



Michael Klosky
05/21/2003 10:14 AM

To: Pete Everds/SanDiego/FWENC@FWENC
cc: Brian Maidrand/SanDiego/FWENC@FWENC, Dennis
Goldman/SanDiego/FWENC@FWENC
Subject: FW: Moffett Hangar 1

----- Forwarded by Michael Klosky/Atlanta/FWENC on 05/21/2003 10:21 AM -----



"Parker, Mary E
(EFDSW)" To: "mklosky@fwenc.com" <mklosky@fwenc.com>
<ParkerME@efdswnav> cc:
fac.navy.mil Subject: FW: Moffett Hangar 1
05/20/2003 02:52 PM

1 of 2 e-mails from NASA on Aroclor 1268.
Mary

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

From: Espinoza, Andrea M (EFDSW)
Sent: Thursday, May 15, 2003 9:42 AM
To: Parker, Mary E (EFDSW); Doctor, Wilson E (EFDSW); Gromko, David S
(EFDSW); Bonura, Carl J (EFDSW); Tamayo, Arturo R (EFDSW)
Cc: Lansdale, Lawrence L (EFDSW); Bollo, Nicholas R (EFDSW); Avery,
Marie A (EFDSW)
Subject: Moffett Hangar 1

Hi All,

This is a good summary of the Hangar 1 situation as we know it at this time. This issue touches everyone in some way on our team, and I wanted to ask for some follow-up items from each of you here. Please let me know what your thoughts are and if you feel there are more/different impacts/issues to be considered.

Mary/Wilson: Groundwater treated from the Hangar 1 sump- are there PCBs in the influent and the effluent to/from WATS? NASA agreed to help analyze the influent (Don) if we wanted them to. If confirmed it will raise a number of additional actions related to the treatment system, NPDES permit, etc. The analytical detection limits we use need to ensure that the discharge are sensitive enough to show if the discharge is safe for the receptors in Steven's creek.

Scott: Need to evaluate and recommend how to address this as a new source area for Site 25 mid-ROD and whether we can proceed the current RODs for the EDM and SWRP as well as if this is qualifies as an on-going source that may prevent us from taking a clean-up action in light of the CNO guidance.

Art: Please update our transition plan to include Hangar 1.

Appreciate your attention to this new, developing issue - let's discuss this in more detail at 1100 on Monday.

Regards,
Andrea M. Espinoza
Base Realignment and Closure Environmental Coordinator
Moffett Federal Airfield
1230 Columbia Street, Suite 1100

San Diego, CA 92101

(619) 532-0911 Phone
(619) 532-0995 Facsimile EspinozaAM@efdswnavfac.navy.mil

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

From: Donald M. Chuck [mailto:Donald.M.Chuck@nasa.gov]
Sent: Wednesday, May 14, 2003 2:48 PM
To: Espinoza, Andrea M (EFDSW)
Subject: FW: hangar 1 summary report

Andrea,

Here's the latest on Hangar 1.

Don

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

From: Sandy Olliges [mailto:Sandra.M.Olliges@nasa.gov]
Sent: Wednesday, May 14, 2003 2:05 PM
To: dchuck@mail.arc.nasa.gov; mhulet@mail.arc.nasa.gov;
tgafney@mail.arc.nasa.gov
Subject: Fwd: hangar 1 summary report

fyi

Don, please forward to Andrea. Thanks, Sandy

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>From: Diane Shelander <Diane.S.Shelander@nasa.gov>
>To: Laura.W.Doty@nasa.gov, Sandra.M.Olliges@nasa.gov, David.B.King@nasa.gov
>Subject: hangar 1 summary report
>Date: Wed, 14 May 2003 14:53:08 -0500
>
>Attached is a summary of the Hangar 1 sampling history, risks,
>actions taken to date, and mitigation options.
>
>



Hangar 1 Summary Report.d

Hangar 1

Site Description

Hangar 1 was constructed in 1932 to house the airship U.S.S. Macon. The hangar is 345.3 meters (1133 feet) long, 93.9 m (308 ft) wide, and 60.4m (200 ft) high. After the loss of the Macon, the hangar continued to service both the Army and Navy for maintenance of aircraft, housing of training facilities, and office space for Navy patrol squadrons. In 1987, the Naval Air Station Moffett Field was listed on the National Priorities List (NPL) as a Superfund site. The hangar sits along the eastern portion of the Navy's Installation Restoration Program (IRP) Site 9. Hangar 1 became part of NASA Ames Research Center (ARC) in 1994 as part of the transfer of the former Naval Air Station Moffett Field to NASA under the Base Realignment and Closure (BRAC) program. Hangar 1 has been used by NASA for display space for air shows and open houses, Project Jason, the Moffett Historical Museum, and various commercial and public functions. It has been designated a national historical building and a Navy engineering landmark.

Background

In 1992, NASA ARC constructed a sediment settling basin for stormwater collected from the western side of the facility. The basin, along with new stormwater discharge pipes was constructed to collect any possibly contaminated sediment before discharge of the water to the stormwater retention pond (SWRP). Figure 1 shows the pipe lines and settling basin.

As part of the maintenance of the settling basin, the sediment is allowed to dry. NASA ARC then samples the sediment to determine the appropriate disposal of the sediments. During the 1997 cleaning and sampling event, the polychlorinated biphenyl (PCB) Aroclor 1268 was discovered in the sediment. Aroclor 1268 had not been seen in previous samples. The common Aroclors used by NASA and the Navy had been 1260 and 1254. Unlike 1260 or 1254, 1268 is not used in electrical equipment. Additionally, since 1268 is relatively rare, it is not commonly analyzed for by the lab. During the 1997 event, the testing lab had a 1268 standard and thus was able to detect its present. The Aroclor continued to be found in the sediment and also in stormwater sampling in various manholes.

In 2002 and 2003, NASA ARC received information that the Navy had used PCBs in paints. Additionally, research into uses of 1268 revealed that it was used in caulking materials and a coating material known as Galbestos. Based on sampling investigations taken by ARC to determine the source of the 1268, samples were taken from the roof and side of Hangar 1. The composite sample from the roof contained 39,000,000 $\mu\text{g}/\text{kg}$ (39,000 ppm) of PCBs and the Galbestos composite contained 57,000 $\mu\text{g}/\text{kg}$. Additional sampling on the interior of the hangar and the floors also indicated the presence of PCBs. NASA ARC has closed the hangar except for essential maintenance, abatement, and security personnel. Figure 2 provides a timeline illustrating the sampling events involving 1268.

Issues

PCBs are persistent in the environment and bioaccumulative in organisms. PCBs are also suspected human carcinogens. Materials that contain PCBs at or above 50 ppm are regulated by the US Environmental Protection Agency (EPA) under the Toxic Substances Control Act (TSCA). TSCA and EPA regulations strictly prohibit the use of PCBs in any manner other than fully enclosed.

In its PCB regulations, EPA requires that any release of PCBs to surfaces to which the public has access must be cleaned to meet or exceed $10 \mu\text{g per } 100 \text{ cm}^2$. The clean-up standard for industrial use from which the public is restricted is $100 \mu\text{g per } 100 \text{ cm}^2$. For remediation of contaminated sites, the EPA has set the following Preliminary Remediation Goals (PRGs):

- residential soil: 0.22 ppm
- industrial soil: 1.0 ppm
- ambient air, residential: 3.4×10^{-6} ppm (30-year, 24 hour/day lifetime exposure)
- tap water: 3.4×10^{-5} ppm

Site-specific cleanup levels have been established for Moffett Field by the EPA and the California Department of Toxic Substances Control (DTSC):

- 1.0 ppm for residential sites (DTSC)
- 0.470 ppm for ecological sites (EPA)

California regulates PCBs when they are found in wastes. Wastes are considered hazardous if they contain soluble PCBs at or above 5 ppm and total PCBs at or above 50 ppm.

The presence of PCBs in Hangar 1 violates both Federal law and EPA regulations since the PCBs in the building materials are not totally enclosed. The PCBs are being released both to the interior of the hangar and to the environment outside of Hangar 1.

Three mitigation options are being proposed for Hangar 1:

- **Encapsulation of hazardous materials:**
 - all hazardous materials would be covered by a double layer of coating material on both interior and exterior surfaces
 - regular sampling of the interior and the environment would be required to ensure that the coating is preventing releases
 - in the event that the hangar is transferred or sold to an entity outside of the federal government, all materials containing PCBs would have to be removed and all materials meeting the criteria of hazardous wastes would have to be disposed of as hazardous wastes
 - estimated costs: \$10,000,000.00 to \$15,000,000.00. (For initial coating only)

- **Removal and replacement of hazardous materials:**
 - includes removal of all materials that contain PCBs including siding, roofing, and material
 - replacement of siding, roofing, and putty with non-hazardous materials
 - all materials meeting the criteria of hazardous wastes would have to be disposed of as hazardous wastes
 - estimated costs: \$30,000,000.00 to \$50,000,000.00.

- **Demolition and disposal:**
 - the hangar would be demolished
 - all materials meeting the criteria of hazardous wastes would have to be disposed of as hazardous wastes
 - estimated cost: \$25,000,000.00 to \$40,000,000.00.

If conducted pursuant to TSCA, each of the options would require an environmental review by state and federal agencies and public hearings in accordance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act. Hangar 1 is listed on the national register of historic buildings and is part of the Shenandoah Plaza National Historic District.

On June 11, 2003, the EPA informed NASA that they plan to require the remediation of Hangar 1 pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as part of the Navy's Federal Facility Agreement (FFA). If conducted pursuant to CERCLA, NEPA would not apply, and the National Historic Preservation Act (NHPA) and TSCA would become applicable or relevant and appropriate requirements (ARARs).

Navy Responsibilities

Under the Memorandum of Understanding (MOU) between NASA and the Navy signed as part of the transfer of Moffett Field, the Navy accepted responsibility to remediate all Navy contamination and sources of contamination. Hangar 1 has been shown to be a Navy source of PCB contamination.

In 1990 and later, the Navy contended that they discovered that various solid materials, found on Navy ships and in other non-maritime and non-military industrial applications, may have contained regulated PCBs. Such materials include: caulking; felt and rubber ventilation duct flange gaskets; insulation and other non-metallic components of electrical cable; bulkhead and pipe insulation; various rubber products such as snubbers, bumpers, pipe hangers, gaskets, O-rings, packing, grommets, etc.; adhesive tape and double-backed adhesive tape; aluminized paint; gloss oil-based paint; and oils and greases.

While the Navy knew of these materials in 1990, none of this information was made available to the parties involved with the transfer of the former NASMF to NASA. Had this information been made available, arrangements could have been made to deal with

the problem or NASA could have refused to accept the structure. Since the information was not made available, NASA accepted the facility without knowing of the problem. Since the hangar was constructed by the Navy using PCB-materials, and the hangar is a major Navy source of PCB contamination, the Navy should be required to remediate the PCB materials in Hangar 1.

NASA is proceeding with a time-critical removal action to remove the contaminated sediments from the pavement and storm drain trench immediately surrounding the hangar.

On June 20, 2003, at the Base Closure Team (BCT) meeting in San Diego, the EPA advised the Navy that EPA had decided that Hangar 1 should be remediated pursuant to CERCLA and should be part of the FFA. The Navy has apparently accepted this decision at Southwest Division of the Naval Facilities Engineering Command in San Diego.

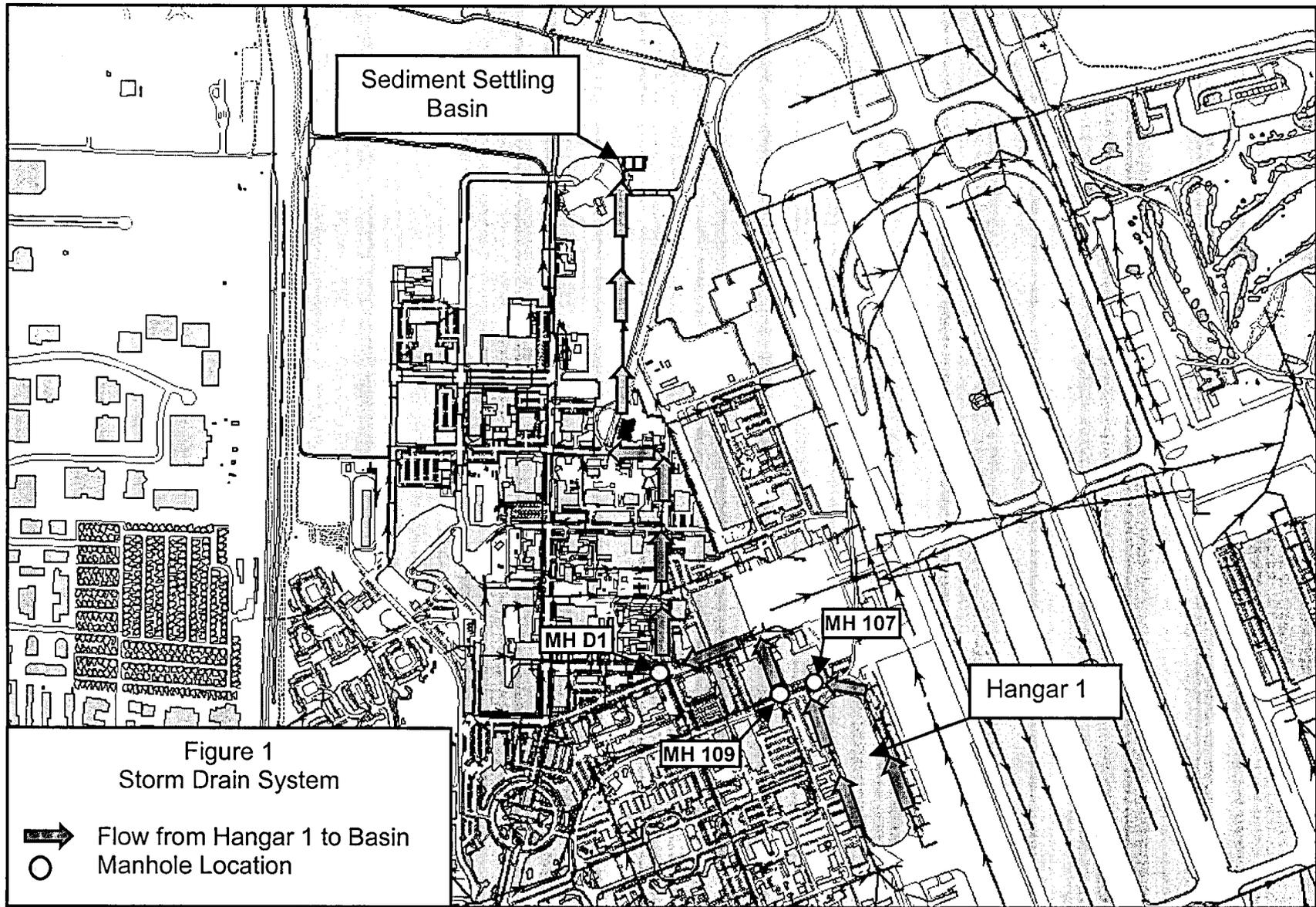


Figure 2. History of Aroclor 1268 Discovery

