



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

Docket No.: 040-01266
License No.: SUB-466(Retired)

Roger Towe
Staff Environmental Engineer
Environmental Affairs
El Paso Energy Corporation
1001 Louisiana Street, Suite 2439
P.O. Box 2511
Houston, TX 77252-2511

SUBJECT: INSPECTION NO. 040-01266/97-003

Dear Mr. Towe:

On September 2, 17 and 24, 1997, John R. Wray of this office conducted safety inspections at the former Tenneco Polymers, Inc. facility at Fords, New Jersey, of activities authorized by the NRC license listed below. Mr. Wray was assisted with the inspection on September 2, 1997 by Mr. Todd J. Jackson and with the inspection on September 17, 1997, by Ronald Bellamy. The inspection was limited to a review of the current status of the site and site remediation activities. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The results of the inspections conducted on September 2 and 17, 1997 were discussed with Mr. Ravi Gupta, SECOR International and others as described in the enclosed report at the conclusion of the inspection. The results of the inspection conducted on September 24, 1997, were discussed with Mr. Andrew Schwartz, SECOR International at the conclusion of the inspection.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the Public Document Room. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

Ronald R. Bellamy, Ph.D., Chief
Decommissioning and Lab Branch
Division of Nuclear Materials Safety

B/30

R. Towe

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Docket No.: 040-01266
License No.: SUB-466(Retired)

cc:
State of New Jersey

Jennifer Goodman Moon
New Jersey Department of Environmental Protection
Bureau of Environmental Radiation
Radiological Assessment Section
CN 415 TN
Trenton, NJ 08626-0415

Ravi Gupta, Principal-in-Charge
SECOR International, Inc.
111-A North Gold Drive
Robbinsville, NJ 08691-1603

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| OFFICE | DNMS/RI | N | DNMS/RI | | | | |
|--------|----------|---|----------|--|----------|--|---------|
| NAME | JWray | | TJackson | | RBellamy | | |
| DATE | 10/16/97 | | 10/ /97 | | 10/ /97 | | 10/ /97 |

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I
INSPECTION REPORT

R: X WPS1
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JNW

Report No. 040-01266/97-003
Docket No. 040-01266
License No. SUB-466 (Retired)
Licensee: Tenneco Chemicals, Incorporated
Meadow Lane
Fords, New Jersey
Facility Name: Tenneco Polymers
Fords, New Jersey
Inspection At: Industrial Boulevard
Fords, New Jersey

Inspection Conducted: September 2, 17 and 24, 1997

Inspectors: _____ date
John R. Wray, CHP
Health Physicist

Todd J. Jackson, CHP
Health Physicist

Approved By: _____ date
Ronald R. Bellamy, Ph.D., Chief
Decommissioning and Lab Branch
Division of Nuclear Materials Safety

Inspection Summary: Routine, announced visits to the formerly licensed site. The objective of the visits was to observe facility status and review progress of remediation activities for the identified uranium contamination at the site. Ongoing work in the warehouse to process and segregate contaminated and clear soil was reviewed, as well as interior work within affected buildings and the identified outside areas. (Inspection Report No. 040-01266/97-003)

Results: The licensee's contractor made significant progress in decontamination work within building K-12. Additional areas of uranium contamination in outside ground locations were identified and remediation activity ~~X~~ There was progressing in a controlled and deliberate manner. The contractor had produced reports describing work for April through ~~June~~ ^{July} 1997, and a special report dated May 28, 1997. No violations were identified during these site inspections. X

DETAILS

1.0 Persons Contacted

- * R. Gupta, SECOR
- ** A. Schwartz, SECOR
K. Smith, SECOR

- * present on 9/2 and 9/17
- ** present on 9/2, 9/17 and 9/24

2.0 Site Tours

The inspectors toured the site to observe current status. Ongoing work in the warehouse to process and segregate contaminated and clean soil was reviewed, as well as interior work within affected buildings and the identified outside areas.

Building K-12

Significant portions of the building interior had been decontaminated by the contractor. The contractor stated that for rooms in which decontamination and final survey work was near complete, a final survey report was being prepared, and the rooms would be available for survey by the NRC in the near future.

The Catalyst Preparation Room (CPR) was an area of active decontamination work. Interior surfaces of the room had been decontaminated, with contamination still present in some soils underneath the concrete floor. Soil had been removed from trenches in which had been the contaminated pipes draining the sump in one corner of the room, and some remaining contamination was yet to be removed.

The inspectors performed spot survey checks on areas within the building interior at areas where contamination would likely be concentrated (e.g. window sills, floor cracks, etc.). Some of these areas indicated contamination greater than the release limit for unrestricted use. The contractor stated that they had not, as yet, completely released the building from remediation work and will reevaluate the areas identified by the inspectors.

The second floor room above the CPR had been decontaminated ~~and surveyed~~ ^{by the contractor.} X
Contamination had been found on horizontal and inclined surfaces within the room, all locations where dust would be expected to settle. Vertical surfaces such as walls had not been found to be contaminated in this room.

The inspectors performed spot survey checks within this room and no indications of elevated contamination levels were identified. The inspectors indicated that a final survey would be performed by the NRC upon notification that inside decontamination activities had been completed.

Outside Areas

In the area where Building K-14 (also identified as "Building 7") had formerly been the contractor had surveyed 7 subsurface sumps and found three of them to be contaminated. Detailed surveys of the area were still in process.

Outside building K-12, soil had been excavated from near the southeast corner of the building. This was the area which had been found to have the greatest U-238 concentration. Pipes from inside K-12 had terminated underground in the area, and were not found to connect with other piping or sumps. Contamination appeared to be localized around the contaminated area, although additional pipes remained to be surveyed.

3.0 Radiological Samples

Samples were taken from known contaminated and potential contaminated areas of the site and analyzed in the NRC Region I Laboratory. Based on a review of activities for which this facility was originally licensed and a letter from the contractor (SECOR) dated May 28, 1997, ~~The analysis was directed to U-238.~~ *the inspectors determine that the isotope of concern for this site is U-238.* ✓

The sample locations and results are presented in Table 1. The table presents U-238 data in pCi/gr and can be compared to the depleted uranium release limit of 35 pCi/gr. Based on these results, the inspector concluded that the contractor is adequately identifying contamination in soil and surface water and had no further questions. Furthermore, a look at the U-238/U-235 ratio appears to indicate that most samples contained naturally occurring uranium and only the outside, gridded locations contained depleted uranium (depleted uranium rating greater than 30).

4.0 Records Review

The following records were reviewed for completeness and compliance to applicable regulatory requirements.

- radiological Training (~~three~~ new technicians on site)
- Air Samples
- Personnel Dosimetry

Training of onsite personnel appeared adequate and met NRC requirements. Breathing zone air samples of technicians obtained during scrubbing activities indicated no airborne concentration in excess of applicable 10CFR20 limits (less than 1.0×10^{-4} DAC for working in Building 12). Personnel dosimetry records indicated no abnormal exposures to radiation. The inspector had no further questions.

5.0 Reports

The inspector reviewed the contractor's reports of activities at the site for April through ~~June~~ ^{July} 1997. The reports provided a detailed overview of activities and progress during the subject periods. In addition, the contractor issued a special report

dated May 28, 1997, characterizing the site contaminate. The inspector reviewed these reports and had no further questions.

5.0 Exit Meetings

The inspector discussed the results of each visit to the site with those responsible contractor personnel present. SECOR personnel present during the discussions are denoted in Section 1.0 of this report. The inspector summarized the purpose, scope, and findings of the inspections at that time.

6.0 Exit Meeting

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TABLE 1

SAMPLE RESULTS (pCi/gr dry wt.)

| Location | Type | U-235 | U-238 | Ratio |
|--|-------|-------------|------------|-------|
| 1) Excavation pit outside Building 12 | Soil | 2.38 ± 0.03 | 51.2 ± 0.9 | 21.5 |
| 2) Segregated excavated dirt identified as contaminated | Soil | 4.20 ± 0.06 | 93.6 ± 15 | 22.3 |
| 3) Segregated excavated dirt identified as releasable | Soil | 0.58 ± 0.03 | 13.2 ± 0.8 | 22.8 |
| 4) outside, gridded area (location 67.5; 17.5) | Soil | 9.78 ± 0.06 | 317 ± 2 | 32.4 |
| 5) CPR east wall (location 04.5) | Soil | 0.25 ± 0.02 | 5.6 ± 0.7 | 22.4 |
| 6) Segregated dirt in building 31 (Batch 3-15) | Soil | 0.54 ± 0.03 | 13.0 ± 0.7 | 24.1 |
| 7) Surface water from excavation pit outside Building 12 | Water | < 8E ± 08 | < 2E-06 | |

Note: a) U-238 limit is 35 pCi/gr
 b) U-238/U-235 ratio for natural uranium is 21.5
 U-238/U-235 ratio for depleted uranium is greater than 30

TABLE 1

SAMPLE RESULTS (pCi/gr dry wt.)

values for Secor
in ink below NRC #.
* from Andy per Telecom
10/29/97

| Location | Type | U-235 | U-238 | Ratio |
|--|-------|-------------|------------------|------------|
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| 3) Segregated excavated dirt identified as releasable | Soil | 0.58 ± 0.03 | 13.2 ± 0.8 40 | 22.8 |
| 4) outside, gridded area (location 67.5; 17.5) | Soil | 9.78 ± 0.06 | 317 ± 2 550 | 32.4 50 |
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8E-08

Threshold
 of 44.9 = 550
 if too low,
 false
 efficiency

Send sample

Tech Spec. on inst. we'll use
 on gas flow
 not 44.9