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JOHNSON CONTROLS

March 09, 1993
JENV.93-202

Los Alamos National Laboratory
Los Alamos, NM 87544

ATTN: Raul Morales, EM-8, MS K490
THRU: Michael Brown, Deputy Manager, JENV
THRU: Richard Perkins, Environmental Compliance Supervisor,
JENV
SUBJECT: SUBCONTRACT NO. 9-X86-Y7575-1, CLOSURE REPORT FOR NON-
REPORTABLE PCB RELEASE AT TA-16, STRUCTURE 563, STATION
9

A PCB cleanup at TA-16, Structure 563, Station 9, was completed on November 12, 1992. A closure document stating the cleanup effort in chronological order is attached to this cover letter. A certification statement is included on page 4 of the closure document. If there are any questions or concerns about this report, please contact Michael Bailey, or Michael Brown, JENV, at 7-0104 or MS A-199, JENV.

Very truly yours,

Michael Bailey
Michael Bailey
Environmental Engineer, JCI/JENV

Attachment: 4 pages Non-Reportable Cleanup Record TA-16, Structure 563, Station 9

cy:
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FORM 100-1001-1001

NON-REPORTABLE

CLEANUP RECORD AND CERTIFICATION FOR
HIGH-CONCENTRATION SPILLS WHICH INVOLVE
LESS THAN 1 POUND OF PCBs BY WEIGHT

LOCATION: TA-16, STRUCTURE 563, STATION 9

SPILL OCCURRED: Date: July 28, 1987 Time: AM
SPILL DISCOVERED: Date: July 28, 1987 Time: 1:00 PM
SPILL STOPPED: Date: August 1, 1987, AM

I. Source of spill: A PCB transformer containing 25,000 PPM PCBs at TA-16, Structure 563, Station 9, PCB ID #4997, had a small leak from the electrical conduit pipe where the wiring was connected to the transformer. The oil was leaking through a bushing gasket up on the side of the transformer where the conduit was connected, and traveled down the electrical conduit to the concrete pad, and then onto the soil next to the pad. Approximately one half to one gallon of oil had leaked from the bushings (visual estimate), and traces of oil were found in the soil next to and below the pad. The transformer is located on a concrete pad surrounded by a fence with a locked gate. The transformer had a blue non-PCB label on it before and after the release, due to the fact that the transformer was retrofilled in 1984 with non-PCB mineral oil. It was sampled at that time, and found to be below 50 ppm PCBs. But, over the years, PCBs leached back into the oil, and when sampled again in 1987, was found to contain 25,000 PPM PCBs.

II. Estimated or actual date and time of the spill occurrence:

The date and time that the leak started is unknown, but visual inspection of the transformer, indicated that the leak occurred shortly before discovery.

III. Chronology of cleanups and cleanup details:

- o Cleanup started on July 28, 1987, by the Johnson Control Linemen. The visible oil was washed from the transformer and the concrete using Penetone Power Cleaner 155, rags, and water. Contaminated soil was removed and placed in a 55 gallon drum.

Per 40 CFR 761.120 "Definitions", the method of cleanup to be used will be a "Double wash/rinse." This is a minimum requirement to cleanse solid surfaces (both impervious and non-impervious) two times with an appropriate solvent or other material in which PCBs are at least 5 percent soluble (by weight).

- o The transformer continued to leak a very small amount until the morning of August 1, 1987. The transformer was inspected daily between July 28 and August 1, and for a period of two weeks following repair. On August 1, an outage was scheduled, and the Linemen repaired the leaking conduit coming from the transformer. A double wash/rinse was conducted on the concrete pad of the transformer using Penetone Power Cleaner 155, brushes, and water for rinse.

The transformer was found to be non-leaking after the repair. The soil and pad had received a cleanup in July 1987, and the transformer was inspected monthly for leaks after that. An inspection on August 3, 1989, by JENV, revealed the need for further sampling where the 1987 release had occurred. Five soil and three swipe samples were taken on August 25, 1989, by HSE-8 (now EM-8). The results of these samples indicated that further cleanup was necessary to ensure that PCB levels meet or are below levels required in EPA's PCB spill cleanup policy for old spills (40 CFR 761.120(a)(1)).

- o A meeting was held on September 27, 1989 between EM-8 and JENV concerning further cleanup at Station 9. A grid of the area was completed by EM-8 on October 17. Sampling of the grid points was done on October 23 and November 3, 1989. Sample results indicated that further cleanup was necessary to ensure that PCB levels meet or are below levels required in 40 CFR 761.120(a)(1).
- o JENV marked the fence around the pad and transformer with PCB signs, and increased the level of surveillance along with monthly inspections until further cleanup could be done. Further cleanup was to continue in conjunction with the transformer replacement.
- o The cleanup continued on May 12 and 13, 1992. The fence was removed from around the transformer, and the transformer was removed from the pad and placed nearby. The pad was removed along with soil around and under the pad at this time. Approximately 352 cubic feet of soil (including the pad) was removed to TA-54, Area G.
- o Sampling of the grid points was done on May 18, 1992, by EM-8. Sample results indicated that further cleanup

was necessary to ensure that PCB levels meet or are below levels required in 40 CFR 761.120(a)(1), which is 25 ppm in soils.

- o The cleanup continued on June 16, 1992. Approximately 198 cubic feet of soil was removed.
- o Sampling of the grid points was done on July 15, 1992, by EM-8. Sample results indicated that further cleanup was necessary.
- o The cleanup continued on August 7, 1992. Approximately 15 cubic feet of soil was removed at this time.
- o Sampling of the grid points was done on August 11, 1992, by EM-8. Sampling results indicated that further cleanup was necessary.
- o The cleanup continued on September 16, 1992. Approximately 36 cubic feet of soil was removed at this time.
- o Sampling of the grid points was done on September 18, 1992, by EM-8. Sampling results indicated that further cleanup was necessary.

IV. The date and time cleanup was completed or terminated:

- o The cleanup was completed on November 12, 1992, when and additional 90 cubic feet of soil was removed from Structure 563, Station 9. Sampling of the grid points was done on November 13 by EM-8. All PCB levels in the soil are now below the TSCA mandated cleanup levels for low-contact outdoor electrical substations of 25 ppm.

V. A brief description of the spill location:

- o The spill location is at TA-16, Structure 563, Station 9 which is located north of TA-16 Building 430. Structure 563, Station 9, is an outside fenced-in pad mounted PCB transformer (PCB ID #4997).

VI. Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces, and a brief description of the sampling methodology used to establish spill boundaries.

- o A standard wipe test (40 CFR 761.130) was done by EM-8 in accordance with EPA methodologies. A grid of the cleanup area was designed by EM-8 using methods described in the EPA publication "Field Manual for Grid Sampling of PCB Spill Sites to

Verify Cleanup" (EPA 560/5-86-017, May 1986).

- o Grids, sample results, and information about the cleanup at TA-16, Structure 563 can be obtained from EM-8.

VII. A brief description of the solid surfaces cleaned and of the wash/rinse method used:

- o See Section III.

VIII. Approximate depth of soil excavation and the amount of soil removed:

The soil was excavated to a depth of 12 inches in some locations, and as deep as eight and one half feet in one location where a crack was evident on the pad (excavation of this area took place after the pad was removed). A total of 691 cubic feet of soil was removed from TA-16, Structure 563, Station 9.

IX. A certification statement signed by the responsible party stating that the cleanup requirements have been met and that the information contained in the record is true to the best of his/her knowledge.

Signature Michael B. Bailey Date: 3/9/93