groundwater that will be extracted to meet a portion of the City's drinking water needs from City drinking water wells Raub 7 and Tippecanoe New well.

I. As a result of the meet and confer process, the City and Lockheed Martin desire to amend the 2002 Interim Perchlorate Agreement to acknowledge the destruction of Raub 4 and Raub 5 wells and their replacement with Raub 4R and Raub 5R. Raub 5R has shown perchlorate above and below the perchlorate MCL while Raub 4R has perchlorate below the MCL. Both wells have TCE concentrations below the TCE MCL.

J. As a result of the meet and confer process, the City and Lockheed Martin also desire to amend the 2002 Interim Perchlorate Agreement to enter into an agreement regarding the installation of a replacement well for the existing Gage Well 29-3 and funding for that replacement well. The existing Gage Well 29-3 is currently in treatment at the Tippecanoe Regional Treatment Facility. The parties intend that water from the replacement well (referred to as Gage 29-3R) will be directed to the Tippecanoe Regional Treatment Facility and that the existing Gage 29-3 well will be destroyed after completion of Gage Well 29-3R.

TERMS OF AGREEMENT

NOW, THEREFORE, in consideration of the above recitals that are incorporated herein by this reference, the parties agree as follows:

1. Section 1 "Definitions" of the 2002 Interim Perchlorate Agreement is amended as follows:

"E. "Perchlorate Wells" refers to the City's Gage wells 51-1, 29-3R, 29-2, 26-1, 27-1, 46-1R, 92-1, 66-1, Tippecanoe New, Raub 4R, Raub 5R, Raub 6, Raub 7 and Raub 8.

2. Section 2 "Responsibility for Costs" is amended and restated as follows with regard to the second paragraph of said section:

"Lockheed Martin shall be responsible for all increased and new City costs relating to the Perchlorate Treatment Systems, including (but not limited to): (1) Labor Costs incurred by the City from existing and future City inspecting, operating, and maintaining the Perchlorate Treatment Facilities and/or supervising the same; (2) costs (including employee time) of sampling and analyzing water samples required to determine, among other things, when treatment media for perchlorate should be regenerated or replaced; (3) costs (including employee time) of monitoring the quality of water produced by the Perchlorate Treatment Facilities; (4) costs (including employee time) of assuring that water produced from the Perchlorate Treatment Facilities has no adverse effect on water chemistry; (5) costs of regenerating, replacing, and/or disposing of treatment media and wastes; (6) increased costs of operating or maintaining wells caused by the presence of perchlorate or treated water from the Perchlorate Treatment Facilities; (7) costs of installing and operating any needed disinfection equipment for the treatment media; (8) costs of inspecting and/or repairing treatment vessels; and/or (9) notwithstanding the allocation of costs described above, nor any other provisions of the Agreement to the contrary, the share of costs associated with the installation, operation and maintenance of Well 29-3R, as more particularly described in Subsection 2(H) (below)."

3. Section 2 "Responsibility for Costs" is further amended by adding the following new Subsection H. "Replacement Well 29-3R" to the end of said section:

"H. Replacement Well 29-3R. Under Section 2 of the Agreement, Lockheed Martin is not required to reimburse the City for costs which are routinely incurred under the present operation of the City's water system in the absence of the water treatment system(s) described in this Agreement. Lockheed Martin is responsible for all increased and new City costs related to the Perchlorate Treatment Systems. Because of the difficulty and uncertainty of determining which costs related to Gage 29-3R should be allocated to each of the parties in conformance with the agreed-upon allocation of costs, the parties agree that Lockheed Martin shall pay Five Hundred Thousand Dollars (\$500,000) to the City within 30 days of the State Water Resources Control Board Division of Drinking Water (DDW formerly DHS and CDPH) issuing an approval to the City to operate Gage 29-3R. This amount is intended to reimburse the City for all increased and new City costs for Gage 29-3R (including well installation and extended screen interval(s)) that are related to the Perchlorate Treatment Systems.

Lockheed Martin's reimbursement obligations include funding the actual cost of two well rehabilitations of Gage 29-3R (the first in approximately 2030; and the second in approximately 2040), if requested by the City. Well rehabilitation costs reimbursed by Lockheed Martin shall include but are not limited to: (1) well rehabilitation services; (2) pre- and post-well rehabilitation down well video surveys to evaluate well condition; (3) performance of standard mechanical and chemical well rehabilitation; (4) servicing of pumping equipment due to

premature equipment damage from entrained air in the well; (5) maintenance of the inflatable packer between hydrostratigraphic unit (HSU) -4 and HSU-6; (6) the cost to adjust the pump setting, if necessary; and (7) the cost for pump and motor replacement and/or any upgrades due to declining water levels. Finally, City may request that Lockheed Martin reimburse the City for the cost to remove the inflatable packer between HSU-4 and HSU-6, and to seal off the screen(s) in HSU-2, if water levels or water quality from HSU-2 negatively impact the City, Lockheed Martin shall not unreasonably withhold consent to do so. The well screen(s) in HSU-2 may be screened off by an inflatable packer, or other means, such as swaging, or another mutually-agreeable approach.”

4. Section 3 “Schedules for Permitting Perchlorate Treatment Facilities” is amended by adding the following new Subsection A. “Replacement Well 29-3R” to the end of said section:

“A. Replacement Well 29-3R. The parties agree to the installation of a new well to replace the existing Gage Well 29-3. The new well (Gage 29-3R) shall be located near the existing Gage Well 29-3, as depicted in the City’s bid documents dated October 2019. Well installation activities shall proceed as approved by the City. Gage 29-3R may be constructed with screens in the shallow, middle, and deep aquifers, referred to as HSU-2, HSU-4, and HSU-6. The City will coordinate with Lockheed Martin on the well design, but if a mutually acceptable well design cannot be reached, the City reserves the right to terminate this Amendment and proceed independently on the construction of Gage 29-3R. If a mutually acceptable well design is reached, Gage 29-3R shall be screened to maximize production from HSU-2 and HSU-4. An aquifer isolation inflatable packer shall be installed between HSU-4 and HSU-6 within an intervening blank casing zone. An annular seal shall be installed between HSU-4 and HSU-6. The City shall provide access and accommodate technical review and inspection by Lockheed Martin’s contractor, including: (1) review/comment on drilling and well construction technical specifications; (2) periodic field inspections; (3) review of geophysical logs; (4) collaboration during zone test and final well design planning; (5) review of zone test analytical results; and (6) review/comment on the final well completion report. The City shall, if feasible, pump a minimum of 3,500 acre feet per calendar year from HSU-2 and HSU-4. Lockheed Martin shall be allowed to use Gage 29-3R as part of the Perchlorate Treatment System for a period of 25 years. If, after 25 years, and Lockheed Martin desires to continue to use Gage 29-3R as part of the Perchlorate Treatment System, the City and Lockheed Martin shall meet and confer regarding the potential future use of Gage 29-3R and the costs associated therewith.

5. All other terms and conditions of the 2002 Interim Perchlorate Agreement and Amendment Nos. 1, 2, 3, and 4 not expressly amended, modified or deleted by this Amendment No. 5 shall remain in full force and effect and are incorporated herein to this Amendment No. 5.

6. Effective date: This Amendment No. 5 shall be effective on the date the last party executes this Amendment No. 5.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment No. 5 to the subject 2002 Interim Perchlorate Agreement to be duly executed the day and year first above written.

CITY OF RIVERSIDE,
a charter City.

LOCKHEED MARTIN CORPORATION,
a Maryland corporation.

By: _____

Its:

Dated: _____

Attest: _____

By:  _____

Its: Director, Environmental Remediation

Dated: 3/16/20

Approved as to Form:

By:  _____

Anthony L. Beaumon
Deputy City Attorney

for Susan Wilson