

ATTACHMENT 5

Prosecution Rebuttal to Defense Case in Chief

1 here is the type of violation that occurred (MMP-type violation versus a discretionary-type
2 violation) and the Water Board's appropriate response. Legally, these types of violations are
3 treated differently. The District contends that imposing an MMP is the only action by the Board
4 that would be "fair, appropriate and consistent [...] with the Enforcement Policy." (District's Brief,
5 P. 2, lines 24-25; P. 20, lines 13-19; P. 21, lines 5-7.) This argument is legally incorrect and
6 inappropriately suggests that the Central Coast Water Board could simply impose only a \$3,000
7 MMP without engaging in a discretionary penalty analysis using the penalty methodology in the
8 State Water Board's Water Quality Enforcement Policy (Enforcement Policy). The Prosecution
9 Team maintains that in order to be consistent with both the statute and the Enforcement Policy, the
10 only legally appropriate manner for the Central Coast Water Board to determine the liability
11 amount for the October 3, 2012 discharge is through consideration of the penalty methodology
12 factors in the Enforcement Policy related to imposing discretionary liability.

13 With respect to MMP-type violations, Water Code section 13385, subdivisions (h) and (i)
14 require that the Board impose \$3,000 mandatory minimum penalties for certain specified violations
15 of NPDES permits. These violations are:

- 16
- 17 a. "serious" violations, which include any waste discharges that exceed the effluent
18 limitation for a Group I pollutant by 40 percent or more, or a Group II pollutant by
19 20 percent or more, or a failure to file certain discharge monitoring reports for a
20 complete period of 30 days; and
 - 21 b. "non-serious" violations which occur if the discharger does any one of the following
22 four or more times in any period of 180 days:
 - 23 a. Violates a WDR effluent limitation;
 - 24 b. Fails to file a report of waste discharge pursuant to Water Code section 13260;
 - 25 c. Files an incomplete report of waste discharge pursuant to Water Code section
26 13260; or
 - 27 d. Violates a whole effluent toxicity effluent limitation where the WDRs do not
28 contain pollutant-specific effluent limitations for any toxic pollutants.²

13-19; P. 21, lines 5-7, 11-12, 16-18; P. 22, lines 8-9; P. 23, lines 3-6, 13-15, 22-25; P. 25 lines 25-28; P. 40, lines 24-25; P. 42, lines 10-11.

² Because the imposition of MMPs for these specific violations is required, the discretionary liability factors specified

[Footnote continued on next page.]

1 However, the District's approximate 300,000 gallon discharge cannot be an MMP effluent
2 violation per the definitions described above; rather, it is a release of partially treated effluent. The
3 District did not collect and analyze an effluent sample during the loss of disinfection interval;
4 therefore, there are no data to determine if there was a violation of an effluent limitation that might
5 trigger an MMP. If the District had collected and analyzed an effluent sample during the loss of
6 disinfection, and there was an effluent violation, the effluent violation would be an MMP-type
7 violation and would be considered **in addition to** the discretionary violation.

8 The District's suggestion that the October 3, 2012 approximate 300,000-gallon discharge
9 should be handled through imposition of an MMP is not permitted by statute or the Enforcement
10 Policy. Even though the Board cannot impose an MMP for the discharge, it does have the
11 discretion to impose whatever liability it deems appropriate, within the required minimum and
12 maximum penalty ranges, *after the Board has considered the discretionary penalty factors*
13 specified in the Water Code and the Enforcement Policy. The Prosecution Team has carefully
14 considered each of the required factors in determining the recommended penalty for the discharge
15 in the amount of \$81,775.

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17 **II. The Industry Standard Does Require a Low Dosage Chlorine Alarm.**

18 The permit, as cited in the Complaint and Attachment A, and as Mr. Sarmiento will testify,
19 requires certain safeguards and redundancy, which the Carpinteria system did not have.

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21 Safeguards shall be provided to assure maximal compliance with all terms and
22 conditions of this permit. Safeguards shall include preventative and contingency
23 plans and may also include alternative power sources, stand-by generators, retention
24 capacity, operating procedures, or other precautions. ...

25 Attachment D, D-11, B.9, Central Coast Standard Provisions. These safeguards, such as "low

26 in Water Code section 13385(e) do not apply, and, as such, there is no requirement to consider the criteria specified in
27 the Enforcement Policy's penalty calculation methodology. -Of course, the MMP statutes *do not prohibit* the Board
28 from assessing a *higher* liability than the mandatory \$3,000 minimum. However, if the Board were to do so, it would
 need to consider the discretionary liability factors specified in Water Code section 13385(e) and the criteria specified in
 the Enforcement Policy's penalty calculation methodology.

1 dosage chlorine alarm systems” to alert certified operators of potential chlorination failure are
2 referred to as industry standards for safe, reliable and compliant operation and maintenance of
3 wastewater treatment plants.

4 In addition to primary and secondary wastewater treatment process, the permit requires
5 chlorination to disinfect the effluent. Primary and secondary wastewater treatment processes
6 reduce some pollutants in large amounts (e.g., suspended solids, biological oxygen demand).
7 However, as seen in Exhibit 18, these processes only result in small reductions of biological
8 pathogens (as indicated by bacteria such as coliforms). This is the reason why disinfection is a key
9 wastewater treatment process; to reduce the levels of pathogens.

10 Mr. Sarmiento will testify as to not only what the permit requires but also what other permittees
11 do to comply with their permits, including alarms on key pieces of equipment, standard operating
12 procedures related to discharge detection and prevention, and facility maintenance.

13 **III. The Prosecution Team’s Selected Factors Are More Appropriate, Given** 14 **Carpinteria’s Arguments, Errors, and Omissions**

15 **(a) Potential for Harm for Discharge Violations**

16 **(i) Factor 1: Harm or Potential Harm to Beneficial Uses**

17 When analyzing violations under the Enforcement Policy, we first determine whether they
18 are discharge (spills) or non-discharge (reporting) violations. Then the Board can proceed to
19 analyze the violation using the Enforcement Policy calculation methodology. The parties here have
20 stipulated to several of the factors, as described in the evidentiary stipulation submitted with the
21 Prosecution Team’s initial submission. We will discuss only disputed factors in this brief.

22 Potential for harm is analyzed in a three-step process that Carpinteria conflates and fails to fully
23 address. Factor 1, “harm or potential harm to beneficial uses” addresses where the discharge
24 occurred as compared to Factor 2, the physical, chemical, biological, or thermal characteristics of
25 the discharge itself. The parties have stipulated that the final factor, susceptibility to cleanup or
26 abatement, is properly scored as a 1, because the discharge could not be cleaned up or abated.

27 Carpinteria’s consultant, ABCL, prepared a report that was submitted with Carpinteria’s
28 Water Code section 13267 response to assess the impacts of the discharge. The ABCL report was

1 also cited in Carpinteria's brief. However, in several instances ABCL cites to the wrong standard,
2 uses the wrong scientific method, or reaches the wrong conclusion, all in Carpinteria's favor, as
3 follows:

- 4 • The ABCL Report is incomplete and inaccurate in the examination of
5 effluent and receiving water limits. The ABCL Report did not mention and
6 did not conduct any analysis for the shellfish beneficial use protection
7 standard. The receiving water limitations, as mentioned in the Prosecution
8 Team's Brief (pg 5, line 3), are that the median total coliform density shall
9 not exceed 70 organisms per 100 mL and in not more than 10 percent of
10 samples shall coliform density exceed 230 organisms per 100 mL. Based on
11 the methodology used by ABCL, the shellfish limitation was exceeded.
- 12 • The ABCL Report was incomplete in its analysis for water contact recreation
13 because there was no analysis for enterococcus. When the District analyzed
14 the wastewater samples, it only conducted the analysis for total and fecal
15 coliform and not for enterococcus (enterococcus monitoring is required by
16 the permit for a loss of disinfection). Enterococcus is the best indicator for
17 fecal contamination and the presence of pathogens (EPA 2012) and would
18 have been useful since there is large uncertainty in the analysis for total and
19 fecal coliform (see Prosecution Team's Brief pg 4).
- 20 • ABCL Report (page 11) and the District's Brief (pg 31) state that there could
21 have been additional disinfection in the chlorine contact tank from leftover
22 chlorine and possibly by UV disinfection (pg. 34, line 23). However, it is
23 important to note that even if indicator bacteria like total coliform or
24 enterococcus could have been reduced, that does not mean that human
25 pathogens associated with the wastewater would have been reduced too. For
26 instance, for a given level of indicator bacteria, in this case enterococcus at
27 35 CFU per 100 mL, there is a higher risk of illness from secondary
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1 disinfectant effluent than from raw sewage (see Exhibit 19³, page 4683,
2 Figure 1). Furthermore, it was overcast in the area on the morning of
3 October 3rd, further limiting any additional UV disinfection (Exhibit 20).
4 This indicates that any additional disinfection speculated in the report likely
5 had little impact on pathogens in the effluent.

- 6 • ABCL used the wrong modeling approach when it attempted to characterize
7 the fate and transport of the effluent plume. ABCL used a near-field model,
8 also known as the mixing zone, but applied it incorrectly to far-field zone.
9 Near-field mixing is turbulent, caused by the buoyancy and momentum of
10 the discharge, and occurs over short distances (10 to 1,000 meters) and times
11 (1 to 10 minutes) (IWA 2010). However, ABCL applied the near-field
12 model by USEPA and USACE (1998) to estimate the dilution of the plume
13 in the far--field zone (IWA 2010). Far-field dilution of the effluent is caused
14 by diffusion and occurs over long distances (100 m to 10 km) and times (1 to
15 20 hours) (IWA 2010). Therefore, it is not appropriate to use the USEPA
16 and USACE mixing model for the far-field zone.

17 Since diffusion is a very slow and gradual process compared to turbulent
18 mixing, it is likely that the plume would have traveled towards shore due to
19 wind and wave motion along the coast until it reached a turbulent area like
20 the surf zone. An analogy for the ABCL's analysis is modeling how long it
21 takes for a parachutist to reach the ground after jumping out of an airplane.
22 There are two phases: a freefall phase and, after the parachute opens, a
23 canopy flying phase. Essentially, the ABCL modeled the canopy flying
24 phase with a freefall model. This causes the consultant to overestimate the
25 time it takes the plume to dilute and thus underestimates the time and area of

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27 ³ Soller, J.A., Schoen, M.E., Bartrand, T., Ravenscroft, J.E., and Ashbolt, N.J (2010) "Estimated human health risks
28 from exposure to recreational waters impacted by human and non-human sources of faecal contamination" Water
Research 44, 4674-4691.

1 the discharge's impact to the receiving water.

- 2 • Additionally, the ABCL Report and the District's Brief only partially cited
3 the receiving water limit for water contact recreation and therefore
4 misrepresented the potential harm. The receiving water limit for water
5 contact recreation contains another limit when the fecal to total coliform
6 ratio exceeds 0.1. This ratio is important, because when the ratio of fecal
7 coliform is high, it indicates that the water is contaminated with sewage and
8 has a high likelihood of containing human pathogens. Since the effluent is
9 treated wastewater, the fecal to total coliform ratio will exceed 0.1⁴.
10 However, the ABCL Report and the District's Brief only uses the much
11 higher standard of 10,000 CFU per 100 mL. Pursuant to the appropriate
12 ratio of 0.1, the District should have used the much lower standard of 1,000
13 CFU per 100 mL.
- 14 • The District tries to re-write the effluent standard in the permit (District
15 Brief, page 19, line 14) and claims that based on ABCL's analysis there was
16 no effluent violation. Only the Water Board can change the permit
17 conditions.
- 18 • The District claims that the ABCL conclusions are further supported by the
19 fact that Santa Barbara County EHS did not require a beach posting and
20 CDPH stated that shellfish growing areas would not be impacted (District
21 Brief, page 30, line 13). However, the District did not receive a return phone
22 call from the County until the following day (page 12, line 21). Furthermore,
23 CDPH's analysis is only for active commercial shellfisheries (Exhibit 21),
24 the closest one being 13 miles from the outfall. The Basin Plan and the
25 permit list four closely related beneficial uses which have significant overlap
26 between the beneficial uses of Commercial and Sport Fishing (COMM),

27 ⁴ The post incident samples taken by the District for the receiving-water harm analysis confirm that the fecal to total
28 coliform ratio exceeded 0.1.

1 Aquaculture (AQUA), Marine Habitat (MAR), and Shellfish Harvesting
2 (SHELL). There is no distinction between commercial and recreation
3 shellfish harvesting. Even if there is no active commercial or recreational
4 shellfish harvesting, the analysis by ABCL indicates that the beneficial use
5 was impaired because the receiving water limits were exceeded.⁵

6 **(b) Factor 2: The Physical, Chemical, Biological, or Thermal Characteristics of**
7 **the Discharge.**

8 The District confuses the analysis for this factor with the analysis for Factor 1. This factor is
9 based on the risk or threat of the material involved in the violation. The potential receptors are
10 defined in the Enforcement Policy as those “identified considering human, environmental and
11 ecosystem health exposure pathways.” There is no disagreement that undisinfecting wastewater is
12 hazardous to humans regardless of whether exposure is through water recreation contact or through
13 shellfish consumption. The District’s argument that this factor should be scored as a “0, or no
14 more than 1” (Brief, page 34, line 26) is inappropriate. Based on the lack of disinfection and
15 therefore the presence of high levels of fecal indicator bacteria such as coliform, the Prosecution
16 Team selected a 2 for this factor because the discharged material poses a moderate risk to potential
17 receptors. The District is arguing for a 0 (negligible risk) or a 1 (minor risk), even though high
18 levels of total coliform were present as indicated by its own analysis, indicating the likely presence
19 of high levels of human pathogens.⁶

20 **(c) Deviation from Requirement**

21 The Prosecution Team often selects a factor of “major” for any discharge in similar
22 enforcement actions, because the permits prohibit unpermitted discharges. However, given the
23 compliance efforts made by Carpinteria, the Prosecution Team selected a factor of moderate. There

24 ⁵ Also note that although it doesn’t affect the analysis, the 2012 Ocean Plan standards cited in the ABCL Report were
25 not in effect at the time of the incident. The 2012 Ocean Plan became effective August 19, 2013. Furthermore, the
depth of diffuser is 25 feet; not 30 feet (Exhibit 1, pg F-4 and District Brief, pg 9, line 16).

26 ⁶ Without supporting evidence, the District claims that over 20% of the POTW in Region 3 discharge to the Pacific
27 Ocean without any disinfection whatsoever (District’s Brief, pg 32, footnote 16). However, of the 16 ocean dischargers,
only two are not required to disinfect (12.5%). These two Dischargers, Watsonville and Monterey Regional, have
28 outfalls that are significantly further offshore (greater than 1 mile) compared to the District. Exhibit 22.

1 is no reason to reduce this factor beyond that selection. The chlorination system that failed was
2 over 14 years old and did not have an alarm to notify plant personnel when a failure occurred. The
3 Prosecution Team has provided citations to the permit and Mr. Sarmiento will testify that this type
4 of an alarm is industry standard. By waiting until a discharge occurred, Carpinteria took a gamble:
5 it could either invest in an alarm, updated equipment or more regular monitoring to be sure of
6 working equipment, or it could use the money not spent on alarms required by the permit for
7 penalties when discharges occurred.

8 **(d) Culpability**

9 The Prosecution Team selected a 1.1 for culpability, because the duration of the discharge could
10 have been lessened had Carpinteria acted differently. This is a different concept beyond having an
11 industry-standard SCADA alarm system. The Carpinteria plant operator who discovered the loss of
12 disinfection did not make his discovery upon first showing up to work that day in October. He had
13 to make his rounds, and discovered the failure several hours later. That indicates the need for
14 improved processes beyond alarms and notifications.

15 **(e) Cleanup and Cooperation**

16 Carpinteria mistakenly states that the Prosecution Team gave it a 1.0, a neutral factor, and
17 argues for a 0.75, the lowest factor that can be assigned. The Prosecution Team instead has always
18 assessed this factor as a 0.9, which serves to reduce the penalty. The Prosecution Team does not
19 see the need to reduce the factor further. While Carpinteria reported and fixed the SCADA system
20 after the discharge, it failed to complete the required monitoring. A discharger that fails to comply
21 with its permit should not be given the maximum reduction in any recommended penalty.

22 **(f) Economic Benefit**

23 In reviewing Carpinteria's modified economic benefit calculation of \$7,000 to conduct the
24 sampling, we would point out the following: assuming that a half-day boat rental is sufficient time
25 to load the equipment on the boat, travel from Santa Barbara Harbor to Carpinteria, collect the
26 samples, return to Santa Barbara Harbor, and unload (a ¾ day charter is \$1,300.00 for Finaddict),
27 that would leave \$178.57 to analyze the five samples for total and fecal coliform and enterococcus
28 at the laboratory. Carpinteria's estimate does not appear to include the cost of analyzing
enterococcus since this analysis was not included in the estimate of harm by ABCL and is only

1 required by the permit if there is a failure of disinfection or if there is three consecutive total
2 coliform exceedances (i.e., enterococcus analysis is not normally conducted by the District).

3 Carpinteria failed to include an estimate of staff time to collect the samples. Staff time would
4 include driving to Santa Barbara and returning to Carpinteria, chartering the boat and collecting the
5 two ocean samples, and then collecting three beach samples in addition to the laboratory staff time
6 to process the samples. For safety reasons, particularly for the ocean sampling, we estimated this
7 effort would take two staff eight hours at a cost of \$75.00/hour for a daily cost of \$1,200 per day.
8 The Prosecution Team's estimate did not include miscellaneous costs like gas, parking, ice, or
9 weekend rates.

10 We remind the Central Coast Water Board that the economic benefit in all matters is only a
11 floor, and that the penalty recommended by the Prosecution Team recovers the economic benefit
12 plus 10%, as required by the Enforcement Policy.

13 **(g) Staff Costs**

14 As stated in the Prosecution Team's Brief, it is seeking \$22,000 in staff costs, and is
15 excluding the staff costs of Michael Thomas, Harvey Packard, Todd Stanley, Thea Tryon, Julie
16 Macedo, and David Boyers. The \$22,000 figure was calculated at the time of the issuance of the
17 ACLC, on March 2, 2015. The current total is now much greater. Carpinteria argues that because
18 it entered into an evidentiary stipulation on April 10, 2015, that staff's effort to investigate the 2012
19 discharge, issue a Water Code section 13267 Order, correct the volume amount, participate in
20 settlement negotiations, draft the ACLC, and prepare for hearing should be negated. The
21 Prosecution Team disagrees, and Carpinteria's position is not consistent with the Enforcement
22 Policy, suggesting that such costs be added to the liability amount (Enforcement Policy, pp. 19-20).

23 **IV. Carpinteria's Reliance on ACLO R5-2010-0505 (City of Chico) is Misplaced**

24 The ACLC for the City of Chico matter was issued on March 17, 2009, and the ACLO⁷
25 referenced by Carpinteria was signed on January 28, 2010. A quick analysis of the Order
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27 _____
28 ⁷ This ACLO is submitted as Exhibit H to Carpinteria's Brief.

1 (paragraph 25) indicates that it was decided before the current Enforcement Policy went into effect
2 on May 20, 2010. Therefore, while the same general factors were analyzed under Water Code
3 section 13385, the ACLO has very little relevance for the Central Coast Water Board as compared
4 to the matters that were either decided or settled after the current Enforcement Policy came into
5 effect, and which the Prosecution Team relies on in comparison for this ACLC.

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7 **V. Advisory Team Questions of April 16, 2015**

8 **Questions Regarding the Complaint:**

9 (1) The Complaint states that the “maximum liability that the Central
10 Coast Water Board may assess pursuant to Water Code section 13385,
11 subdivision (c) is \$2,978,960, based on a volume of 297,896 gallons
12 plus \$10,000 per day.” 297,896 multiplied by 10 is \$2,978,960.
13 Adding \$10,000 per day (one day) totals \$2,988,960. Is it correct that
14 \$2,988,960 is the maximum penalty for the alleged violations described
15 in Attachment A?

16 **Response:** No. Section 13385 requires that the first 1,000 gallons be
17 subtracted from any discharge, resulting in the maximum penalty of
18 \$2,978,960.

19 (2) Similarly, if the MMP liability is potentially \$50,000, shouldn't the
20 total maximum liability be \$2,988,960 + \$50,000 or \$3,038,960?

21 **Response:** We did make an error here. This number should be
22 \$3,028,960 (again accounting for subtracting the first 1,000 gallons).

23 **Questions Regarding Attachment A:**

24 (1) The Prosecution concludes that the score for Factor 1 is two for being
25 Below Moderate. Please explain what criteria were compelling. Were
26 impacts observed? Is there evidence of harm to Beneficial Uses? Is
27 harm to Beneficial Uses reasonably expected due to the length of the
28 discharge (5 ½ hours) and the type of pollution (fecal coliform)?

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Response: We believe we have addressed this in both our opening (pgs. 3-6) and rebuttal briefs (pgs. 4-9).

(2) The Prosecution concludes that the score for Factor 2 is two, a moderate risk or threat. Please explain what criteria were compelling. What are potential receptors in the discharge area? 68 times the effluent limit appears to be significant. Why is there only a “moderate” concern for potential receptors?

Response: We believe that we have addressed this in both our opening (pgs. 6-7) and rebuttal briefs (pgs. 8-9). We usually score raw sewage a 3 or above, and took that into account here, to respond to your comment “why is there only a ‘moderate’ concern for potential receptors.” The Prosecution Team looked at things in context, both in terms of each factor, an appropriate final penalty, the deterrence for this discharger, for all dischargers, the likelihood of a similar discharge occurring again, and so on.

(3) Please confirm that chlorine monitoring is now constant and has an alarm that will promptly alert personnel in the event of an exceedance.

Response: The Prosecution Team finds that this question is more appropriately directed to Carpinteria, but that based on its planned upgrades, a new alarm is in place, as well as a backup pump in case the main pump fails.

(4) Was Carpinteria in violation of the permit by not maintaining such an alarm prior to the alleged violation? If so, is failure to maintain an alarm a separate violation of the permit?

Response: Since the Prosecution Team has argued that appropriate alarms and backup systems are required by the permit (*see* ACLC p. 26 and Attachment A, culpability), it is a separate violation. We exercised our discretion to not recommend a penalty for this violation.

(5) Under the “deviation from requirement” section of Factor 3, is the

1 requirement to chlorinate “rendered ineffective in its essential
2 functions” by the failure to maintain alarm systems?

3 **Response:** We did not believe the requirement was “rendered
4 ineffective,” we believe it was “partially compromised” by the
5 selection of a moderate deviation from requirement. Again, we
6 exercised our discretion in a conservative fashion. Carpinteria was not
7 ignoring its permit or disregarding its obligation. It did, however, fail
8 to consider the ramifications, especially the water quality impacts, of
9 all of its decisions. In reaching an appropriate penalty, the Prosecution
10 Team considers what Carpinteria did and what it should have done, and
11 how far apart those are. We find a “moderate” for Factor 3 accurately
12 reflects the efforts Carpinteria made toward achieving compliance.

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14 **VI. Conclusion**

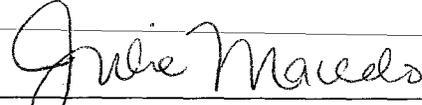
15 Every driver, even good drivers, gets his or her first speeding or parking ticket. While
16 Carpinteria is a well-run facility, the October 2012 discharge was significant in volume and is being
17 appropriately scored under the Enforcement Policy for its potential harm. Legally, the discharge
18 cannot be assessed as an MMP because it does not fit the legal criteria or definition. If the Board
19 would like to go through the Enforcement Policy methodology and assess a discretionary penalty in
20 an amount lower than the Prosecution Team’s recommendation, that is within the Board’s
21 discretion, as long as economic benefit is captured. However, that does not make the discharge an
22 MMP-type violation. The discharge is a discretionary-type violation, and the Prosecution Team has
23 applied the penalty methodology reasonably and conservatively where warranted based on
24 Carpinteria’s past operational history. The resulting penalty recommendation is appropriate and
25 consistent with the Water Code and the Enforcement Policy, and the Prosecution Team
26 recommends that the Board adopt ACLC NO. R3-2015-0011.
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1 May 13, 2015

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