

October 7, 1994

City of Cleveland
Department of Public Health
ATTN: Robert Staib
Acting Commissioner
Division of Environment
1925 St. Clair Avenue
Cleveland, OH 44114

ACCD/DCB
JED7

SUBJECT: FORMER CLEVELAND PNEUMATIC TOOL COMPANY

Dear Mr. Staib:

This is a followup to our October 6, 1994 telephone conversation in response to your October 5, 1994 letter regarding the former Cleveland Pneumatic Tool Company which had conducted operations at 3781 E. 77th Street in Cleveland. In your letter and the telephone conversation you expressed concern over potential health and safety issues as a result of our August 9, 1994 letter conveying the results of a June 21, 1994 inspection we performed at the above facility.

As stated during the phone call, we had performed two additional inspections of the same facility. The second of those inspections was conducted on July 20, 1994, and confirmed that all radioactive material in excess of NRC criteria for unrestricted release had been removed from the facility. As a result there is no radiological health and safety concern regarding this building. We also stated during the phone call that the levels and locations where radioactive material had been found in the facility would have had little to no safety concern to the workers who had been working within the building. Enclosed are copies of the inspection reports from these additional two inspections.

If you have any questions, please contact me at (708) 829-9856 or Bill Snell of my staff at (708) 829-9871.

Sincerely,

Original Signed By William Snell
for
George M. McCann, Chief
Fuel Facilities and Decommissioning
Section

- Enclosures: 1. 6/21/94 letter w/encl
- 2. 7/29/94 letter w/encl

cc w/o encl: G. L. Shear, RIII

bcc w/encl: PUBLIC

DOCUMENT NAME: B:\CLEVELND.CTY

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII	C	RIII	C				
NAME	Snell:dp WGS		McCann WGS/oa					
DATE	10/7/94		10/7/94					

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JUN 21 1994

File

Pneumo Abex Corporation
ATTN: Mr. Michael E. Kaluza
General Counsel
Aerospace Group
3781 East 77th Street
Cleveland, OH 44105

License No. STB-543 (Terminated)
Docket No. 040-06733 (Terminated)

Dear Mr. Kaluza:

SUBJECT: THORIUM CONTAMINATION FROM PREVIOUSLY LICENSED ACTIVITIES

This refers to the special inspection conducted by Mr. William Snell on June 13, 1994, of the facility formerly occupied by the Cleveland Pneumatic Tool Company located at 3781 East 77th Street, Cleveland, Ohio. Licensed activities were previously authorized by Atomic Energy Commission (AEC) Source Material License No. STB-543. The results of our preliminary inspection findings were discussed with you at the conclusion of the inspection on June 13, 1994.

The enclosed copy of our inspection report identifies areas examined during the inspection. The inspection consisted of a selective examination of representative records from the former license file, observations, independent measurements, and interviews with representatives of Pneumo Abex Corporation.

Based upon this inspection, we concluded that the remediation plan submitted by RUST Federal Services was adequate for you to carry out decontamination of the flash welder. Your schedule called for beginning work on June 14, 1994, with the expectation that decontamination of the welder would be completed on June 17, 1994. Based on a telephone call with Mr. Mike Hodge of B.F. Goodrich during the morning of June 17, it appeared that the decontamination efforts would be completed as scheduled.

However, the results of the inspection raised our concern regarding the potential for contamination to exist above the NRC release levels at other locations within the building. The radiation levels identified do not constitute an immediate health and safety problem for your employees or visitors. Based on telephone calls with you on June 15 and 16, 1994, and Dave Kiesling of Fluor Daniel on June 16 and 17, we understand that you will be providing us with a plan within 30 days of the date of this letter to characterize the extent of any building contamination.

040290164

JUN 21 1994

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC Public Document Room.

We will gladly discuss any questions you have concerning the inspection.

Sincerely,

Original Signed by Gary L. Shear

Gary L. Shear, Chief,
Fuel Cycle and Decommissioning Branch

Enclosure: Inspection Report
No. 999-90063/94004(DRSS)

cc w/enclosure:

- R. Owen, Ohio Department of Health
- M. White, Mayor, City of Cleveland
- T. Brady, Cuyahoga County Board of Health
- D. R. Kiesling, Fluor Daniel
- R. L. Lewis II, Vorys, Sater, Seymour and Pease
- G. Egleston, Pneumo Abex Corporation
- M. L. Jackman, RUST Federal Services
- M. Hedge, B.F. Goodrich, Inc.

bcc w/enclosure:

- P. Goldberg, IMNS
- T. Johnson, LLWM
- PUBLIC (IE07)

RIII

wls
Snell
06/17/94

RIII

wls
McCann
06/17/94

RIII

GLS
Shear
06/20/94

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 999-90063/94004(DRSS)

License No. STB-543 (terminated)
Docket No. 040-06733 (terminated)

Licensee: Pneumo Abex Corporation
3781 East 77th Street
Cleveland, Ohio 44105

Inspection At: Pneumo Abex Corporation
3781 East 77th Street
Cleveland, Ohio 44105

Inspection Conducted: June 13, 1994

Inspector: *William Snell*
William Snell
Senior Radiation Specialist

6/17/94
Date

Approved by: *William Snell Jr*
G. M. McCann, Chief
Fuel Facilities and Decommissioning
Section

6/17/94
Date

Inspection Summary

Inspection on June 13, 1994 (Report No. 999-90063/94004(DRSS))

Areas Inspected: This was a special inspection to review the former licensee's activities, recent scoping surveys, and the planned decontamination of a flash welder, in regard to the past use of thorium in the form of a thorium-magnesium alloy.

Results: The inspector confirmed that at least one area on the flash welder exceeded the NRC release limit of 3,000 dpm per 100 cm² maximum. In addition, the inspector identified two small pieces of metal located inside wooden storage bins on the second floor that also exceeded the NRC's release limit. Surveys of areas of the building where former operations involving the thorium took place identified radiation levels of up to twice background.

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DETAILS

1. Persons Contacted

Mike Kaluza, Pneumo Abex Corporation
Gary Egleston, Pneumo Abex Corporation
Mike Hodge, B.F. Goodrich, Inc.
Al Ruehmann, B.F. Goodrich, Inc.
Ajit Patra, B.F. Goodrich, Inc.
Dave Kiesling, Fluor Daniel
Richard Lewis II, Vorys, Sater, Seymour and Pease
Mike Jackman, RUST Federal Services
Steve Weismann, RUST Federal Services

All the above personnel attended the exit meeting conducted on June 13, 1994.

2. Background

License No. STB-543 was issued to Cleveland Pneumatic Industries, Inc., on February 9, 1962, for use and possession of a thorium-magnesium alloy containing not more than 4% thorium at their facility located at 3781 East 77th Street, Cleveland, Ohio. The authorized activities included bending, welding, grinding and chemically treating thorium-magnesium extrusions to form rings for use in satellites. The license authorized the possession of a maximum of 132 pounds of thorium at any one time.

There was no documentation to indicate that the NRC had conducted an inspection of licensed activities at this facility. The license was renewed on February 19, 1965, and January 10, 1968. The license was formally terminated on January 12, 1972, although it appears licensed activities ceased in the late 1960's.

3. Facility Status

The building where the formerly licensed activities took place is approximately 500,000 square feet and comprises an entire block. The Pneumo Abex Corporation has been leasing the building, but the lease expires in July 1994 and they are not renewing the lease. To vacate the building, Pneumo Abex sold the assets of the building in conjunction with the sale of Cleveland Pneumatic Tool Company to B.F. Goodrich, Inc. Currently the building is essentially vacant, with all the contents removed except the flash welder. B.F. Goodrich will move the welder to their building a few blocks away as soon as it can be decontaminated and released for unrestricted use.

4. Independent Measurements

The NRC inspector conducted radiological surveys in and around the former operations areas on the first floor, basement, second floor and roof of the building. The areas surveyed included the flash welder, wooden storage bins where samples had been stored, the area where the thorium-magnesium rings were stored, the areas where sizing die identification and test welding were conducted, where rack storage of extrusion was located, where barbering and penetrant dye check was performed, the areas where the king bore/vertical turret lathe, bending machine, press, and band saw had been located, and the roof areas surrounding the ventilation exhaust.

Radiation surveys were performed with a Victoreen, Model 190 portable survey instrument, NRC Tag 042444, calibrated on February 1, 1994. Prior to the surveys the instrument was checked for accuracy and constancy with a dedicated and traceable $^{90}\text{Sr}/^{90}\text{Y}$ check source. The instrument responded as expected. The instrument results were also corrected for probe size and counting efficiency. This correction showed that 170 counts/minute (cpm) above background equates to 3,000 disintegrations per minute/100 cm^2 (maximum release level) and 60 cpm above background equates to 1,000 dpm/ cm^2 (release level averaged over one square meter) beta/gamma radiation. Background measurements showed 30-50 cpm (525-875 dpm/100 cm^2). Except for the roof, the locations where radiation measurements were taken are indicated in Attachment A.

Direct measurements taken on debris/sludge located in a ventilation duct under the flash welder showed the highest radiation level of 750 cpm (13,000 dpm/100 cm^2). Measurements of two small pieces of metal found in wooden storage bins on the second floor were 200 cpm (3,500 dpm/100 cm^2). Surveys of areas of the building where the former operations involving the thorium took place showed most areas at background levels, with variations ranging up to 70 cpm (1250 dpm/100 cm^2). A single spot was identified at the base of a girder where the press and band saw were formerly located of 100 cpm (1750 dpm/100 cm^2).

In conclusion, the inspector's independent radiation measurements confirmed that contamination remains on the flash welder and several pieces of radioactive metal were found that exceeded the NRC limits for release for unrestricted use.

5. Remediation Plan

Pneumo Abex had contracted with RUST Federal Services to decontaminate the flash welder. A draft copy of the plan (Plan No. PL-NRS-0694-152) was provided to the inspector, and was reviewed while the inspector was still onsite. Pneumo Abex's goal was to have RUST begin the decontamination activities the following day. The inspector's review of the plan found it to be acceptable to conduct the decontamination activities associated with the flash welder.

Additional concerns were raised regarding the need to conduct surveys and decontamination (if necessary) of the ventilation duct, support girders, and floor area associated with the flash welder. It was agreed the draft plan could be modified to conduct remediation of these additional areas if surveys indicated that it was necessary. It was also agreed that RUST would collect the two pieces of radioactive metal and dispose of them with the rest of the waste being generated by the decontamination of the flash welder. RUST would also resurvey the wooden storage bins to ensure that if other pieces of radioactive metal existed, they could also be removed.

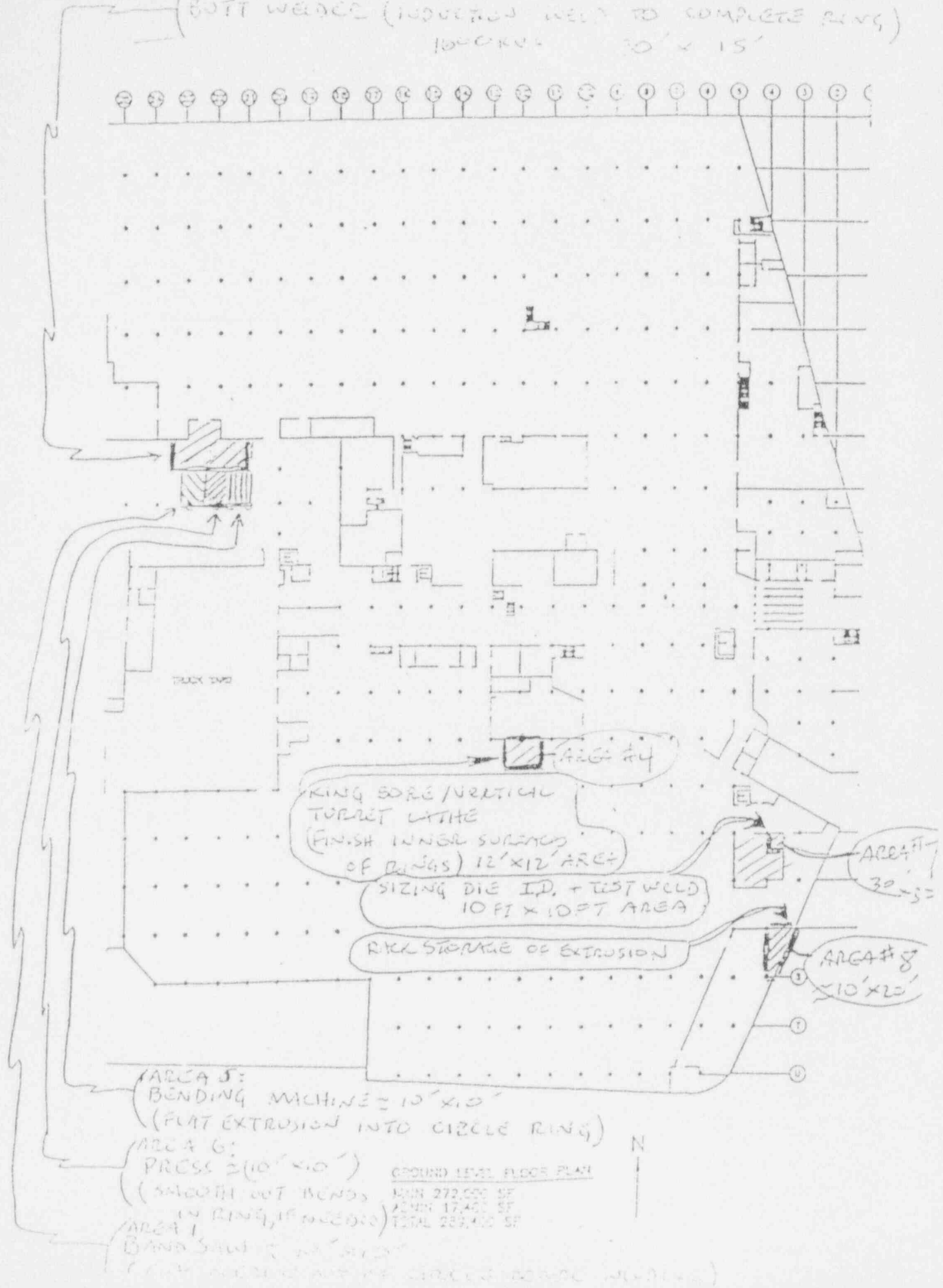
6. Exit Meeting

The NRC inspectors met with the individuals identified in Section 1 of this report and summarized the findings of the inspection. The inspector stated that the independent radiological survey confirmed the existence of contamination in the welder that exceeded current NRC release criteria. In addition, two pieces of radioactive metal were found that also exceeded the release criteria. These areas were identified for further evaluation during remediation. During the course of the inspection and during the exit meetings, no documents, inspection findings and/or statements were identified as proprietary in nature.

Attachment:

A. Locations of former operations

AREA 3
BUTT WELDER (INDUSTRIAL WELD TO COMPLETE RING)
160000 30' x 15'



AREA #4
RING SORE / VERTICAL
TURN TABLE
(FINISH INNER SURFACE
OF RINGS) 12' x 12' AREA

SIZING DIE ID, + TEST WELD
10 FT x 10 FT AREA

RACK STORAGE OF EXTRUSION

AREA #9
30' x 5'

AREA #8
10' x 20'

AREA 5:
BENDING MACHINE = 10' x 10'
(FLAT EXTRUSION INTO CIRCLE RING)

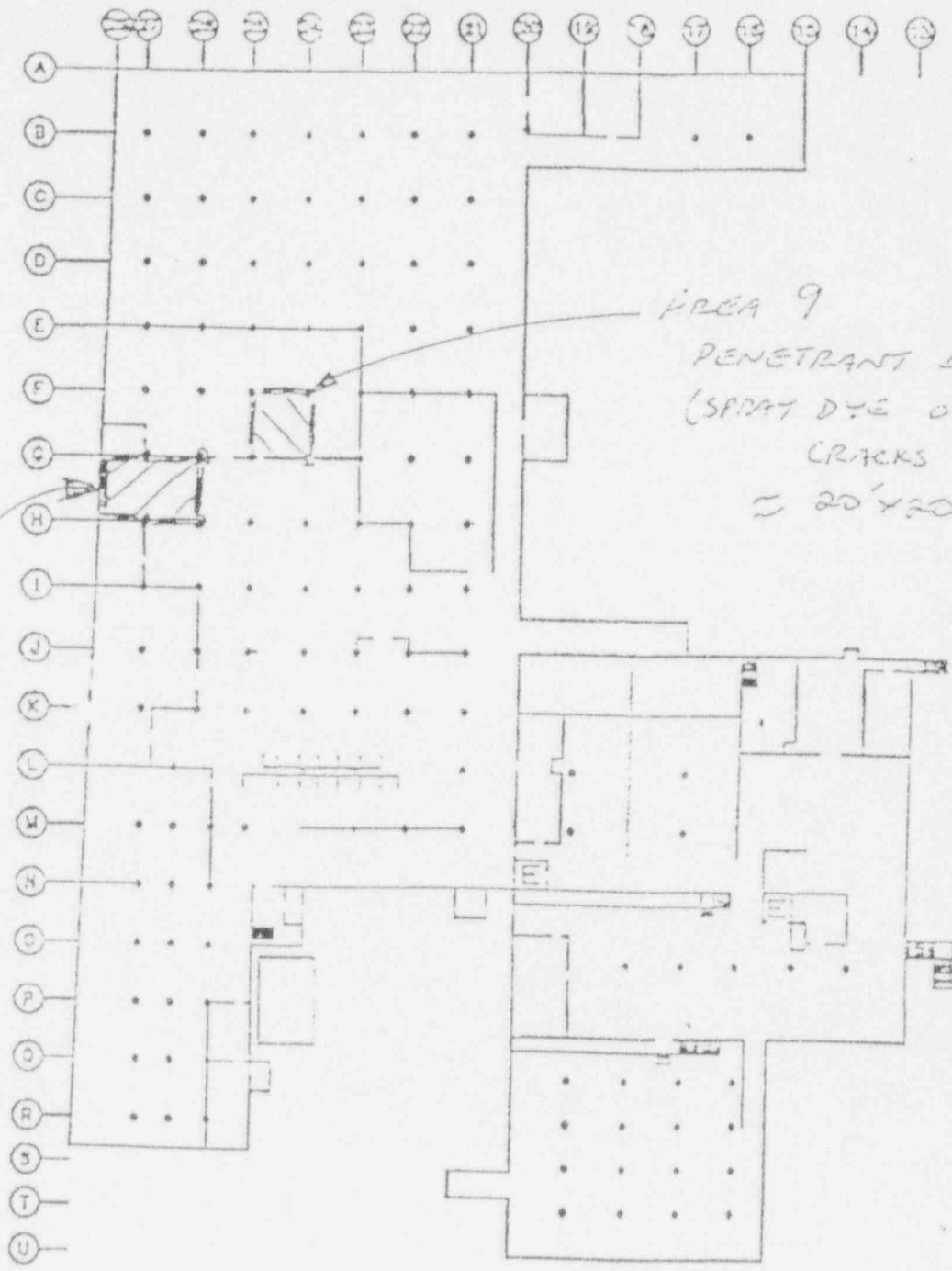
AREA 6:
PRESS 2 (10' x 10')
(SMOOTH OUT BENDS
IN RING, IF NEEDED)

AREA 7
BAND SAW 2 (10' x 10')
(CUT AND TRIM OUT OF CIRCLES FROM RINGS)

GROUND LEVEL FLOOR PLAN

MAIN	272,000 SF
2ND FLOOR	17,400 SF
TOTAL	289,400 SF

N

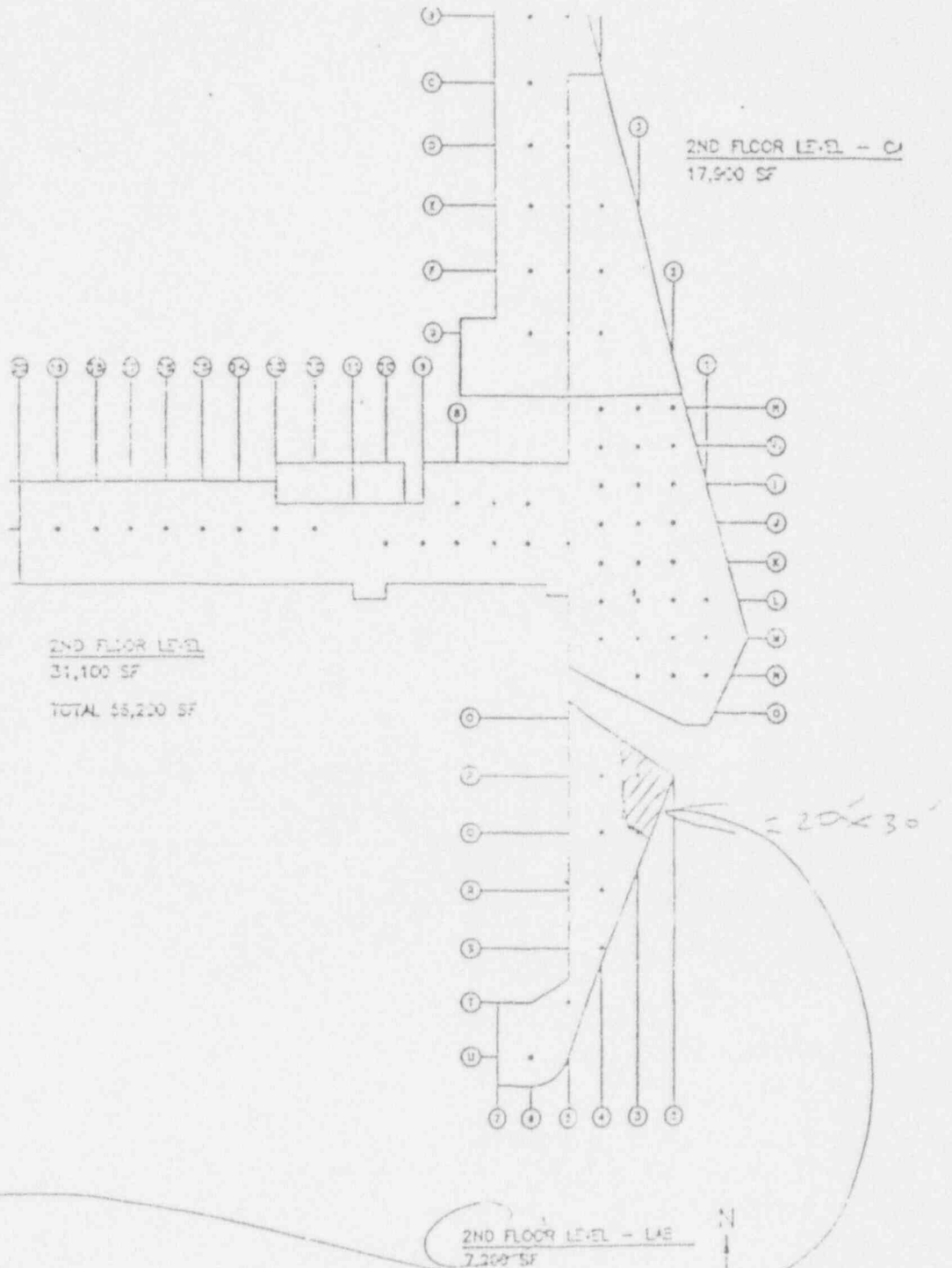


AREA 9
PENETRANT DYE CHECK
(SPRAY DYE OBSERVE FOR
CRACKS IN WELD)
≈ 20' x 30'

AREA 2 BARREL SHOP (ABRASIVE CLOTH WHEELS)
(REMOVE WELD BURRS, BREAK EDGES,
POLISH IF NEED)
≈ 30' x 20'

BASEMENT LEVEL FLOOR PLAN
F. 300 S.F.

N



AREA 10

RING STORAGE AREA

IS PRESENTLY OBSOLETE

JUL 29 1994

Pneumo Abex Corporation
ATTN: Mr. Michael E. Kaluza
General Counsel
Aerospace Group
3781 East 77th Street
Cleveland, OH 44105

License No. STB-543 (Terminated)
Docket No. 040-06733 (Terminated)

Dear Mr. Kaluza:

SUBJECT: NRC CONFIRMATORY SURVEY (NRC REPORT NO. 999-90003/94049(DRES))

This refers to the special inspection conducted by Messrs. William Shell and Mike Kurth on July 20, 1994, of the facility formerly occupied by the Cleveland Pneumatic Tool Company located at 3781 East 77th Street, Cleveland, Ohio. Licensed activities were previously authorized by Atomic Energy Commission (AEC) Source Material License No. STB-543. The results of our inspection findings were discussed with Mr. Gary Egleston of Pneumo Abex, Mr. David R. Kiesling of Fluor Daniel and Mr. Michael L. Jackman of RUST Federal Services at the conclusion of the inspection on July 20, 1994.

The enclosed copy of our inspection report identifies areas examined during the inspection. The inspection consisted of independent surveys and measurements of the facility at 3781 East 77th Street, Cleveland, Ohio. In addition to our independent inspection activities, we also reviewed the results of the confirmatory surveys that you had performed at the above facility.

The results of the radiological surveys and analyses performed indicated that residual radioactive material on building surfaces at the facility were less than the criteria found in NRC's "Guidelines for Decontamination of Facilities and Equipment prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated August 1977. After reviewing your reports and surveys of this facility and conducting our own confirmatory surveys, we conclude that further remedial action is not required. Therefore, NRC no longer has any regulatory concern with regard to this facility. The facility, located at 3781 East 77th Street, Cleveland, Ohio, is released for unrestricted use.

The NRC will not require any additional decommissioning in response to future NRC criteria or standards, except in the event that additional contamination, or noncompliance with the Facility Close-Out Survey Plan approved by the NRC by letter dated July 7, 1994, is found indicating a significant threat to public health and safety.

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JUL 29 1994

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC Public Document Room.

We will gladly discuss any questions you have concerning the inspection.

Sincerely,

*Original Signed by
G. M. McCann*

Gary L. Shear, Chief
Fuel Cycle and Decommissioning Branch

Enclosure: Inspection Report:
No. 999-90003, 34049(DRSS)

cc w/enclosures:

- R. Owen, Ohio
Department of Health
- M. White, Mayor, City of
Cleveland
- T. Brady, Cuyahoga County Board
of Health
- D. R. Kiesling, Fluor Daniel
- R. L. Lewis II,
Vorys, Sater, Seymour and Pease
- G. Egleston, Pneumo Abex Corporation
- H. L. Beckman, RSI Federal Services

bcc w/enclosure:

- P. Goldberg, IMMS
- T. Johnson, LLWM
- PUBLIC (IE07)

(yes)

RIII
WGS
Snell
07/23/94

RIII
Kurth
07/27/94

RIII
McCann
07/27/94

RIII
Shear
07/27/94
HLM
LJS

U.S. NUCLEAR REGULATORY COMMISSION
REGION III

Report No. 999-90003,94049(DRSS)

License No. STB-543 (terminated)
Docket No. 040-06733 (terminated)

Licensee: Pneumo Abex Corporation
3781 East 77th Street
Cleveland, Ohio 44105

Inspection At: Pneumo Abex Corporation
3781 East 77th Street
Cleveland, Ohio 44105

Inspection Conducted: July 20, 1994

Inspector:

William Snell
William Snell
Senior Radiation Specialist

7/29/94
Date

Mike Kurtz
Mike Kurtz
Radiation Specialist

07/29/94
Date

Approved by:

G. H. McCann
G. H. McCann, Chief
Fuel Facilities and Decommissioning
Section

07/29/94
Date

Inspection Summary

Inspection on July 20, 1994 (Report No. 999-90003/94049(DRSS))

Areas Inspected: This was a special inspection to perform a confirmatory survey following remediation of contamination previously identified in a June 13, 1994, inspection (NRC Report No. 999-90063/94004(DRSS)). The purpose of the survey was to determine if residual radioactive material was less than NRC's unrestricted use criteria. Also reviewed were the results of confirmatory surveys performed by the licensee.

Results: The inspection did not identify any radiation levels or any removable radioactive contamination above background at the locations surveyed. Based upon the inspection findings, it was concluded that the facilities met the current NRC criteria for release for unrestricted use.

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DETAILS

1. Persons Contacted

Gary Egleston, Pneumo Abex Corporation
Dave Kiesling, Fluor Daniel
Mike Jackman, RUST Federal Services

All the above personnel attended the exit meeting conducted on July 20, 1994.

2. Background

On June 13, 1994, the NRC conducted a scoping survey of the facility (Inspection Report No. 999-90063/94004(DRSS)) and confirmed Pneumo Abex's finding that radioactive material was present that exceeded the NRC release limit for unrestricted use. In response, Pneumo Abex contracted to RUST Federal Services for the development and execution of a characterization and remediation of the facility. This was accomplished RUST Federal Services during June and July 1994.

3. Facility Status

The building where the formerly licensed activities took place was approximately 500,000 square feet and comprised an entire block. The Pneumo Abex Corporation had been leasing the building, but the lease expired at the end of July 1994, and the lease was not being renewed. To vacate the building, Pneumo Abex sold the assets of the building in conjunction with the sale of Cleveland Pneumatic Tool Company to B.F. Goodrich, Inc. At the time of the inspection the building was essentially vacant, with only minimal furnishings remaining.

4. Independent Measurements

The NRC inspectors conducted radiological surveys in and around the former operations areas on the first floor, second floor, third floor, basement, loading dock and roof of the building. The areas surveyed included the area where the flash welder had been located, wooden storage bins where samples had been stored, the areas where the thorium-magnesium rings were stored, the areas where sizing die identification and test welding were conducted, where rack storage of extrusion was located, where barbering and penetrant dye check was performed, the areas where the king bore/vertical turret lathe, bending machine, press, and band saw had been located, the loading dock, and the roof area surrounding the ventilation exhaust.

Radiation surveys were performed with two Ludlum Model 12 portable survey instruments with Model 44-9 alpha-beta-gamma probes. The instruments, NRC Nos. 047065 and 047067, were both calibrated on February 9, 1994. Prior to the surveys the instruments were checked for accuracy and constancy with a dedicated and traceable ⁹⁰Sr/⁹⁰Y check

source. The instruments responded as expected. The instruments results were also corrected for probe size and counting efficiency. This correction showed that for beta/gamma radiation with background included, approximated 3,000 disintegrations per minute/100 cm² (dpm/100 cm²), (the maximum unrestricted release level), instrument 047065 indicated 192 counts/minute (cpm) and instrument 047067 indicated 187 cpm. Background was measured and determined to be 60 cpm.

Confirmatory surveys were performed and wipes taken on the floors, walls, accessible ventilation ducts, drain openings, and support beams, as applicable, in each of the Affected Areas. Affected Areas were defined as areas that were potentially contaminated (based on previous surveys or operating history), including areas where radioactive materials were stored or used. There were a total of twelve Affected Areas. In addition, random surveys were conducted in Unaffected Areas, which were defined as a 10 meter buffer zone surrounding each Affected Area. Surveys included direct measurements for alpha and beta activity. Wipes were analyzed for gross alpha and gross beta activity.

Surface scans for α and β activity were indistinguishable from background. This survey indicated that residual radioactive material was less than NRC unrestricted use criteria of 1000 dpm (17 Bq)/100 cm² average activity; 3,000 dpm (50 Bq)/100 cm² maximum activity; and 200 dpm (3 Bq)/100 cm² removable activity. These criteria are found in NRC's "Guideline for Decontamination of Facilities and Equipment prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," August 1987. A review was also performed of the results of RUST's characterization survey, remediation, and confirmatory survey. The review indicated the results to be comparable with NRC survey data.

In conclusion, the inspector's independent radiation measurements confirmed that the facility had been adequately remediated and no radioactive material was found that exceeded the NRC guideline values for unrestricted use.

5. Exit Meeting

The NRC inspectors met with the individuals identified in Section 1 of this report and summarized the findings of the inspection. The inspector stated that the independent radiological survey identified no radioactive material was found that exceeded the NRC release criteria. During the course of the inspection and during the exit meeting no documents, inspection findings and/or statements were identified as proprietary in nature.