

Restoration Advisory Board (RAB) Meeting, 1/24/2019

Former Fort Devens Army Installation, Devens, MA

Attendees (please see attached RAB sign in sheet)

Introductory Remarks:

Prior to the Army's presentation, Laurie Nehring (PACE) provided her notes and interpretations from a recent MassDEP public meeting regarding Conservation Law Foundation and Toxic Action Center petition for rulemaking to establish a treatment technique drinking water standard for PFAS held 1/16/2019

- Presentations were given by DEP, Conservation Law Foundation, Toxics Action, et al. with the overall objective of establishing MCL regulations for the "whole family" of PFAS compounds, not just two at a time as the federal government as the federal government does
- Primary presenters at the meeting proposed a limit of 0 to 2 ppt, but PACE feels this is unrealistic and is willing to accept a limit of 20 ppt for all PFAS compounds combined.
- Presentations from residents in Westfield and Cape Cod, military base exposures; large treatment facilities required.
- Breast Cancer Action: emphasized concern over exposure to mothers and children; Hyannis has high levels due to firefighting
- Jennifer Peterson, MA Waterworks: treatment or trigger level is needed; cost should not solely be placed on the town, but also on the source of the contamination; pushing for MCL.
- Woodard & Curran Engineer: more studies and peer-reviewed science are necessary; we need to slow down; however, most important objective is to get all PFASs out of the environment
- Representative from American Chemical Council (ACC): all regulations on PFAS are wrong and/or unnecessary
- Clean Water Action (wife of firefighter): talked about AFFF exposure to firefighters as well as PFAS in waterproof clothing; she is having new waterproof firefighting suits tested for PFAS; husband has cancer; testicular cancer is number one cancer in firefighters.
- Speaker from Silent Spring: NJ has MCL of 14 ppt, which is enforceable
- Suzanne Chapman (toxicologist): we have analytical limitations, can't get down to 1ppt; we should be aware of precursors because they can turn into PFASs; precursors end up in landfills because they're now bio-solids; overall process is complex.
- Mass DEP (final speakers): detailed all the PFAS work they are currently undertaking.
- It was noted that Mass DEP has 10 business days to rule on the petition
- Slides for this presentation from DEP are on website under, "Petition for rulemaking to establish a treatment technique drinking water standard for PFAS"
- Website: <https://www.mass.gov/lists/pfas-information-a-petition-for-rulemaking-to-establish-a-treatment-technique-drinking-water>

Presentation: see powerpoint slides dated 1.24.19, which discussed (1) the new website for Former Ft. Devens, (2) the community involvement plan process, (3) status on PFAS remedial investigation sampling for Areas 1, 2 and 3; (4) results for Area 1; and next steps.

Questions following or during presentation:

- 1. What will happen if/when a new MCL for Massachusetts is established? (PACE)**
 - a. It depends on how they're promulgated. The standards for MA will be forwarded to Army headquarters. Attorneys and programmatic officials at Army headquarters—in consultation with EPA and other federal entities—will then provide guidance. Process is long and complex.
 - b. ARAR is an “applicable or relevant and appropriate requirement.”
 - c. If there's risk, the Army can use ARARs in the feasibility study to determine what the remedy should be.
 - d. When a cleanup is performed, risk is assessed. If you find an unacceptable risk, then a cleanup may be triggered. ARARs are used during this process.
 - e. At the next meeting, Army will have some slides that will review the CERCLA process.
 - f. Note that drinking water regulations differ from cleanup regulations.
- 2. Comment: Previously on Cape Cod, perchlorate was addressed without an MCL. In other words, clean up actions have taken place locally without an established MCL. (DEP)**
- 3. Comment: There is concern over paying for the drinking water system treatment system in Ayer because Ayer is not waiting for DEP, EPA, Army, et al., to figure out what's going on. (PACE)**
- 4. Presentation Begins (KGS)**

Is the website searchable? (PACE)

 - a. No, however data can be downloaded and can be searched for within the pdf.
- 5. Who put together the website? (DEP)**
 - a. USACE created the website.
- 6. What triggered its creation? (DEP)**
 - a. The website was created in response to comments at prior RAB meetings and a desire by the Army to effectively share data with the general public.
- 7. Comment: Keep up the good work. (DEP)**
- 8. Clarification of figures (Town of Ayer, DPW Superintendent):**
 - a. Well 8 was always above 70 ppt, but the blend was below 70ppt; out of caution, the well was taken off line. Ayer uses well 1 as necessary. Due to high iron and manganese concentrations, Ayer has to blend the wells.
- 9. Question to Town of Ayer: Has Littleton sampled their wells? (PACE)**
 - a. “I do not believe Littleton has sampled their wells.”
 - b. Probably more than 50% of supplies outside of MWRA haven't been tested (unofficial data). DEP has information on their website regarding which communities have been tested.
- 10. Question to Town of Ayer, DPW Superintendent: Are the numbers changing due to wells being taken offline and different wells pulling in more water? (PACE)**
 - a. Well 8 is being pumped to waste. There was a slight uptick lately in PFAS values recently after a decrease. There was a lot of precipitation and groundwater flow, which may have played a role in the change.

- 11. Question to Town of Ayer, DPW Superintendent: Are the blended wells in the same wellfield? (unknown)**
- Yes, all three are within ~50-75 ft from the other.
- 12. Question to Town of Ayer, DPW Superintendent: Which well is closest to Devens? (unknown)**
- Well 8 is closest to Devens
- 13. Question to Town of Ayer, DPW Superintendent: Where is well 8 being discharged?**
- Well 8 is being discharged into Grove Pond. The Department of Public Works has a discharge permit to do so.
- 14. Question to Town of Ayer, DPW Superintendent: Does well 7 look like it is being impacted now that it's online? (DEP)**
- It's hard to tell because we don't know where the source is. The effect of pumping well 8 to waste is unknown. More hydrogeologic data is necessary.
- 15. Could future figures include the Mass DEP sum of the 5, as well? (PACE)**
- It will be taken into consideration and data for all compounds is available on the website.
- 16. In slide 7, were these results also below 70 ppt for the MA sum of the five? (unknown)**
- Yes
- 17. With regard to slide 7, what is the background data like for the entire area including private wells? Including the sum of the five compounds? (ECR)**
- All available results were non-detects unless mentioned in the presentation. Harvard and Shirley had low levels between non-detect and ~10 ppt. Areas closer to the rotary (Rt 110) had slightly higher concentrations, around 30 ppt.
- 18. CIP Update onward (presenter: Amy Brand, Jacobs)**
- Will this new Community Involvement Plan (CIP) replace the old CIP? (PACE)**
- No, but this will add to the prior CIP and explain what the Army plans to do and when.
 - Also, the new CIP should do the following: assess what people already know about the project, what they want to know, how to get information, and if they want to get information, what kind of information do they want to receive.
- 19. Since Devens isn't a town, how will the complexity of dealing with multiple towns be addressed in the CIP process? (PACE)**
- This should be answered in next slide. Army will be talking to people in all four towns, including those who attended meetings, people who have had their wells sampled, community leaders, et al.
- 20. Comment: Devens newspaper is in between big newspapers, e.g., the Lowell Sun and the newspaper in Fitchburg. The way to get current conversations is to go online; Facebook and listservs; suggestions can be given by PACE (PACE)**
- During the CIP process, the Army plans to reach out to PACE and others for their suggestions.
- 21. Could the CIP include Sudbury Annex and Hingham and Annex? (DEP)**
- The Army will take a look at it because each location is typically treated as its own separate area.
- 22. What do you do with the outcome of the plan?**
- The CIP becomes the official plan for community involvement on the project. If the Army states it will perform an action in the CIP, the Army will follow through.

23. What issues will be addressed in the CIP? (PACE)

- a. It will depend upon the results of the entire process including interviews. Areas of concern for most people will be noted. It's important to get input from many constituents, not only those who are well-informed.

24. What are some examples of community resources? (PACE)

- a. If a town has an e-blast service and town agrees to use the service for this purpose, information could be shared via e-blast.
- b. One best approach is to utilize the ways the community already communicates. The Army can tap into these ways.
- c. One priority is moving beyond sending information solely to people who are highly interested.

25. What is the schedule for something like this? (Town of Ayer, DPW Superintendent)

- a. The Army will be looking to perform draft interviews between now and May, i.e., spring of 2019.

26. Is this an army requirement? (unknown)

- a. It is a requirement under CERCLA. The DOD follows EPA's guidance.

27. Remedial Investigation (Presenter: KGS) >>>

How are we managing without EPA being here? (PACE)

- a. We are proceeding with our field investigation. Field work has not been slowed down due to the government shutdown. The Army is awaiting EPA comments on the Area 3 work plan.

28. Is there a scale showing how far things are from one another? (PACE)

- a. On later figures, scales are provided. Some figures in this presentation are zoomed in, so they are most easily visible on a presentation screen. Scales will be added to figures in the future.

29. Will future groundwater flow direction indicators take into account wells that are in use? (PACE)

- a. Yes.

30. There are other wells on the north side of Grove Pond, is there a time frame on those? (Town of Ayer, DPW Superintendent)

- a. Not yet, the Army just recently received permission from town of Ayer.

31. In the Area 1 field sampling plan was there a specific number of monitoring wells specified? (ECR)

- a. The Army had planned 27 wells in Area 1.

32. What are the green spots on the Area 3 figure? (PACE)

- a. The green spots indicate GIS coverage of wetlands. This figure is a zoomed-in excerpt from the field sampling plan.

33. Why aren't AOC 20 and 21 labeled in figures? (PACE)

- a. AOC 20 and 21 were cutoff in the image, which was chosen for better viewing on a presentation screen.

34. In Area 3 is there a remedial action plan? (Town of Ayer, DPW Superintendent)

- a. Yes, there is currently on-going remediation in Area 3 to address the solvent plume.

35. Would that remedial action plan be modified based on this study? (Town of Ayer, DPW Superintendent)

- a. First, the Army performs the remedial investigation to determine the nature and extent of PFAS contamination—including where the groundwater is flowing—then looks at the risk associated with PFAS in the specific media. Based on these results, the Army would then perform a feasibility study.
 - b. Currently, the solvent plume is being remediating via injections of substrates, which has been every effective.
- 36. Is the Devens wellfield included in the results? (Town of Ayer, DPW Superintendent)**
- a. No. The Devens wellfield is not operational, so the Army is unable to sample any of these wells.
- 37. Could you conclude if there was a specific depth where the highest concentrations were found? (unknown)**
- a. This will be covered in future slides.
- 38. Was AOC 57 an area where soil was removed? (DEP)**
- a. Yes, there were soil removal actions from AOC 57 Areas 1, 2, and 3. These took place due to petroleum and PCB contaminated soil.
- 39. Clarification, was the new soil the source of PFAS? (PACE)**
- a. No, it's likely that the historic activities responsible for the petroleum and PCB contamination were also the source of PFAS contamination.
- 40. What was the function of the area at AOC 57 Areas 2 and 3? (PACE)**
- a. This was a military/industrial area where vehicle maintenance and repairs were performed. Vehicles included armored tanks, trucks, etc.
 - b. These particular areas are associated with some drainage that brought waste down from other locations to AOC 57 Areas 2 and 3.
- 41. How far is AOC 74 from the Grove Pond well field? (PACE)**
- a. A later slide will clarify this. The Grove Pond well field appears very close to the site.
- 42. Was there ever a drainage system or topographic feature like a catch basin in AOC 74? (Town of Ayer, DPW Superintendent)**
- a. Historically, it looks like there were no drainage structures; it appeared flat. Presently there is a large drainage basin in AOC 74.
- 43. Where does the water flow direction on the figure come from? (ECR)**
- a. The water flow direction comes from prior modeling; it is uncertain because the flow model was made for a different project and it's at the edge of the model.
 - b. The RI data, including monitoring well data, should help reduce model uncertainty.
- 44. Why can't you drill in the wetlands? (DEP)**
- a. A drill rig would sink into the wetlands. Also, the Army doesn't want to cause harm to the wetlands.
- 45. Are you considering looking at spring interaction, which is used in Cape Cod projects? (DEP)**
- a. No, we are not considering that at present. We are planning to install wells with screens at different intervals to give a better idea of vertical flow through the aquifer.
 - b. Also, with the vertical profile data, we're finding that the contamination closer to the brook is relatively shallow.
 - c. The Army will use all these data to determine if contamination is flowing into the brook.
- 46. At what depths are most of the exceedances? (PACE)**
- a. Most exceedances in AOC 74 are 10-40 ft thick.

- b. High concentrations were found at 74VP-18-05 from 24 ft to 54 ft below ground surface. The six intervals below this were below the EPA LHA.
 - c. The water table in this area is at ~20 ft.
- 47. Are some of the black triangles on private property? (PACE)**
- a. The Army will be putting these locations on town property. The Army will be working with the town of Ayer to determine property boundaries and will contact home owners to let them know where and when drilling will take place.
- 48. Did you take any water samples where the brook flows into Grove Pond? (Town of Ayer, DPW Superintendent)**
- a. This will be covered in a future slide.
- 49. How deep were the surface water samples collected? (PACE)**
- a. They were collected near the surface by manually capturing water samples. The samples were not collected at depth.
- 50. Is Balch Pond the highest? (Town of Ayer, DPW Superintendent)**
- a. Yes, the concentrations of the Balch Pond surface water is the highest of the surface water samples taken in the Grove Pond area.
- 51. Are other compounds being looked at? (PACE)**
- a. Yes, the Army is sampling for all 16 PFAS compounds. All data will be incorporated as part of the RI.
 - b. For this sort of presentation, PFOS and PFOA are looked at in order to focus the discussion.
 - c. The website includes all data.
- 52. Could we include a table of data in the future for all compounds? (PACE)**
- a. We could do so in the future. However, at present toxicology information is lacking for other compounds beyond PFOS and PFOA.
- 53. What stood out to you or surprised you from the data? (Town of Ayer, DPW Superintendent)**
- a. There were different signatures in different AOCs. These will be evaluated with respect to contributions to source areas.
 - b. In the eastern side of the Grove Pond wellfield area, the Army found more PFOA, while the western side had more PFOS. The Army will use this information to determine if there is one source or more than one source.
- 54. Is there anything the stood out that would cause you to install more monitoring wells? (unknown)**
- a. Once we get an understanding of the nature and extent, this will inform the best places to install new monitoring wells.
 - b. The Army has gone from ~50 proposed vertical profiling locations to ~78 at the time of the meeting.
- 55. Is there enough scientific knowledge out there to determine how these compounds are changing and morphing? (PACE)**
- a. Much study is being conducted and research is ongoing. PFOS and PFOA are end products and other PFAS compounds can break down to form these compounds.
- 56. How are you going to address the ecological risk assessment if so much is uncertain with respect to PFAS? (DEP)**

- a. The Army is currently putting together a work plan that includes human health and ecological risk. Since we don't have all the numbers for human receptors, the Army is trying to collect as much data as possible and compare it with background concentrations.
- b. We lack the ability to perform quantitative risk assessment. However, we'll get ballpark figures to direct future sampling.
- c. As part of the Tri-Services PFAS work group, the Air Force is subsidizing a large research effort that is geared towards ecological receptors and systems. We hope that in a few years the data from the Tri-Services group and other research efforts will be available for use.

57. Comment: It is unfortunate that in the United States, a compound is considered safe until proven dangerous, while in other countries a compound must be proven safe prior to initial use. (PACE)

58. Are airborne contaminants or rainfall being considered? (Mass Development)

- a. In the ecological sampling we're planning, we'll be looking at background or reference areas, which incorporate regional effects. Indirectly, we will be looking at non-point source contributions, e.g., airborne contaminants or rainfall.

59. When will the next RAB meeting take place?

- a. The next meeting will take place on April 18th at 6:30PM in Ayer, MA at Ayer Town Hall.