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2 Location: Frances C. Richmond Middle School Library, Lyme Road, Hanover NH

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4 Members Attending: Tim McNamara, Dartmouth College, Chair
5 Darrell Moore, USACE-NAE, Co-chair
6 Ken Richards, NH DES
7 Kristine McDevitt, Citizen Volunteer
8 Kate Connolly, Citizen Volunteer, Town of Hanover
9 Roelof Versteeg, Citizen Volunteer
10 Jonathan Brush, SAU 70
11 Dick Berg, Citizen Volunteer (by speakerphone from Florida)

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13 Also in attendance: Rod Rustad, AMEC Scientist
14 David Van Wie, AMEC, RAB Facilitator
15 Larry Cain, USACE-NAE
16 Larry Danyluk, ERDC/CRREL
17 Bryan Armbrust, ERDC/CRREL
18 Jeffrey Pickett, AMEC Project Manager
19 Scott Calkin, AMEC Scientist
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22 Chairman Tim McNamara called the meeting to order at 4:02 pm.

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24 1. Welcome & Introductions

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26 Mr. McNamara welcomed the attendees. RAB team members and attendees in the audience
27 introduced themselves.

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29 2. Minutes of Meeting #1

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31 Minutes of Meeting #1 were presented, incorporating comments received from members via
32 email on earlier draft. Mr. McNamara asked for further comment. No comments were offered.
33 Motion to accept the minutes was made by Darrell Moore; seconded by Jonathan Brush.
34 Motion was approved with a unanimous vote.

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36 3. Amended Operating Procedures

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38 David Van Wie distributed a redline version of the Operating Procedures with amendments
39 requested by RAB members at the previous meeting regarding the criteria and process for
40 approving new members of the RAB. No other amendments were proposed. Motion to accept
41 the amended procedures was made by Kristine McDevitt; seconded by Kate Connolly. Motion
42 was approved with a unanimous vote. Mr. Moore directed AMEC to provide a clean version of
43 the revised procedures to the RAB members.

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45 4. New Candidates for the RAB

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47 Mr. McNamara noted that the RAB has received two requests from new candidates to join the
48 RAB:
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- 1 • Dr. Walter Noll of Etna, NH is a Professor of Pathology at Dartmouth Hitchcock Medical
- 2 Center,
- 3 • Mr. Stephen Gaughan of Norwich is an employee at CRREL with children at the CRREL
- 4 daycare center.

5
6 Copies of the candidates' interest forms were distributed. Mr. McNamara summarized their
7 backgrounds, and asked for comments. Members noted that having someone with a medical
8 background, and having a CRREL on-site employee would be very valuable perspectives to add
9 to the RAB. With no objection to the candidates, it was moved by Mr. Brush and seconded by
10 Ms. Connolly that the two candidates be recommended to the Commander for approval and
11 invitation to join the RAB at the next meeting.

12 13 5. Community Relations Plan

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15 The February 2013 Community Relations Plan was provided to the RAB members at the last
16 meeting to review. Mr. McNamara had provided some written comments to Mr. Moore and Mr.
17 Van Wie for consideration in future revision of the Plan. Mr. McNamara summarized his
18 comments, and asked for other comments on the Plan.

19
20 Ms. McDevitt commented that the plan appears to be very comprehensive, but because much of
21 it was written over a year ago, the plan needs updating and some additional specifics about how
22 to communicate information to the public. Members suggested that the CRREL "TCE" web site
23 also needs to be updated to make information easier to find. Links to a website for the
24 Environmental Restoration Program should be provided on the SAU 70/Middle School website,
25 the Town website and communicated to the public through the Town ListServe. Mr. Van Wie
26 and Mr. Armbrust noted that website updates are already being drafted to remove dated
27 information from earlier in 2013, and to add current information.

28
29 Mr. Versteeg asked that the CRP be revised to address Mr. McNamara's comments and other
30 needed updates, and then provided to the RAB for further review. Mr. Van Wie asked that any
31 specific suggestions be sent to him directly. Mr. Moore noted that he would direct AMEC to
32 prepare a revised CRP to be provided to the RAB for comment before sending it for approval by
33 the Commander.

34
35 Ms. McDevitt also suggested that the revised FAQ and other summaries should be provided to
36 the public through other avenues (not just the website), such as through the school newsletters.

37
38 Mr. McNamara asked why the Administrative Record (AR) is housed at the Kilton Library in
39 Lebanon, rather than the Howe Library in Hanover. Mr. Moore responded that earlier contact
40 with the Howe Library indicated that they were not interested in housing the AR. Mr. McNamara
41 and Ms. McDevitt said they would contact the Howe Library to request that it accept the AR so it
42 would be more convenient to CRREL neighbors and Hanover residents. Mr. Moore and Jeff
43 Pickett from AMEC agreed to pursue this transfer. Copies of the updated Administrative Record
44 Index were distributed to the RAB members.

45 46 6. Overview of CERCLA Process

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48 Mr. Moore reviewed a diagram that showed the CERCLA process and important milestones,
49 working through the various steps required under federal law and regulations. Mr. Moore
50 explained the purpose and scope of the following steps:

- 1 • Preliminary Investigation/Site Inspection – this stage is effectively completed for CRREL
- 2 • Remedial Investigation (RI) – now underway, will wrap up later this fall
- 3 • Feasibility Study of remediation options – will begin this fall and will take about 6 months
- 4 • Record of Decision – will go to public for formal comment and review about 12 to 14
- 5 months from now
- 6 • Remedial Design – specific design of one or more technologies and mitigation measures
- 7 • Remedial Action Construction
- 8 • Remedial Action Operation
- 9 • Long Term Management and monitorim (LTM)

10
11 Larry Cain of USACE noted that there are/have been a number of Interim Actions that have
12 been designed, constructed and operated ahead of the full formal Record of Decision. Interim
13 Actions are taken to address more immediate risks or possible worsening of conditions or
14 impacts. In addition, pilot studies may be undertaken at various points in the process to gain
15 information about remedial options, site conditions/constraints, new technologies or cost or
16 feasibility considerations.

17
18 In response to questions from RAB members, Mr. Moore and Mr. Richards explained that a
19 version of the CERCLA process was followed in the 1990s, and the CERCLA process was
20 restarted in 2010 when USACE-NAE took over program management. With changing
21 information or new technologies, the CERCLA process may be phased for different “Operable
22 Units” such as different contaminants/constituents, parts of the property, or media (e.g. soil vs
23 groundwater vs vapor). The CERCLA steps may also be cyclical with steps revisited as
24 information is evaluated or new information arises.

25
26 Mr. Moore summarized some of the Interim Actions that have already been implemented,
27 including the sub-slab system in the childcare center, the groundwater treatment plant, and the
28 pilot study of sub-slab depressurization in part of the Main Lab. Mr. Moore also mentioned that
29 some larger interim measures may require an Engineering Evaluation and Cost Analysis
30 (EECA) prior to expenditure of significant funds. All of interim actions must be documented in
31 the Administrative Record.

32
33 Ms. McDevitt asked how the CERCLA process evaluates other nearby sites or past spills, such
34 as the old dry cleaner or gas station nearby. Mr. Moore said information from nearby sites was
35 fully reviewed with NHDES to determine any relationship between different sites, including any
36 comment chemicals or constituents. Data from those sites have been evaluated.

37 38 7. Physical Geology of CRREL Region

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40 Rod Rustad of AMEC made a video-graphic presentation of 3-dimensional images of the site
41 geology, showing impacts from glaciation and the historic Lake Hitchcock that flooded the (now)
42 Connecticut River valley at the end of the last ice age. He showed various overhead and cross-
43 section views of bedrock, groundwater table, and deposited soils.

44 45 8. Overview of Past Investigations as CRREL

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47 Using the same 3-D model, Mr. Rustad showed the location of the groundwater extraction wells,
48 and the locations and depths of monitoring wells installed over the period from 1992 to 2000.
49 He used the wells to show the location of past investigations and how the understanding of the
50 site, or Site Conceptual Model (SCM) has evolved over time. He explained how TCE

1 contamination in the groundwater is contained on the site by the high volume pumping of
2 groundwater extraction wells.

3
4 Mr. Rustad explained how the different layers of soils above the groundwater table influence the
5 concentration or possible movement of TCE in soil vapor. He noted that vapors do not move
6 like groundwater, and that the vapors do not come from the groundwater itself. The impacted
7 area of vapor is generally in steady state unless some force acts to move the vapors. He
8 showed the correlation between higher soil vapor concentrations at different depths to the type
9 of soil layers present at those depths, with the higher measured concentrations in the deeper
10 fine grained sand layer.

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12 9. Next Meeting

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14 The next meeting is scheduled for Wednesday, March 26 at 4:00 to 6:00 pm in the same
15 location (Middle School Library). The agenda for the next meeting will include:

- 16 • Review of Community Relations Plan revisions
- 17 • Review of risk assessment methods and criteria
- 18 • How to interpret sampling results
- 19 • Overview of work plans for additional investigations

20
21 Ms. McDevitt asked that the information provided in the presentations be summarized into a 3 or
22 4 page document for sharing with others.

23
24 10. Comments and questions from the public

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26 Mr. Lenny Siegel of the Center of Public Environmental Oversight (CPEO) of Mountain View,
27 CA introduced himself and told the RAB that he is surveying communities to learn about how
28 well the government facilities and agencies are communicating with and engaging the public in
29 the facility restoration process.

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31 11. Meeting adjourned at 6:10 pm.