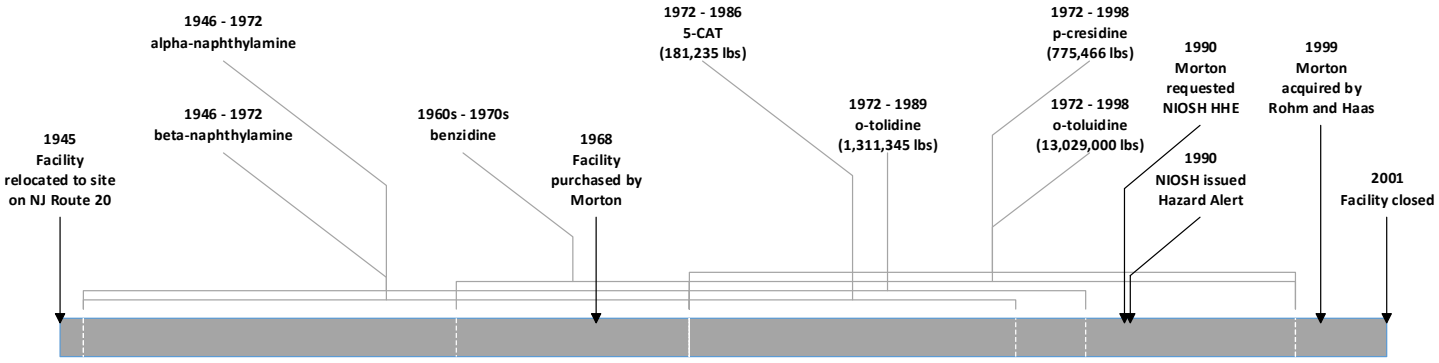
You are receiving this newsletter because we believe you worked for more than 30 days during 1946–2000 at the Patent Chemical / Morton Chemical / Rohm and Haas facility in Paterson, NJ. Paterson workers might be at increased risk of developing bladder cancer due to the opportunity for workplace exposure to chemicals that are known or suspected to cause bladder cancer.

A bladder cancer screening program has been offered for Paterson plant employees since 2001, but many workers have never participated in the screening program. You are invited to respond to this message and confirm your current contact information, including address, telephone number, and email address (if any) and to notify us of any changes in the future. If we have contacted you in error, please notify us, and we will remove your address from our mailing list.

Chemicals of Concern: Multiple chemicals of concern used at the Paterson facility have been classified according to their carcinogenicity (or cancer causing potential) by the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC). Product labels indicated that Paterson supplies of alpha-napththylamine were contaminated with beta-napthylamine.

CAS	Agent	NTP	IARC
000095-53-4	ortho-toluidine	known	carcinogenic (group 1)
000092-87-5	benzidine	known	carcinogenic (group 1)
000091-59-8	beta-naphthylamine	known	carcinogenic (group 1)
000134-32-7	alpha-naphthylamine		not classifiable (group 3)
000095-69-2	5-CAT (4-chloro-ortho-toluidine)	reasonably anticipated	probably carcinogenic (group 2A)
000119-93-7	ortho-tolidine	reasonably anticipated	possibly carcinogenic (group 2B)
000120-71-8	p-cresidine	reasonably anticipated	possibly carcinogenic (group 2B)

Records indicate that one or more chemicals of concern were in use during 1946–1998.



Dye products made using chemicals of concern included: Black 101, Blue-Black, Blue 10, Hytherm Blue E, Dry Red, Red B, Red 10B, Red 18, Orange RC, Purple DR, and Yellow 8.

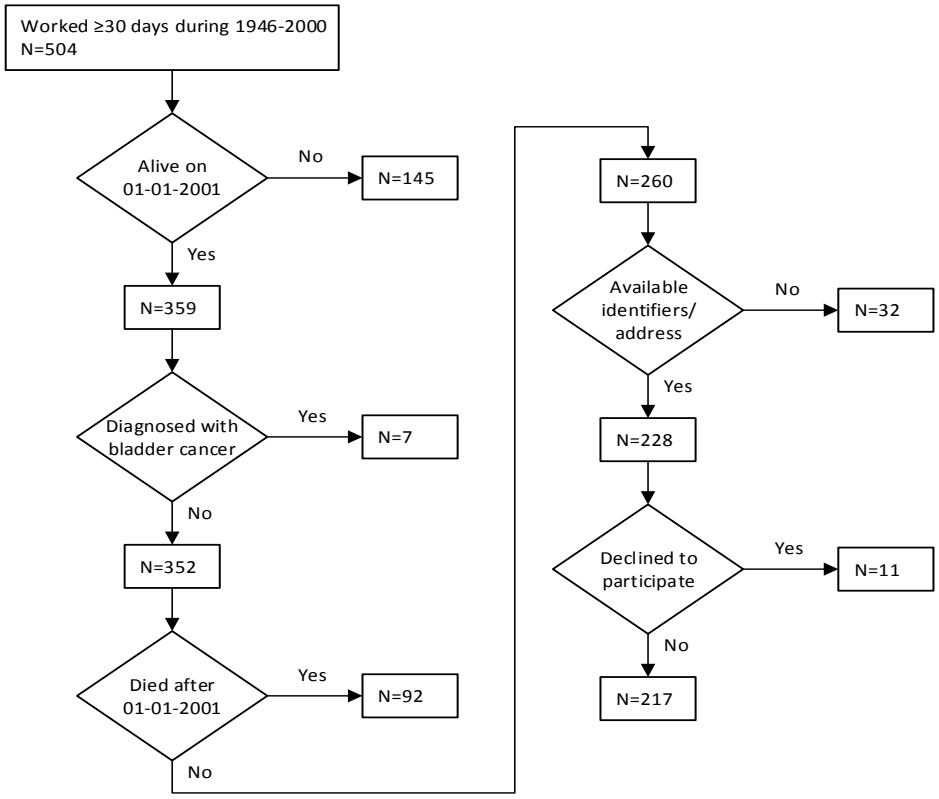
There were multiple areas of the facility where chemicals of concern were used or handled, including Buildings 2, 5, 8, 11, and the so-called “Hot boxes” adjacent to Building 7.

Workers performing tasks in these areas may have had opportunity for exposure. Morton attempted to control exposure through engineering controls and personal protective equipment, and all airborne exposures measured by the company during 1982–1990 were below limits considered acceptable at the time of exposure monitoring. However, the company's medical monitoring program detected "bladder dysplasia" among several active workers.

In September 1990, the National Institute for Occupational Safety and Health (NIOSH) performed a Health Hazard Evaluation (HHE) at the Paterson facility in order to assess exposures of employees to ortho-toluidine. Urine specimens were collected before and after work shifts, both from workers considered the most likely to be exposed (probably exposed) and workers least likely to be exposed (presumably unexposed). Urinary concentrations of ortho-toluidine in presumably unexposed workers were nearly identical post-shift vs pre-shift, and their non-zero concentrations might have owed to non-occupational exposures (e.g., smoking). Average urinary concentrations of ortho-toluidine in probably exposed workers were approximately 8 times greater post-shift vs pre-shift, demonstrating that workers in the facility were occupationally exposed to ortho-toluidine.

Screening Program: Given this demonstrated opportunity for exposure, Paterson workers might be at increased risk of developing bladder cancer. Pursuant to a legal settlement agreement in 2001, Rohm and Haas has provided a bladder cancer screening program for former Paterson workers. The screening program aims to limit morbidity and mortality from bladder cancer. Participants may submit urine for testing every 6 months. Bladder cancer can often be found early because it causes blood in the urine (hematuria) or other urinary symptoms.

A comprehensive review of all available Paterson records identified 504 workers. Currently there are 217 potential screening program participants.



Screening program testing has changed over time and might change again in the future. During 2001–2003, testing included urinalysis (to check for blood and other substances in the urine), cytology (which uses a microscope to look for cancer cells in urine), and a test for NMP-22 (a nuclear matrix protein often found at higher levels in people who have bladder cancer). During 2003–2007, with a change from Quest Diagnostics to Dianon Pathology, testing included urinalysis, cytology, and a score for DNA aneuploidy (the presence of an abnormal number of chromosomes in a cell, which can be indicative of cancer). From 2007 to present, the testing has included cytology and fluorescent in situ hybridization (FISH) (which looks for chromosomal DNA changes often seen in bladder cancer cells).

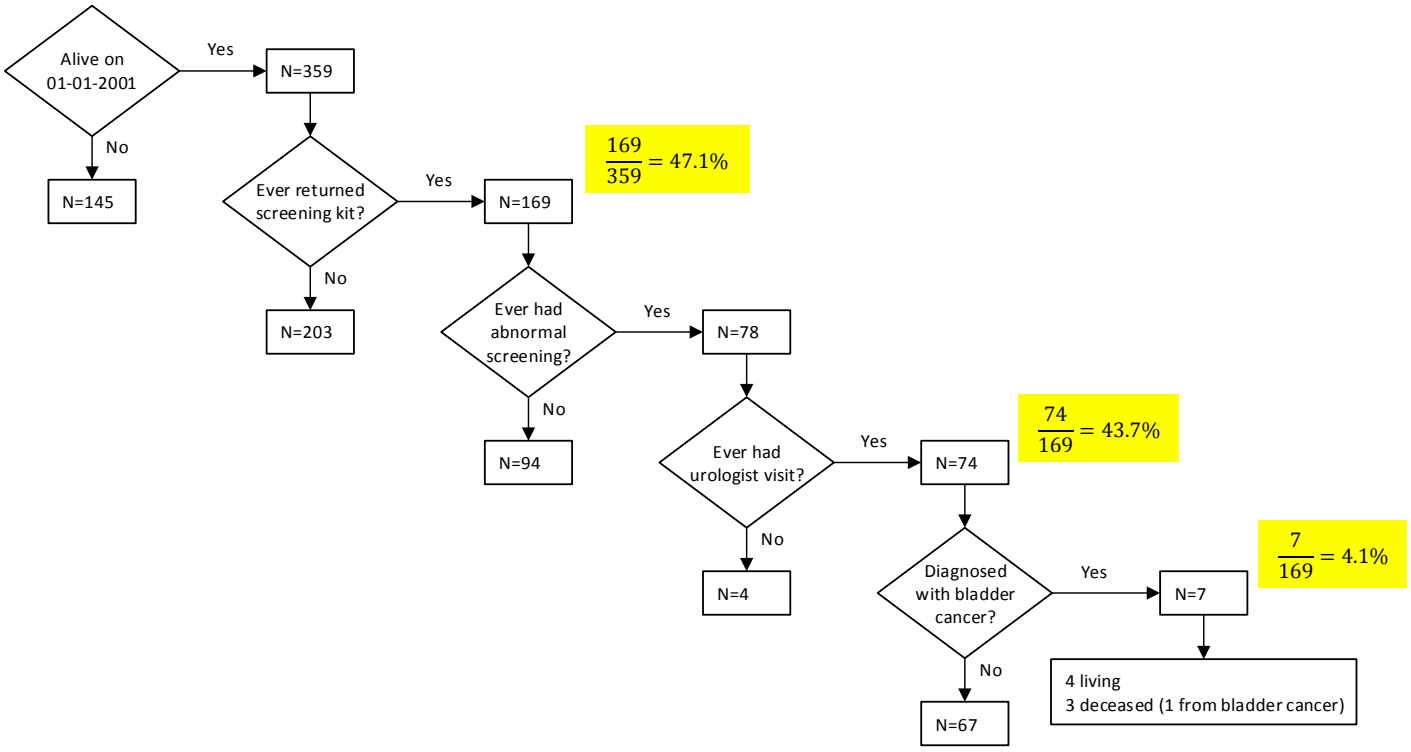
The settlement agreement specifies that the screening program use the most effective, accurate, and sensitive medical tests and technology available for the detection of bladder cancer, and we will evaluate whether future changes to the testing protocol might be necessary. Unfortunately screening test results might be abnormal even in some people who do not have cancer (i.e., false positive result). The FISH test has a high false positive rate, even when it is used as intended to detect bladder cancer among (a) patients who have hematuria or (b) patients already diagnosed with bladder cancer who are being screened for disease recurrence following treatment. Adding FISH testing to the testing protocol in 2007 likely contributed to false positive results and unnecessary urological procedures. Any future changes to the testing protocol will be aimed at balancing the risk of harm from false positive results with the potential benefits of early disease detection.

Positive or atypical results trigger an immediate referral to a urologist for evaluation and follow-up. Participants may choose their urologist, but selected urologists must accept workers' compensation as payment for services. Urological evaluations for abnormal screening test results have commonly included procedures such as cystoscopy, biopsy, computed tomography (CT) scan, and ureteroscopy (see enclosure for more details). The screening program will pay for all reasonable medical expenses determined to be relevant to the evaluation or treatment of health issues related to suspected or confirmed bladder cancer. Invoices must be accompanied by supporting records, including any progress notes, laboratory results, study findings, radiology reports, pathology reports, etc. Expenses for other medical conditions, including unrelated urological conditions such as prostate cancer, will remain the responsibility of the participant.

Find below counts for program activities during 2017 and 2018 (year-to-date, 01-01 thru 06-01-2018):

2017	2018 (YTD)	Description
169	66	Screening kits sent
98	55	Urine specimens, submitted for testing
84	45	Urine specimens, tested normal
14	10	Urine specimens, tested abnormal
12	10	Urine specimens, tested abnormal by FISH
13	10	Urine specimens, tested abnormal by cytology
30	12	Urologist visits

The flowchart below captures the cumulative screening program activity among eligible participants. Among the 359 workers alive at the time of the screening program inception, 169 workers (47.1%) have ever participated in the screening program by returning a screening kit. Among these, 78 workers have ever had an abnormal screening result, nearly all of whom elected to follow-up with a urologist: 74 workers or 43.7% of participants. However, the cumulative number of workers diagnosed with bladder cancer has been far smaller: 7 workers or 4.1% of screening program participants. In the process of making those 7 diagnoses, participants have had at least 121 cystoscopies, 77 CT urograms, 11 ureteroscopies, and two emergency department visits for complications to urological evaluations.



We added all Paterson workers to Dow's Epidemiology Surveillance System (ESS). Dow's epidemiology program has requested records from the Social Security Administration (SSA), the National Death Index (NDI), and state vital records offices to determine vital status and, for deceased workers, cause of death. Among the known 237 deceased Paterson workers, 4 have bladder cancer listed as a cause of death on their death certificates. We ask that next of kin (or knowledgeable coworkers) notify us when a former Paterson worker dies.

Screening program activity, including dates for screening kit results, urological visits, bladder cancer diagnoses, and deaths, is recorded in a database, which helps us to ensure that screening kits are sent on schedule. All Paterson workers are strongly encouraged to participate in the program, both by Rohm and Hass Company and by Attorney Steven H. Wodka (732-530-2815; shw@wodkalaw.com), who represents the class of former Paterson workers in the legal settlement. However, if you decline to participate, we will respect your decision and record your preference in our database in order to avoid sending you any more screening kits in the future. Whether you choose to participate or not, you can expect to continue receiving our annual program newsletter.

If you have not been receiving a test kit every six months and now wish to participate, please contact Lynne Glynn at 989-638-6228 or le.glynn@dow.com

Finally, corporate restructuring within The Dow Chemical Company in the context of its merger with DuPont and planned division into three separate companies will result in the elimination of my position. Responsibility for directing the screening program will transfer to my colleague, Dr. Barb Gibson. Her contact information is included below. Also, Emily Tolksdorf has resigned from the role of Program Manager. Lynne Glynn will now be your initial point of contact for all routine screening program activities such as screening kits, test results, and payment for covered medical expenses. All invoices and written communication should continue to be sent to the same address in Michigan.

It was my pleasure to direct the screening program during the past two years, and I enjoyed speaking directly with many of the program participants. Please contact me with any questions or concerns.

Sincerely,

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