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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

JAN 19 2012

**MEMORANDUM**

**SUBJECT:** Region 3 Request for a Emergency Removal Action at the Dimock Residential Groundwater Site in Dimock Township, Susquehanna County, Pennsylvania

**FROM:** Gilberto Irizarry, Director
Program Operations and Coordination Division

**TO:** Lawrence M. Stanton, Director
Office of Emergency Management

This memorandum requests your concurrence with the response proposed under the Region 3 Action Memorandum request for an emergency removal action at the Dimock Residential Groundwater Site. The actual approval of this action memo is done by the Region 3 Approving Official (Associate Director of the EPA Region 3, Office of Preparedness and Response, Hazardous Site Cleanup Division) or designee. Region 3 has submitted this action memo for concurrence to OEM under the nationally significant or precedent-setting policy. The site is not on the National Priorities List (NPL).

This removal action has been reviewed by a number of headquarters offices, including OGC, OECA, OSWER, and the Office of the Administrator.

Based on information from the draft final action memo and discussions with Region 3 and other pertinent headquarters offices, I recommend that we concur with the action proposed by Region 3. Please indicate your decision on the attached concurrence memorandum.

Attachment

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION III**
**1650 Arch Street**
**Philadelphia, Pennsylvania 19103-2029**

**SUBJECT:** Concurrence on a Request for Funding for a Removal Action at the Dimock Residential Groundwater Site, Intersection of PA Routes 29 & 2024 Dimock Township, Susquehanna County, Pennsylvania

**FROM:** Dennis P. Carney, Associate Division Director
Hazardous Site Cleanup Division (3HS30)
Office of Preparedness and Response

**DATE:** 1/18/12

**TO:** Lawrence M. Stanton, Director
Office of Emergency Management

**ATTN:** Gilberto Irizarry, Director
Program Operations and Coordination Division

**ISSUE:**

EPA Region III is requesting concurrence on the attached "Request for Funding for a Removal Action at the Dimock Residential Groundwater Site, Intersection of PA Routes 29 & 2024 Dimock Township, Susquehanna County, Pennsylvania. Based on available data, the OSC has determined that home wells in the Dimock area contain hazardous substances some of which are not naturally found in the environment. The hazardous substances are at levels that present health concerns at four of the homes. These specific homes have been dependent upon donated water for drinking and/or household use and the reliability of the sources for donated water is at this point uncertain. The presence of hazardous substances constitutes a release or substantial threat of a release and the situation meets the criteria for conducting a removal action under Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The OSC has determined that funds in the amount of $100,000 are needed to mitigate the health concerns initially at four homes and therefore proposed the actions included in this Action Memorandum. The action includes home well sampling at approximately 61 homes within the Site area, based upon historical information and a sampling rationale developed. This sampling may result in recommendations for further EPA action, including the provision of alternate water at additional homes.

The OSC has determined that this Site meets the criteria for a Removal Action under Section 300.415 of the NCP. Because the conditions at the Site meet the criteria set forth in Section 300.415 of the NCP, and the Region finds that the conditions at the Site described above constitute a public health concern warranting attention, I am requesting your concurrence on the request for funding for the removal action based on redelegation of authority R-14-2 pertaining to nationally significant or precedent-setting removals. This approval is provided pursuant to

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EPA delegation of authority 14-2 which gives the Associate Division Director of the EPA Region III, Office of Preparedness and Response, Hazardous Site Cleanup Division authority to approve CERCLA removal actions.

Because the action appears to be nationally significant and/or precedent-setting, the Region will continue to coordinate closely with Headquarters. EPA also will maintain coordination and communications with PADEP. In taking this action, EPA is aware of and has considered the potential applicability of the natural gas exclusion under CERCLA, the Bentsen Amendment under the Resource Conservation and Recovery Act (RCRA), and the exclusions to the definition of 'underground injection' under the Safe Drinking Water Act (SDWA). EPA has concluded that this action is appropriate under CERCLA at this time.

The Action Memorandum is attached for your review. My approval awaits your concurrence.

Concur

Director, Office of Emergency Management

1/19/2012
Date

According to the redelegation, authority to non-concur remains with Assistant Administrator. If you choose not to concur on this action, please forward this memorandum to the Assistant Administrator.

Non-Concur:

Assistant Administrator for Solid Waste and Emergency Response

Date

cc: Mathy Stanislaus, AA-OSWER

Attachment: January 18, 2012 Action Memorandum

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION III**
**1650 Arch Street**
**Philadelphia, Pennsylvania 19103-2029**

**Subject:** Action Memorandum - Request for Funding for a Removal Action at the Dimock Residential Groundwater Site, Intersection of PA Routes 29 & 2024 Dimock Township, Susquehanna County, Pennsylvania

**From:** Gerald T. Hoot for Richard M. Fetzer, On-Scene Coordinator
Eastern Response Branch (3HS31)

**To:** Dennis P. Carney, Associate Division Director
Hazardous Site Cleanup Division (3HS30)

JAN 19 2012

## I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of an emergency removal action to prevent, limit, or mitigate the threats posed by the presence of hazardous substances at the Dimock Residential Groundwater Site (the "Site"), pursuant to Section 104(a) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9604(a) (CERCLA). The Site is located in Dimock Township, Susquehanna County, Pennsylvania. The OSC has initiated a removal site evaluation in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300. The OSC has determined, based on Pennsylvania Department of Environmental Protection (PADEP) and Cabot Oil and Gas Corporation (Cabot) sampling information, consultation with an EPA toxicologist, the Agency for Toxic Substances and Disease Registry (ATSDR) Record Of Activity (AROA), issued 12/28/11, and the recent EPA well survey effort, that a number of home wells in the Dimock area contain hazardous substances, some of which are not naturally found in the environment. Inorganic hazardous substances are present in four home wells at levels that present a public health concern. These four specific homes have been dependent upon donated water for drinking and/or household use and the reliability of the sources for donated water is at this point uncertain.

Historic drilling activities in the Dimock area may have used materials containing hazardous substances. Spills and other releases have been documented by PADEP from these drilling activities. There is reason to believe that a release of hazardous substances has occurred. The presence of hazardous substances in the four home wells constitutes a release or substantial threat of a release and the situation meets the criteria for conducting a removal action under Section 300.415 of the NCP. The OSC has determined that funds in the amount of $100,000 are needed to mitigate the human health concern initially at four homes and therefore proposes the actions included in this Action Memorandum. This action includes provision of alternate water to four homes and home well sampling at approximately 61 homes within the Site area.

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## II. SITE CONDITIONS AND BACKGROUND

A. Background

1. Site Description - The Site area is located in Dimock, a rural area of northeastern Pennsylvania in Susquehanna County. A map of the area is included below.
2. History - Cabot began drilling for natural gas in the Dimock area in 2008. Methane contamination was detected in private wells thereafter in concentrations exceeding those previously found. PADEP had the lead in investigating the environmental complaints in Dimock. PADEP entered into a Consent Order and Agreement (CO&A) with Cabot which required permanent restoration or replacement of the affected water supply. A public water line was initially considered. PADEP later modified the CO&A to require installation of "gas mitigation" systems for 19 homes served by 18 private wells in the Site area.[1] Until the gas mitigation systems were installed, Cabot was to provide a temporary water source. Some well owners, within the scope of the PADEP CO&A, have gas mitigation systems installed, but others do not. While the gas mitigation systems were designed to remove methane, a potential exists that they may remove some hazardous substances as a by-product of their operation. Regardless, EPA does not know what, if any, hazardous substances these "gas mitigation" systems, originally designed to address methane, are removing. Therefore, EPA is including both pre- and post-treatment sampling in the scope of this action. Furthermore, there are

[1] It had originally been reported that 19 homes were served by the 18 wells included within the scope of the CO&A but the door-to-door home well survey conducted to date by EPA has identified that there are currently 21 homes served by 20 wells on those same properties.

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other homes served by private wells that were not covered by the scope of the PADEP CO&A, but are within this Site area.

III. Quantities/Types of Substances Present

1. Arsenic* – Arsenic is a naturally occurring element widely distributed in the earth's crust. Arsenic may also be present at elevated concentrations in the groundwater due to the use and effects of drilling fluids. Arsenic is classified as a known human carcinogen. This classification is based on animal and human studies, which indicate an increased risk for developing cancers of the skin, lung, bladder, kidney, liver, and prostate from consuming arsenic containing water. Non-cancer health effects associated with ingestion of arsenic include circulatory problems and skin damage.
2. Barium – Barium is a silvery-white metal that exists in nature only in ores containing mixtures of elements. It combines with other chemicals such as sulfur or carbon and oxygen to form barium compounds. Barium sulfate is sometimes used by doctors to perform medical tests and to take x-rays of the gastrointestinal tract. Ingesting drinking water containing levels of barium above the EPA drinking water guidelines for relatively short periods of time can cause gastrointestinal disturbances and muscle weakness. Ingesting high levels for a long time can damage the kidneys. Barium is known to be a common constituent of drilling fluids.
3. Bis(2-ethylhexyl)phthalate (DEHP)* - DEHP is a manufactured chemical that is commonly added to plastics to make them flexible. The phthalates are generally considered to be of slight to moderate toxicity. DEHP may be irritating to the eyes, skin, and mucous membranes. Mild gastric disturbances and diarrhea may occur following ingestion of larger doses. Central nervous system (CNS) depression may occur if large amounts of phthalate acid esters are absorbed. EPA has determined that DEHP is a probable human carcinogen. These determinations were based entirely on liver cancer in rats and mice. DEHP is known to be associated with drilling activities.
4. Glycol Compounds (including Ethylene Glycol* and 2-Methoxyethanol) – Glycol compounds are a class of organic compounds belonging to the alcohol family. Exposure to large amounts of ethylene glycol can damage the kidneys, nervous system, lungs, and heart. Exposure to high concentrations of 2-methoxyethanol is associated with testicular damage, impaired nervous system, and anemia. Glycols are known to be common in drilling fluids.
5. Manganese* – Manganese is a naturally occurring substance found in many types of rock and soil. Manganese is also known to be a constituent of some specialized drilling fluids. Eating a small amount of manganese from food or water is needed to stay healthy. At high levels, it can cause damage to the nervous system.

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6. Phenol* - Phenol is both a manufactured chemical and a natural substance. Phenol is used as a disinfectant and is found in a number of consumer products. Skin exposure to high amounts can produce skin burns, liver damage, dark urine, and irregular heart beat. Various phenols are commonly associated with drilling fluids.
7. Sodium* – Sodium is an essential nutrient and occurs naturally in most foods. Excessive sodium intake is associated with high blood pressure. Various sodium containing compounds are associated with drilling fluids.

*A hazardous substance, as defined under CERCLA Section 101(14) and designated in Section 302.4 of the National Contingency Plan (NCP), 40 C.F.R. Section 302.4.

**B.** National Priorities List

The Dimock Residential Groundwater Site is not on the CERCLA National Priorities List (NPL).

**C.** State and Local Authorities' Roles

Cabot had been sampling the home wells and providing bottled drinking water and alternate water for non-potable use, through a Consent Order and Agreement (CO&A) with PADEP. The CO&A applies only to a specific list of homes, and does not include other homes, also located within the same geographic area. Some of these additional homes have had limited sampling conducted by Cabot and/or PADEP. PADEP determined that Cabot has complied with the terms of the CO&A, as it applies to the provision of temporary water, and subsequently approved Cabot's request to stop the delivery of alternate water.

## IV. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b)(2)(i), (ii), and (vii) of Section 300.415 directly apply to the conditions found at the Dimock Residential Groundwater Site.

In evaluating the situation, the OSC first considered whether hazardous substances were present in a home well. The levels of those hazardous substances were then considered against primary Maximum Contaminant Levels (MCLs). They were also considered for non-cancer risk to determine if the levels generate a hazard quotient greater than 2. The presence of inorganic and organic chemicals in a number of wells supports the need for this action.

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**300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants"**

The hazardous substances listed above, present in water from home wells at this Site based on sampling data described below, could cause adverse health impacts when chronic exposure through drinking water or other uses of water in the home occurs. There are other contaminants discussed in the Agency for Toxic Substances and Disease Registry's (ATSDR) Record of Activity (AROA) issued on December 28, 2011, which could also cause adverse health impacts. ATSDR has concluded for the area originally included with the PADEP/Cabot CO&A, which includes the four homes being considered here for alternate water, that a chronic health risk exists for most wells and that the situation supports a "Do Not Use the Water" action including the consideration of alternative home water supplies until further characterization is completed. An EPA Region III toxicologist's opinion is that, of the homes evaluated to date in an on-going effort, that four home wells contain contaminants at levels that present a public health concern. In one home, manganese was detected at 628 ug/L. Exposure to this concentration would yield a Hazard Quotient of approximately 2. In another home, manganese (1360 ug/L) was detected at a level that generates a Hazard Quotient of approximately 4. Note that children reside at this location. In the third home, arsenic was observed at a concentration (37 ug/L) that exceeds its MCL of (10 ug/L) and would pose a long-term cancer risk of 8E-04. Note that children reside at this location. In the fourth home, manganese was detected at 669 ug/L. Exposure to this concentration would yield a Hazard Quotient of approximately 2.3. Available data also indicate that hazardous substances may be present in a number of other homes. Because the available data is not complete and is of uncertain quality, additional sampling is needed to facilitate a further evaluation of any potential health concerns from the drinking water at home wells in the Site area.

EPA is providing water based upon a risk of exposure to hazardous substances above health-based levels. Furthermore, the OSC notes that for those homes where the EPA toxicologist has not identified contaminants that present a public health concern, that the limited data available does identify the existence of hazardous substances. In addition, PADEP's CO&A determined that 18 home wells were impacted by drilling activities; such impact may be evidence of the migration of hazardous substances.

Again, it is noted that this determination is based upon data which was collected by parties other than EPA (Cabot and PADEP). The quality assurance/quality control (QA/QC) information has not been verified. However, what is clear is that this data strongly suggests that hazardous substances have been released and are present in some home wells at levels that may present a public health concern. Current data does show arsenic and manganese at higher levels than may be typically found, in post drilling samples. Since arsenic and manganese are naturally occurring substances, EPA's assessment will include comparisons of background concentrations and post drilling concentrations present. EPA routinely acts under CERCLA to protect public health first while it acts to further define contamination. Thus, within this action, EPA will complete an assessment of the water quality of the home wells in the Site area to close information gaps as soon as possible. This sampling will be focused initially on evaluating those homes in the Site area that have been sampled in the past. Beyond that, sampling at homes will be based upon a sampling rationale using information regarding alleged health impacts and



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data gaps. In addition, EPA will continue to evaluate the updated data, and may revise its actions to provide water to any of the additional homes, or to cease provision of water, as warranted by the data.

**300.415 (b)(2)(ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems"**

The discussion of 300.415 (b) (2) (i) above applies to this factor. Both organic and inorganic contaminants have been detected in home wells. Although this action is predominantly based upon inorganic data at the four homes, it should be noted that organic compounds have been detected at other homes as detailed in the ATSDR AROA. Glycol detections included ethylene glycol, triethylene glycol, and 2,2'oxybisethanol (diethylene glycol). Some wells had all three reported glycols present in their wells but no exceedances of risk based screening criteria (note: the analytical detection level used appeared to be higher than screening levels). Bis(2-ethylhexyl) phthalate (DEHP) was detected in five samples and ranged from 0.14 µg/L to 22 ug/L. 2-methoxyethanol concentrations (ranging from 880 ug/L to 1,300 ug/L) were detected in each of six wells.

**300.415 (b) (2) (vii) "The availability of other appropriate federal or state response mechanisms to respond to the release"**

The four homes being considered for alternate water under this action were all dependent upon donated water, either bottled, water buffaloes (temporary storage tanks) or both. It is the OSC's understanding that the last delivery of bulk water from those organizations ceased on January 3, 2012. In any case the reliability of sources for donated water is at best uncertain.

## V. PROPOSED ACTIONS AND ESTIMATED COSTS

### A. Proposed Action

#### 1. Proposed Action Description

Throughout the duration of Site activities, all personnel involved with execution of this proposed action will comply with the requirements of CERCLA and with all other applicable Federal and State regulations to the extent practicable considering the exigencies of the situation in accordance with 40 CFR § 300.415(j). Available data indicate that a number of homes in the area have hazardous substances present in the home wells, but only four indicate concentrations identified by the EPA toxicologist at a level of concern. Thus, those four homes will be immediately supplied with water. At the same time, approximately 61 home wells will be sampled by EPA to obtain data of known quality assurance to support future evaluations and response decisions. EPA will continue to evaluate the updated data, and may revise its actions to provide water to any of the additional homes, or to cease provision of water, as warranted by the data. The Removal activities at the Site will include the following:



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1. Mobilize and demobilize personnel and equipment to conduct the action;
2. Delivery of a temporary source of clean water for household use to the four (4) homes with wells that contain contaminants at levels of public health concern. This provision of temporary water will continue until potential exposures are further understood and mitigated as needed.
3. The sampling program will include analysis for a broad range of parameters with a special priority being placed on quick turnaround for those parameters which are most frequently observed in the data available to EPA at this time. The Agency will also do some limited sampling for methane and bacteriological constituents. Home well water sampling will be performed by EPA in the Site area using the following assigned priority:

   i. The four (4) homes considered for provision of alternate water, to assess the potential exposure to hazardous substances and to determine whether continued temporary provision of clean water for household use is required.
   ii. The seventeen (17) remaining homes located on properties included in the PADEP/Cabot CO&A[2], which were identified as being impacted by drilling activities.
   iii. Approximately thirty (30) additional homes in the immediate area that have been sampled in the past.
   iv. Additional homes in the Site area where one or more of the factors below supports sampling.
      1. Direct observation or other evidence (home well surveys) of adverse health effects potentially attributable to contaminated groundwater use.
      2. Where data gaps in groundwater measurement or sampling need to be filled to gain an adequate understanding of Site conditions.

   Approximately ten (10) homes are currently identified from well surveys, but more could be added based upon data review.
4. Maintain necessary documentation of Site activities.
5. Develop and implement appropriate health and safety protocols for the removal activity.

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[2] It had originally been reported that 19 homes were served by the 18 wells included within the scope of the CO&A but the door-to-door home well survey conducted to date by EPA has identified that there are currently 21 homes served by 20 wells on those same properties.



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### 2. Contribution to Remedial Performance

A remedial action is not anticipated and therefore this removal action is not inconsistent with any proposed remedial action.

### 3. Applicable or Relevant and Appropriate Requirements ("ARARs")

Actions will be conducted in compliance with Applicable or Relevant and Appropriate Regulations (ARARs) to the extent practicable considering the exigencies of the situation, in accordance with 40 CFR 300.415(j).

### B. Estimated Costs

| Extramural Costs | Total |
|---|---|
| Regional Allowance Costs: (ERRs Contractors and Subcontractors) | $ 50,000 |
| Other Extramural Costs Not Funded From the Regional Allowance: START Contractor | $ 25,000 |
| Subtotal, Extramural | $ 75,000 |
| Extramural Costs Contingency | $ 25,000 |
| **Total Removal Action Project Ceiling** | **$100,000** |

## VI. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If no action is taken, the residents may utilize well water which poses a potential public health concern.

## VII. OUTSTANDING POLICY ISSUES

Because this response action could be considered nationally significant or precedent setting, it requires the prior concurrence of the Assistant Administrator, Office of Solid Waste and Emergency Response (AA-OSWER). Furthermore, because the action appears to be nationally significant and/or precedent-setting, the Region will continue to coordinate closely with Headquarters. EPA also will maintain coordination and communications with PADEP. In taking this action, EPA is aware of and has considered the potential applicability of the natural gas exclusion under CERCLA, the Bentsen Amendment under the Resource Conservation and Recovery Act (RCRA), and the exclusions to the definition of 'underground injection' under the Safe Drinking Water Act (SDWA). EPA has concluded that this action is appropriate under CERCLA at this time.

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## VIII. ENFORCEMENT

The total EPA costs for this removal action based upon full-cost accounting practices that will be eligible for cost recovery are estimated below as follows:[3]

| | |
|---|---|
| Direct Extramural Costs | $100,000 |
| Direct Intramural Costs | $ 25,000 |
| Total Direct Costs | $125,000 |
| Indirect Cost (67.13% x Direct Costs) | $ 83,912 |
| Total Costs (Direct and Indirect) | $208,912 |

## IX. RECOMMENDATION

This Action Memorandum represents the selected Removal Action for the Dimock Residential Groundwater Site in Dimock Township, Susquehanna County, Pennsylvania, developed in accordance with CERCLA, as amended, and is consistent with the NCP. This decision is based on the administrative record for the Site. The administrative record consists of the following documents

1. 1/13/12 "Dimock Home Well Data" memo from EPA Toxicologist Dawn Ioven.
2. ATSDR AROA Issued 12/28/11.
3. Summary of Portions of data received by EPA and reviewed by the OSC.
4. PADEP Consent Order and Agreement, dated December 15, 2010.
5. EPA Data Review Memo, January 13, 2012.
6. EPA 104e request to Cabot, January 6, 2012

Conditions at the Site meet the Removal Action requirements of Section 300.415(b) of the NCP and I recommend your approval of the proposed removal action and exemption from the statutory limits. The total project ceiling, if approved, will be $100,000. Of this, as much as, $50,000 comes from the Regional removal allowance. Please indicate your approval or disapproval below.

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[3] Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use in not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

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Action by the Approving Official:

I have reviewed the above-stated facts and, based upon those facts and the information compiled in the documents described above, I hereby approve/disapprove the selected removal action.

**APPROVED:** Dennis P Carney **DATE** 1/19/2012

Dennis P. Carney, Associate Division Director
Hazardous Site Cleanup Division
EPA Region 3

**DISAPPROVED:** _____ **DATE** _____

Dennis P. Carney, Associate Division Director
Hazardous Site Cleanup Division
EPA Region 3

February 10, 2012

Special Bulletin A - Increase in Dimock Residential Groundwater Site Ceiling

From : Richard M. Fetzer, OSC

To: Dennis P. Carney, Director

Office of Preparedness and Response

Background: On January 19, 2012 Region III, with Headquarters concurrence approved an action memorandum to take actions at the Dimock Residential Groundwater Site including the provision of bulk and bottled water to 4 homes. The action also included sampling at approximately 61 homes. In order to implement these actions the OSC has used ERRS to provide the bulk and bottled water and to support command post logistical support activities. During the course of providing water, several unexpected items arose. One was the higher usage of water than originally expected by some residents. The other item was the requirement for some plumbing services to switch from wells back to water buffaloes. The current monthly cost for this action for ERRS is estimated at approximately $110,000. Therefore, the $100,000 ceiling for ERRS and START will no longer be sufficient to continue the action. The OSC is also planning to switch some homes to larger 1000 gallon water buffalo tanks to allow for a more efficient bulk water delivery, deal with potential weather issues affecting water delivery and realize a cost savings.

Situation: On February 9, 2012 I received your verbal approval to raise my site ceiling from $100,000 to $225,000. I also understand that you received Headquarter concurrence on this increase. This approval also includes implementing cost savings by increasing tank sizes, as described above. A final Action Memorandum will be prepared documenting all cost and scope changes when the site operations are concluded.

Estimated Schedule: The last regularly scheduled 1st round sample will be collected on February 14, 2012. There will be a few remaining homes (residents on vacation or otherwise not available until later) where those samples will be collected in March 2012. With final data results for those last samples being received within approximately 5 weeks (March 23rd), it is estimated that data review analysis will and decisions for the next actions will extend into April 2012. Therefore, without adding any additional homes, the site field activities are expected to last at least to April 30, 2012. It is estimated that the current site ceiling will allow operations to run to March 10, 2012.

Approved Costs:

| | Current | New |
|---|---|---|
| ERRS | $85,000 | $200,000 |
| START | $ 5,000 | $ 10,000 |
| Contingency | $10,000 | $ 15,000 |
| | $100,000 | $225,000 |

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**Special Bulletin B**

Dimock Residential Groundwater Site
Intersection of PA Routes 29 at 2024
Dimock, PA

**Date:** February 19, 2012

**To:** Regional Response Center, U.S. EPA Region III

**From:** Richard Rupert, On-Scene Coordinator
Eastern Response Branch (3HS31)

**Subject:** High Arsenic in Drinking Water at Residence HW47

## I. Issue

On February 8, 2012, a groundwater sample was collected from the potable water supply well at residence HW47 (Residence). The final chemical analytical report from the Residence indicates concentrations of arsenic at greater than 90 micrograms per liter (ug/l or parts per billion - ppb) both at the well head (90.7 ppb) and the drinking water tap (91.1 ppb) located at the kitchen sink. The maximum contaminant level (MCL) for arsenic is 10 ppb. The EPA toxicologist, in an opinion dated February 17, 2012, has reviewed the results presented in the final chemical analytical report and indicates that the concentration of arsenic found in the HW47 well represent a significant threat to Resident's health.

This Residence is located within the Dimock Residential Groundwater Site (Site). The action memorandum for the Site, dated January 19, 2012, sets forth the description of the Site, contaminants and the basis for EPA's action there.

On February 17, 2012, the OSC recommended an action to provide alternate water to the Residence as soon as possible. OEM concurrence and verbal approval for this action were received on the same afternoon.

Later that same afternoon the OSC and Site Administrative Officer (SAO) visited the Resident to share the results of the recent well sampling and offer drinking water. The Resident indicated that PaDEP had called this past Wednesday and indicated their sample (collected during the EPA sample collection) had tested positive for arsenic at 79 ppb. The Resident said that PaDEP called Cabot and asked them to provide drinking water, which Cabot did. As a result the Resident has enough water for cooking and drinking purposes. The Resident also indicated that Cabot resampled the well.

The Resident indicated there was an operating reverse osmosis (RO) unit in the residence that evidently was not functioning properly. The system was being repaired during the visit. The Resident said that Cabot had sampled the well in 2010 but, had never provided a copy of the results. A later call to Cabot revealed this sample contained arsenic at 16 ppb. It is uncertain how long the Resident has been drinking arsenic tainted water. The Resident mentioned that at some time in the past water at the Residence tested positive for arsenic but, at levels around 1-4 ppb.

## II. Actions

The OSC is arranging for an EPA toxicologist to visit the Resident. A water sample, to confirm the operating efficiency of the RO unit, may also be collected. Bottled water may be provided until the sample results confirm the water is safe to drink.

The assessment and background investigation to determine the presence and origin of contaminants in the groundwater is continuing.

## III. Current Costs

The actions described above can be accomplished within the present approved budget.

### A. Estimated Costs

| Agency | Costs to Date | Ceiling |
|---|---|---|
| ERRS | $89,703 | $200,000 |
| Unallocated | | $ 25,000 |

### B. Contribution to Remedial Performance

A remedial action is not anticipated and therefore this removal action is not inconsistent with any proposed remedial action.

### C. Compliance with ARARS

The removal action will comply with all Applicable or Relevant and Appropriate Requirements (ARARs), to the extent practicable, considering the exigencies of the situation.

## IV. Expected Change in the Situation Should No Action be Taken or Action Delayed

If no action is taken, the Resident may continue to consume well water which poses a health threat.

## V. Outstanding Policy Issues

There are no known outstanding policy issues.

## VI. Enforcement

The OSC will make all available information available to enforcement/cost recovery unit.

Richard Rupert
On-Scene Coordinator
US EPA Region III

March 14, 2012

Special Bulletin C - Increase in Dimock Residential Groundwater Site Ceiling

From : Richard M. Fetzer, OSC

To: Dennis P. Carney, Director

Office of Preparedness and Response

Background: On January 19, 2012 you approved an action memorandum to take actions at the Dimock Residential Groundwater Site including the provision of bulk and bottled water to 4 homes. The action also included sampling at approximately 61 homes. The site ceiling for that action was set at $100,000. In order to implement these actions the OSC has used ERRS to provide the bulk and bottled water and to support command post logistical support activities. The current monthly cost for this action for ERRS is estimated at approximately $105,000.

Situation: On February 9, 2012, I received your verbal approval to increase the site ceiling from $100,000 to $225,000. In documenting that increase, the OSC estimated the need for additional funding by March 10, 2012. Of that February 9th ceiling increase, we currently only have approximately $15,000 left for the ERRS contractor.

Estimated Schedule: The OSC estimates the current work (providing water and additional sampling) will continue until at least May 31, 2012. The cost estimate to continue site operations for approximately 10 weeks is $275,000. I estimate the approved cost below will allow site operations to continue until May 31, 2012.

Approved Costs:

| | Current | Proposed |
|---|---|---|
| ERRS | $200,000 | $475,000 |
| START | $ 10,000 | $10,000 |
| Contingency | $ 15,000 | $15,000 |
| | $225,000 | $500,000 |