

EPA-DOC-2011

Patricia
Erickson/CI/USEPA/US
12/11/2009 02:29 PM

To Sally Gutierrez, Randy Hill
cc Adele Cardenas, Andrew Gillespie
bcc
Subject Re: AACM: Your Favorite Topic, I Know

Sally, I'll get started on this but Steve's out until Tuesday.

Trish
Sally Gutierrez

----- Original Message -----

From: Sally Gutierrez
Sent: 12/11/2009 01:10 PM EST
To: Randy Hill
Cc: Patricia Erickson; Adele Cardenas; Andrew Gillespie
Subject: Re: AACM: Your Favorite Topic, I Know

Randy,

I have asked my staff to complete a thorough review of the health and safety measures implemented during the course of these research studies.

Thanks for your advice in this matter.

Sally

Randy Hill | Sally, I have now moved on to the Offic... | 12/10/2009 02:48:23 PM

From: Randy Hill/DC/USEPA/US
To: Sally Gutierrez/CI/USEPA/US@EPA
Date: 12/10/2009 02:48 PM
Subject: AACM: Your Favorite Topic, I Know

Sally,

I have now moved on to the Office of Water; thank you for your kind note. (b) (6)

I promised Catherine McCabe that I would update you on OECA's final review of the documents, (b) (6) Is there a time we could talk soon? My calendar is very free the remainder of today and tomorrow. Let me know and I'll give you a call.

Randy Hill
Deputy Director
Office of Wastewater Management
U.S. EPA (4201M)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
(202) 564-0748
(202) 501-2338 (FAX)
hill.randy@epa.gov

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EPA-DOC-2040

**Patricia
Erickson/CI/USEPA/US**
12/22/2009 10:39 AM

To Angela Hadley, Steve Musson
cc Sally Gutierrez, Andrew Gillespie
bcc
Subject AACM health & safety review

Angela and Steve, Sally has asked for our most senior safety staffer to review our health and safety performance in the alternative asbestos control method projects 2 and 3.

I've gone through AACM 3 and marked up the documents and met with the project team (purple notes on the paper copies I'll leave for you). The paper file also has the NESHAP standard for asbestos. The paper file is the only copy of the handwritten notes, so please give it good custody.

The draft final reports, the draft EPA response to peer review comments (all 3 with 10/22/09 in the file names), and our response to OECA comments are all posted on the O drive's short term storage folder in a subfolder marked AACM. The HASP and QAPP are on Region 6's web site:
<http://www.epa.gov/region6/6xa/asbestos/project3.htm>

I'll go through AACM2 while I'm on leave for the holidays and get that to you the week of 1/4. If you have questions, I'll have my blackberry but won't be checking voicemail.

thanks.
Trish

Trish Erickson
Assistant Director - Land & Nano
National Risk Management Research Lab
tel 513.569.7406

EPA-DOC-2017

Steve Musson/CI/USEPA/US

12/15/2009 07:46 AM

To Patricia Erickson

cc Andrew Gillespie, Angela Hadley

bcc

Subject Re: Fw: AACM: Your Favorite Topic, I Know

Trish,

Here is a summary of my notes from speaking with Ann Strickland. Following our meeting with Andy and Sally, I did not retain copies of the signature sheets from Bill. These were signatures of people on the site and did not include any approval signatures by SHEM or lab supervisors.

Steve

Date: 11/17/2009

Time: 3:45 PM

Subj: Asbestos Demolition Projects conducted by NRMRL researchers

I received a phone call from Ann Strickland at approximately 3:35 pm on 11/17/2009. She stated that she had contacted the SHEM Division at headquarters and had spoken with Dave Gibson and Cassy Watson. They had referred her to me. I informed her that I was new within the SHEM office and was not familiar with the research she was asking about. However, I did review the SHEM Health & Safety Plan Database and found a record for that research but it was not marked as approved nor did I have a written copy.

She then briefed me on background information including work at Ft Chaffee and Fort Worth, Texas, and the canceled burns in New Orleans.

She stated that offices in HQ received draft reports for review from Region 6 at 7 am on inauguration day and were told that Region 6 wanted them back by 3 pm that day. A task not achievable.

She said eventually the offices responded with some comments on May 1, 2009 and received comments/corrections from ORD. However, in these revisions, they identified new issues and significant errors. In the second review, they also felt they identified H&S issues. These included high asbestos readings in perimeter surveillance samples and lack of worker protection, particularly for workers taking samples from the concrete slab afterward. It was believed that they did not meet OSHA standards for worker protection and off-site sample cans came back with significant asbestos levels. She was also concerned about Fort Chaffee safety issues including working in a condemned building and the transport of asbestos sheeting from offsite to this location.

Ann sent me several emails with the information and reports posted on the Region 6 website.

Following this, I asked my staff about the project. Leslie Wilsong and Mitch Pence worked with Bill Barrett on this project shortly before his departure for the testing in Fort Worth and were not informed of the prior projects. They stated that they were told by Bill that EPA personnel were only observing a contractor perform the demolition. However, the HASP was never completed to SHEM's satisfaction nor routed for approval by Bill. Bill took the draft document with him to the site without SHEM's approval or completion.

Leslie also provided an email she received at 11:30 pm the night before demolition was to begin. It was from Bill Barrett suggesting that a SHEM member should come to Fort Worth since they had received a letter protesting the work from a local attorney/environmental group. It was impossible to do so since it was received less than 12 hours from the start time and outside of office hours.

Immediately following the phone call, I briefed Angela Hadley.

Steve

Patricia Erickson Thanks, Bill, I'll work off Steve's copie... 12/14/2009 09:06:11 PM

From: Patricia Erickson/CI/USEPA/US
To: William Barrett/CI/USEPA/US@EPA, David Ferguson/CI/USEPA/US@EPA
Cc: Steve Musson/CI/USEPA/US@EPA
Date: 12/14/2009 09:06 PM
Subject: Re: Fw: AACM: Your Favorite Topic, I Know

Thanks, Bill, I'll work off Steve's copies.

Trish

William Barrett

----- Original Message -----

From: William Barrett
Sent: 12/14/2009 06:16 PM EST
To: David Ferguson
Cc: Patricia Erickson; Steve Musson
Subject: Re: Fw: AACM: Your Favorite Topic, I Know

Dave,

I gave copies of everything to Steve already. This includes a sign off form for everyone who was on sight indicating that they reviewed the H&S plan. I can get them to Trish and you as well. I had numerous discussions about the Health and Safety Plan with Leslie and Mitch about AACM3, I am surprised that there is not a copy of the plan signed by the H&S office.

As a side note, John Kominsky has all the H&S records for AACM1.

Bill

William M. Barrett Jr. PhD, PE
National Risk Management Research Laboratory
United States Environmental Protection Agency
26 W. Martin Luther King Dr., MS-445
Cincinnati, Ohio
513.569.7220

David Ferguson The H&S plans we sent to Steve were... 12/14/2009 05:16:45 PM

From: David Ferguson/CI/USEPA/US
To: Patricia Erickson/CI/USEPA/US@EPA, William Barrett/CI/USEPA/US@EPA
Date: 12/14/2009 05:16 PM
Subject: Re: Fw: AACM: Your Favorite Topic, I Know

The H&S plans we sent to Steve were the most up to date. I don't think we actually had approved plans, although Bill Barrett does have a plan that was signed by several NRMRL staff (but not Steve's office). I just looked at the SOW for AACM2 and there was no mention of the H&S plan. I will check with Lynn Lewis to get the actual work assignments, but I'm certain that we were responsible for writing the H&S plan and the contractors were supposed to implement it. We did give the H&S plans to the contractor but

not officially signed copies. For AACM2 we used the H&S plan from AACM1.

Bill - Can you show Trish what you have on AACM3?

I thought we ignoring OECA on this issue because it has nothing to do with the research results.

Dave

-----Patricia Erickson/CI/USEPA/US wrote: -----

To: David Ferguson/CI/USEPA/US@EPA
From: Patricia Erickson/CI/USEPA/US
Date: 12/14/2009 04:09PM
Subject: Fw: AACM: Your Favorite Topic, I Know

Dave, more health and safety questions...

Steve Musson is back in tomorrow, so I'll get more particulars on the phone call with Ann Strickland that started this issue.

A couple documents we'll need are the final health and safety plans for AACM2 and 3. I looked at the Region 6 web-posted versions, but I don't think they're finals.

Do you also have copies of the actual work assignments? I'm particularly looking for the part that talks about contractor responsibility with regard to H&S (implement our plan, have their own plan, etc.).

Might need a meeting/call with you and Adele Wednesday or Thursday this week.

thanks.
Trish

Trish Erickson
Assistant Director - Land & Nano
National Risk Management Research Lab
tel 513.569.7406

----- Forwarded by Patricia Erickson/CI/USEPA/US on 12/14/2009 03:57 PM -----

From: Sally Gutierrez/CI/USEPA/US

To: Randy Hill/DC/USEPA/US@EPA

Cc: Patricia Erickson/CI/USEPA/US@EPA, Adele Cardenas/R6/USEPA/US@EPA, Andrew Gillespie/CI/USEPA/US@EPA

Date: 12/11/2009 01:10 PM

Subject: AACM: Your Favorite Topic, I Know

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Randy,

I have asked my staff to complete a thorough review of the health and safety measures implemented during the course of these research studies.

Thanks for your advice in this matter.

Sally

Randy Hill---12/10/2009 02:48:23 PM---Sally, I have now moved on to the Office of Water; thank you for your kind note. I've very excited

From: Randy Hill/DC/USEPA/US
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Randy Hill
Deputy Director
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EPA-DOC-2018

Patricia
Erickson/CI/USEPA/US
12/15/2009 09:25 AM

To David Ferguson
cc
bcc
Subject Re: Fw: AACM: Your Favorite Topic, I Know

Thanks.

We weren't pursuing it until Sally had another conversation with Randy Hill. And now we are.

Trish

Trish Erickson
Assistant Director - Land & Nano
National Risk Management Research Lab
tel 513.569.7406

David Ferguson [The H&S plans we sent to Steve were...](#) 12/14/2009 05:16:45 PM

From: David Ferguson/CI/USEPA/US
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Trish

Trish Erickson
Assistant Director - Land & Nano
National Risk Management Research Lab
tel 513.569.7406

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From: Sally Gutierrez/CI/USEPA/US

To: Randy Hill/DC/USEPA/US@EPA

Cc: Patricia Erickson/CI/USEPA/US@EPA, Adele Cardenas/R6/USEPA/US@EPA, Andrew Gillespie/CI/USEPA/US@EPA

Date: 12/11/2009 01:10 PM

SubjectRe: AACM: Your Favorite Topic, I Know
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To: Sally Gutierrez/CI/USEPA/US@EPA

Date: 12/10/2009 02:48 PM

Subject: AACM: Your Favorite Topic, I Know

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Randy Hill
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EPA-DOC-2090

Patricia
Erickson/CI/USEPA/US
02/01/2010 10:26 AM

To Sally Gutierrez
cc Andrew Gillespie
bcc
Subject Fw: AACM project H&S review

Sally, per meeting Friday. I left Steve a voicemail about the overall statement you wanted.

Trish

Trish Erickson
Assistant Director - Land & Nano
National Risk Management Research Lab
tel 513.569.7406

----- Forwarded by Patricia Erickson/CI/USEPA/US on 02/01/2010 10:25 AM -----

From: Steve Musson/CI/USEPA/US
To: Patricia Erickson/CI/USEPA/US@EPA
Cc: Angela Hadley/CI/USEPA/US@EPA
Date: 01/14/2010 01:02 AM
Subject: AACM project review

Trish,

I have performed an initial review of the AACM3 project. However, my review was limited by the information presented in the folder and what I could locate on the internet about the project. The report with pictures provided to me by Ann Strickland was unavailable due to my travel. Therefore, I could not address safety concerns in the report pictures. Also, measures taken to meet environmental regulations concerning container marking, shipping, and disposal was not possible.

1. The HASP presented on the Region 6 website and by Bill Barrett was intended to cover ONLY EPA EMPLOYEES. Bill was specifically told this by SHEM personnel during initial HASP development. Based upon the signatures provided, it appears Bill may have used it with contractor staff (LBG and others). Non-EPA employees would be required to be provided a safety plan and training by their employer, not the EPA.
2. The HASP was NEVER approved by SHEM. Bill Barrett was given initial guidance and worked with SHEM staff and was asked to gather further information to complete the HASP. This was not completed. Hence, the HASP was never signed by SHEM personnel.
3. SHEM has no record of listed EPA employees enrollment or completion of required training for the respiratory protection program as required by the HASP.
4. HASP did not address the exposure limits to personnel of the chosen wetting agent. MSDS indicates wetting agent contained ingredients with PEL of 100 ppm and skin notation.
5. Remedial Action Plan developed on Dec 12, 2007 was never adopted into HASP.
6. Within the HASP, the information used to select the location of the protective poly wall for occupied buildings was not described and factors used to determine its distance from the work were not provided.
7. The HASP and QAPP did not identify the expected regulated area of the project. The QAPP described

methods to determine the distance at which the maximum concentration of asbestos fibers would occur. However, the calculations used a default unity value for rate of release vice an actual worst case scenario for release. Thus, the potential distance that asbestos fibers could exceed OSHA PELs was not determined prior to the work, possibly impacting occupied dwellings and personnel outside the established regulated area.

8. Failure to determine possible asbestos concentrations also would impact respirator selection for the staff in the regulated area, requiring them to default to the more restrictive positive pressure respirators.

Regulated area means: an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit. Requirements for regulated areas are set out in paragraph (e) of this section.

NESHAP regulations were addressed/ OSHA regulations were not addressed.

9. NESHAP regulations were addressed in project documents, however, the OSHA regulations contained in 29 CFR 1926.1101 for asbestos work in construction were not addressed. Under OSHA regulations this would be considered Class I asbestos work.

Class I asbestos work means activities involving the removal of TSI and surfacing ACM and PACM.

10. The name of the "competent person" to be onsite was not given.

Competent person means, in addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class III and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92 (a)(2).

11. Photos of the work site found online indicate that warning signs were not posted as required by OSHA regulations.

12. Excursion limit samples were not conducted per OSHA regulations (30 minute samples taken at the point of potential maximum asbestos release).

13. Based upon the worker sample results and area sample results, the OSHA PEL was not exceeded.

Steve

EPA-DOC-2099

Steve Musson/CI/USEPA/US

03/02/2010 07:44 AM

To Patricia Erickson

cc Angela Hadley

bcc

Subject Statement on AACM project

Hi Trish,

I got your message. I did complete the statement and gave it to Angela on 2/5/10. I've attached a copy of the memo for your reference. I hope this helps.

Steve



AACM3 evaluation memo.doc



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
NATIONAL RISK MANAGEMENT RESEARCH LABORATORY
CINCINNATI, OHIO 45268

Date: 02/05/2010

From: Stephen Musson, NRMRL/LSAS/SHEM, CHO

To: Sally Gutierrez, NRMRL Director

Via: Angela Hadley, NRMRL/LSAS Chief
Andrew Gillespie, NRMRL, Deputy Director
Patricia Erickson, NRMRL Assistant Laboratory Director

Subj: SHEM Evaluation of project "Evaluation of the Alternative Asbestos Control Method at Site Three (AACM3) for Demolition of Asbestos-Containing Buildings"

The following statements summarize the findings of my review of the AACM3 project. This review encompassed the safety and health of Environmental Protection Agency employees at the project site. The safety and health measures and regulatory compliance of contract workers at the site was not assessed. In addition, records were not available to permit assessment of compliance with environmental regulations concerning container marking, shipping, and disposal of asbestos materials.

Findings

1. The HASP presented by Region 6 and Bill Barrett of EPA/ORD/NRMRL provided guidance to EPA employees only. SHEM specifically stipulated this to Bill Barrett during its initial HASP review. Based upon the HASP review signatures provided by Bill Barrett, the HASP may have been used by contractor staff (LBG and others). Contractors and other onsite employers should have been required to provide a safety plan and employee training of their own. No other site safety plans were presented for review.
2. The HASP was not approved by SHEM as indicated by the lack of approval signature by a SHEM staff member. Bill Barrett was provided initial guidance and had worked with SHEM staff. However, SHEM determined the HASP to have insufficient information and safety measures and requested Bill Barrett to gather further information to complete the HASP. This was not completed.
3. The HASP requires EPA employee enrollment in the respiratory protection program. SHEM has no record of the EPA employees listed on the signature page enrolling in this program or completing required respirator training.

4. The HASP failed to address the exposure limits of the wetting agent. The wetting agent MSDS indicates ingredients with PEL of 100 ppm and a skin notation. No measures were taken to address this potential exposure.
5. The Remedial Action Plan developed on Dec 12, 2007 was never adopted into the HASP.
6. Within the HASP, the information used to select the location of the protective poly wall for occupied buildings was not described and factors used to determine its distance from the regulated work area were not provided. The size, location, and distance of the wall appear to be arbitrarily determined.
7. The HASP and QAPP did not identify the expected regulated area of the project. Contaminant modeling was used within the QAPP to determine the distance at which the maximum concentration of asbestos fibers would occur. However, the calculations used a default unity value for rate of release vice an actual worst case scenario for release. Thus, the potential distance that asbestos fibers could exceed OSHA PELs (1926.1101(c)) was not determined prior to the work and established boundaries were not based on predicted exposure levels.
8. Failure to determine possible asbestos concentrations requires staff in the regulated area to default to the more restrictive positive pressure respirators (1926.1101(h)(3)(iv)). Negative pressure respirators were worn by contract personnel and designated in the HASP.
9. NESHAP regulations were addressed in project documents; however, the OSHA regulations contained in 29 CFR 1926.1101 for asbestos work in construction were not addressed. Under OSHA regulations this would be considered Class I asbestos work (1926.1101(b)).
10. The name of the "competent person" to be onsite was not given (1926.1101(f)(2)(i)).
11. Photos of the work site show that warning signs were not posted as required by OSHA regulations (29 CFR 1926.1101(k)(7)).
12. Excursion limit samples (30 minute samples taken at the point of potential maximum asbestos release) were not conducted per OSHA regulations (1926.1101(f)(1)(iii)).

Potential for EPA Employee Exposure to Asbestos

EPA employees remained outside of the "Caution" and "Danger" marked work area. However, the boundaries of this area were not established based upon a safe distance to ensure employees were not exposed above PELs. Instead the areas were established at the perimeter air sampling stations, the area calculated to be the point of highest potential asbestos concentration. Therefore, employees at the marked boundary stood at the point of potential highest asbestos concentration.

Personal air sampling was not performed on workers stationed at the work boundary. Therefore, an exposure assessment for these workers must be based upon the perimeter air monitors at this location, the dust settling samples, and the personal air monitoring of contract workers within the work area.

Perimeter air monitoring samples did not show asbestos concentrations above the OSHA PEL of 0.1 f/cc TWA. Excursion monitoring was not performed. However, if all asbestos fibers were assumed to be collected in a single 30 minute period, all samples would remain below the excursion limit of 1 f/cc and the 8 hour limit of 0.1 f/cc. However, these samples were taken at a height of 10 feet in the air and were not representative of the employee breathing zone.

Dust settling samples were taken at a height of 5 feet in the air and would be more representative of employee breathing zones. These samples did show appreciable levels of asbestos at the boundary of the work area. However, the long collection time (approximately 28 hours) and inability to determine a correlating air volume prevents determination of airborne concentrations from these surface samples.

A final basis for determining boundary employee exposure is the personal monitoring results of employees within the regulated area. All worker samples within the work area were less than the OSHA time weighted average PEL of 0.1 f/cc.

Therefore, based upon the regulated worker personal sample results and the perimeter airborne sample results, exposure of EPA employees at the boundary to asbestos fiber concentration above the PEL is not indicated.

EPA-DOC-2106

Steve Musson/CI/USEPA/US

03/04/2010 07:52 PM

To Patricia Erickson

cc Angela Hadley

bcc

Subject Assessment of EPA Employee Exposure at AACM 3 Project

Trish,

The following is my assessment for EPA employee exposure to asbestos at the AACM 3 project in Texas.

EPA employees remained outside of the "Caution" and "Danger" marked work area. Personal air sampling was not performed on workers stationed at the work boundary. Therefore, an exposure assessment for these workers must be based upon the perimeter air monitors at this location, the dust settling samples, and the personal air monitoring of contract workers within the work area.

Perimeter air monitoring samples did not show asbestos concentrations above the OSHA PEL of 0.1 f/cc TWA. Excursion monitoring was not performed. However, if all asbestos fibers were assumed to be collected in a single 30 minute period, all samples would remain below the excursion limit of 1 f/cc and the 8 hour limit of 0.1 f/cc. However, these samples were taken at a height of 10 feet in the air and were not representative of the employee breathing zone.

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Therefore, based upon the regulated worker personal sample results and the perimeter airborne sample results, exposure of EPA employees at the boundary to asbestos fiber concentration above the PEL is not indicated.

Stephen Musson, PhD, CIH, CHMM
Chemical Hygiene Officer
LSAS, National Risk Management Research Lab
United States Environmental Protection Agency
26 W. Martin Luther King Dr.
Cincinnati, OH 45268
phone: 513-569-7969
fax: 513-569-7585

EPA-DOC-2111

Patricia
Erickson/CI/USEPA/US
03/08/2010 10:46 AM

To Steve Musson
cc
bcc

Subject Re: AACM 2 review

Steve, sorry, I didn't get to the end of my to-do list last Thursday. Here's the draft AACM2 report which should have been in the folder I gave you. I think it has all the data you need to review.

thanks.

Trish

[attachment "AACM2 Final Report 10 22 2009.docx" deleted by Patricia Erickson/CI/USEPA/US]

Trish Erickson
Assistant Director - Land & Nano
National Risk Management Research Lab
tel 513.569.7406

Steve Musson

Trish, I reviewed the folder you provide...

03/04/2010 08:06:40 PM

From: Steve Musson/CI/USEPA/US
To: Patricia Erickson/CI/USEPA/US@EPA
Cc: Angela Hadley/CI/USEPA/US@EPA
Date: 03/04/2010 08:06 PM
Subject: AACM 2 review

Trish,

I reviewed the folder you provided and found the following for AACM2:

- 1 - Peer Review Report and EPA Responses for AACM2 and AACM3 dated 10/22/09
- 2 - HASP dated Nov 2005 from Environmental Quality Management
- 3 - Asbestos Investigation Report for Building 235 Fort Chaffee, Arkansas dated 07/16/2007 - The appendix with sampling results was missing.
- 4 - QAPP dated 07/19/2007

I am not sure if the QAPP or report is the right one since the QAPP is dated after the report.

Without results and a clear layout of where the samples were taken and where people were located during the test, I will not be able to make an assessment of exposure.

Preliminarily the same error was made as in AACM3 in not making an exposure estimate to determine boundaries and respiratory protection needs. Also, in this case the HASP was never presented to the SHEM office in Cincinnati.

If you can provide results and more information, I will work on a better assessment while I am in Ada.

Steve

Stephen Musson, PhD, CIH, CHMM
Chemical Hygiene Officer
LSAS, National Risk Management Research Lab
United States Environmental Protection Agency
26 W. Martin Luther King Dr.

Cincinnati, OH 45268
phone: 513-569-7969
fax: 513-569-7585

EPA-DOC-2126

Steve Musson/CI/USEPA/US

03/22/2010 09:21 AM

To Steve Musson

cc Angela Hadley, Patricia Erickson

bcc

Subject AACM2 Project Health & Safety Review

Trish,

I have performed a review of the AACM 2 project - the demolition of the building at Fort Chafee, AK. Below is a list of my observations.

1. Measures taken to meet environmental regulations concerning container marking , shipping, and disposal was not possible .

2. A Health and Safety Plan was not created concerning work involving the transport of asbestos materials from off site to the site and its subsequent addition to the building .

- a. Significant additional weight was added to a building deemed by inspectors and described in the QAPP and HASP as "structurally unsound and in imminent danger of collapse. This increased the chance of collapse, possibly while workers were working inside and around the building.
- b. Initial air samples were collected 25 feet away from the building, however pavement samples near the building showed significant asbestos levels on the pavement within a few feet of the building. Air samples should have been taken near the building to characterize the exposure of workers near the building when hanging plywood and other transite. Additionally, the area should have been isolated to prevent entry by foot and road traffic. This is highlighted in the report when it is observed that vehicles and other traffic in the area may have carried off asbestos. Pictures in the report show workers in shorts and t-shirts while working in this area.

3. The HASP presented on the Region 6 website and in the folder you provided had several inconsistencies. These included:

- a. The HASP was never review by the SHEM Program. This HASP was written by the contractor EQ for the EQ personnel. It did not specifically address the EPA personnel.
- b. No approval signatures or review signatures appear on the posted version of the HASP.
- c. The HASP appears to be a copy of the HASP for AACM1. - example 6.2.1 states that three concentric rings of air monitors will be placed. This does not match the QAPP.
- d. HASP does not specify the exclusion zone or regulated (area to be isolated for worker safety) and in fact leaves it open to interpretation of the people onsite.
- e. HASP overly uses generic language and simply copies regulatory language versus giving project specific safety measures.

4. Respiratory Protection requirements were not met :

- a. SHEM has no record of listed EPA employees enrollment or completion of required training for the respiratory protection program as required by the HASP.
- b. Workers in the demolition area were not placed in Level B PPE per the HASP requirements (Level B would require SCBA or supplied air systems)

5. The HASP and QAPP did not identify the expected regulated area of the project . The QAPP described methods to determine the distance at which the maximum concentration of asbestos fibers would occur. However, the calculations used a default unity value for rate of release vice an actual worst case scenario for release. Thus, the potential distance that asbestos fibers could exceed OSHA PELs was not determined prior to the work, possibly impacting occupied dwellings and personnel outside the established regulated area.

6. NESHAP regulations were addressed in project documents , however, the OSHA regulations contained in 29 CFR 1926.1101 for asbestos work in construction were not addressed . Under OSHA regulations this would be considered Class II asbestos work.

7. The name of the "competent person" to be onsite was not given.

8. Photos of the work site contained within the project report show that warning signs were not posted as required by OSHA regulations.

9. Excursion limit samples were not conducted per OSHA regulations (30 minute samples taken at the point of potential maximum asbestos release).

10. Transite was classified as nonfriable despite being highlighted as significantly damaged and high initial asbestos contamination of surrounding pavement. Possible that asbestos could be classified as friable.

11. The report highlights measures taken to protect adjacent buildings from contamination with asbestos by covering them in plastic. However, photos show personnel in street clothes between the work area and these buildings. This leads to question why these workers were not protected from contamination as the buildings were. (Figures 5-5, 5-15, 5-33 of report)

12. Contract personnel did not wear PPE properly

- a. Hoods on tyvek suits were not raised, potentially permitting asbestos and other contamination into the partially zipped front and gaps at the neck and shoulders. (Figures 5-31, 5-33, 5-40)
- b. Crew member working in the sump was bare handed vice wearing protective gloves. (Figure 5-47)

13. Based upon the worker sample results and area sample results, the OSHA PEL was not exceeded by workers.

Steve

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