

APPENDIX A INDUSTRIAL RADIOGRAPHY INSPECTION RECORD (IP 87120)											
REGION IV											
Insp. Record #	00-01		License #	46-23236-03			Docket #	030-32816			
Licensee Name	Anvil Corporation										
Street Address	1675 West Bakerview Road										
City, State, Zip	Bellingham, WA 98226										
Location (Authorized Site) Being Inspected	455 Moore Lane and the Conoco Refinery, Billings, Montana										
Licensee Contact Name			Steve Gunderson, LRPO				Phone #	406-254-0364			
Priority	1	Program Code		3320		Description	Radiography				
Date of Last Inspection:			4/4/99			Date of This Inspection			1/3-4/99		
Type of Insp.	Announced		X	Routine	X	Initial					
	Unannounced			Special							
Next Insp. Date	No Change		Normal	X	Reduced		Extended				
Justification for change in normal inspection frequency:			No Change, due to NRC enforcement action in 99.								
Summary of Findings and Actions											
No violations/Clear 591/or letter issued					X	Non-cited violations					
Violation(s), 591 issued			Violation(s), letter issued								
Follow up on previous violations:			This area is satisfactory								
Inspector - Printed Name			Kent M. Prendergast								
- Signature			<i>Kent M. Prendergast</i>				Date	1/24/00			
Approved - Printed Name											
- Signature			<i>Linda Hewell</i>				Date	2/7/00			

PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY		
1.	AMENDMENTS AND PROGRAM CHANGES	
License amendments issued since last inspection, or program changes noted in the license.		
Amendment No.	Date	Subject
2.	INSPECTION AND ENFORCEMENT HISTORY	
Unresolved issues; previous and repeat violations; Confirmatory Action Letters; and orders.		
<p>There were 6 violations identified during the last inspection completed on 4/14/99. The violations involved: 1) failures to limit the dose to 5 Rem; 2) failure to observe the radiographers assistant during radiographic operations; 3) failure to perform an adequate survey to ensure the source had returned to the safe position; 4) Failure to check alarm ratemeter prior operations; 5) Failure to survey and adjust boundaries; 6) failure to perform surveillance and protect against entry into the HRA.</p> <p>Based upon discussions with radiographers; observations of radiographers at the Moore Lane facility; changes to the shooting area Hootch at the Conoco Refinery; and observations of records of dosimetry the licensee has made satisfactory corrective actions and no further violations were observed for the items listed above,</p>		
3.	INCIDENT/EVENT HISTORY	
List any incidents or events reported to NRC since the last inspection. Citing "None" indicates that regional event logs, event files, and the licensing file have no evidence of any incidents or events since the last inspection.		
None, since the last inspection		
PART II - INSPECTION DOCUMENTATION		
NOTE: References that correspond to each inspection documentation topic are in Inspection Procedure 87120, Appendix B, "Industrial Radiography Inspection References."		

The inspection documentation part is to be used by the inspector to assist with the performance of the inspection. Note that not all areas indicated in this part are required to be addressed during each inspection. However, for those areas not covered during the inspection, a notation ("Not Reviewed" or "Not Applicable") should be made in each section, where applicable.

All areas covered during the inspection should be documented in sufficient detail to describe what activities and procedures were observed and/or demonstrated. In addition, the types of records that were reviewed and the time periods covered by those records should be noted. If the licensee demonstrated any practices at your request, describe those demonstrations. The observations and demonstrations you describe in this report, along with measurements and some records review, should substantiate your inspection findings. Attach copies of all licensee documents and records needed to support violations.

1.	ORGANIZATION AND SCOPE OF PROGRAM
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Management organization; authorities and responsibilities; authorized locations of use; type, quantity, and frequency of byproduct material use; staff size; delegation of Radiation Safety Officer (RSO) functions; reporting chain-of-command; multiple field offices and temporary job sites.

Vern Grenier, Operations Manager
Kathleen Turner, RSO
John Holderith, Field Supervisor
Steve Gunderson, Local RPO

Anvil Corp. is a good sized NDT licensee. At the Billings facility, there are 7 radiographers which have been certified by ASNT as of the time of this inspection. The licensee employs 3 radiographers assistants. The licensee possess 4 Amersham 660B's and 1 Cobalt 60 741 which is in storage. All of which have been retrofitted to meet 34.20. The licensee works out of the main Billings Office and the Conoco Refinery a couple times a week. Presently, there are 2 Field Offices under this license.

2.	MANAGEMENT OVERSIGHT
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Management support to radiation safety; RSO; program audits or inspections; authorized individuals; as low as is reasonably achievable (ALARA) reviews.

According to the LRPO, the Anvil RSO audits the Billings, Montana operation at least once per year. Records of Audits and the ALARA program are maintained at the Corporate Office. No violations were identified in this area.

3.	FACILITIES
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Facilities as described; uses; control of access; engineering controls; separation of materials and explosives; containers labeled.

The facilities on Moore Lane were as described in the NRC licensee and consisted of Offices, a good sized storage bay, and a brick storage area. The cameras were kept in a locked storage safe within the storage area. Posting was satisfactory and access was restricted. All cameras were appropriately labeled and marked. The licensee maintained an ample supply of calibrated survey meters. Surveys taken in the licensee's facility outside the storage area were at background or less than 0.1 mR/hr. The inspector also observed the shooting hootch at the Conoco Refinery and noted additional bricks had been placed outside for shielding; the door was enlarged to a double door and kept open with bungee cords; and the table in the hootch had been replaced with a small table which was placed in the rear of the hootch. The design of the shielding now allowed the radiographers to view the hootch from all sides to preclude any inadvertent entry. No violations were identified in this program area.

4.

EQUIPMENT AND INSTRUMENTATION

Radiography devices, source assemblies, source changers, special equipment meet performance requirements; appropriate survey instruments, dosimeters, alarming ratemeters.

The cameras and sources were as authorized on the license and included (4) Amersham 660 B cameras and all of which utilized the 424-9 sources. The cameras were noted transported in a properly marked and labeled shipping overpack and the licensee had the current COC for the OPL overpack. The licensee maintained an ample supply survey meters (NDS 2000) which were noted to have appropriate range and had been recently calibrated on 10/12/99. Ample RA 500 alarming rate meters were observed and which were last calibrated on in 12/6/99. The licensee also maintained an ample supply of Victoreen pocket dosimeters with a range of 0-200. Records of pocket dosimeter calibration indicated that they were calibrated annually. No violations were identified in this program area.

5.

MATERIAL USE, CONTROL, AND TRANSFER

Materials and uses authorized; security and control of licenses materials; and procedures for receipt and transfer of licensed material; inventories; utilization logs.

The licensee's cameras and sources were as authorized under the NRC License.

Based upon discussions with the LRPO and a review of training records, the individuals who perform radiography had received appropriate training and were authorized by the RSO. The inspector noted that all radiographers had been certified by the ASNT.

The inspector examined records of receipt and they were satisfactory. The licensee has appropriate procedures for the shipping, transport, and receipt of licensed materials. The records also indicate appropriate surveys were conducted.

The inspector examined records of sealed sources transferred to the manufacturer and noted the records were well maintained and contained all appropriate information. The review of the shipping papers indicated that all DOT requirements were followed.

Records of inventory and leak tests for 1998 and 1999 were reviewed and considered satisfactory. Records of utilization were reviewed for 1999 and also considered satisfactory to meet all NRC requirements.

No violations were identified in this program area.

6.	INSPECTION AND MAINTENANCE
Maintenance program; daily and quarterly inspections; records of defects; source modifications; Type B packages; 10 CFR Part 21 reports.	
Records of quarterly maintenance for 1998 and 1999 were examined and considered satisfactory. The records indicated that licensee's cameras had last been serviced on 12/29/99 and that the licensee also examined storage containers, transport containers and control assemblies on a quarterly frequency.	
The inspector examined random daily inspection records, and the records indicated that cameras, guide tubes, and cable assemblies had been checked prior to use for 1998 and YTD 99. The RSO indicated that they do not perform any source modifications or repairs, equipment needing repairs would be tagged out and sent to the manufacturer for repairs. The inspector also noted that a Part 21 was posted at the facility. The inspector also observed 2 radiographers demonstrate their daily maintenance procedures during the observation of a quarterly audit.	
No violations were identified in this program area.	

7.	FIELD STATIONS AND TEMPORARY JOB SITES
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Documents and records at field stations and temporary job sites; operating and emergency procedures; Agreement State licenses.

Documents required at the Field Office included: a copy of the NRC License, Parts 19, 20 and 34, properly filled out utilization logs, O&EPS, survey meter calibration records, current shipping papers for the Amersham OPL container and cameras. Pocket dosimeters and alarm ratemeters also indicated the date of calibration to meet 34.89

8.	AREA RADIATION SURVEYS AND CONTAMINATION CONTROL
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Radiological surveys (instruments, perimeter, storage devices, post-exposure, post-source exchange, storage area); leak tests (frequency, sealed sources, depleted uranium devices); handling of radioactive materials; records; and public doses.

Records of utilization (utilization logs) and surveys were examined for temporary job sites and the records documented that appropriate surveys were conducted to meet NRC requirements.

Records of leak tests were reviewed for 1998 and 1999 YTD to present and the records appeared satisfactory. The leak tests also included DU.

Public doses were stated to be less than 100 milliRem/year based upon discussions with RSO and a review of surveys.

Records of surveys following use, when the licensee places the device in storage were indicated on the utilization log and appeared satisfactory.

No violations were identified.

9.	TRAINING AND INSTRUCTIONS TO WORKERS
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Interviews and observations of routine work; staff knowledge of all routine activities; Parts 19, 20, and 34 requirements; training programs, including written tests; supervisor, assistant training.

According to the LRPO, all radiographers had taken a 12 hour course from Amersham, and passed the certification test that was given by the ASNT. Records of training are maintained at the main office. No violations were identified in this program area.

10.	RADIATION PROTECTION
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Radiation protection program with ALARA provisions; external dosimetry (dosimeters, direct reading dosimeters, alarming ratemeters); exposure evaluations; planned special exposures; dose and survey records and reports; annual notifications to workers; bulletins and other generic communications.

The inspector reviewed radiation exposure dosimetry records from January 1998 to present and discussed those records with licensee representatives to determine if the licensee's personnel dosimetry program met regulatory and license requirements. The inspector noted the previous overexposures in 1998 and that the individuals who received the overexposures were no longer working in radiography. One individual had quit and the other individual was working in NDT outside of radiography. Based on records licensee personnel were issued Landauer NAVLAP approved TLDs, exchanged at monthly intervals and records were satisfactory. The highest annual dose was 1452 TEDE for 1999 YTD.

The LRPO indicated the RSO provides each worker a copy his annual and lifetime radiation exposure. There were no planned special exposures or Declared Pregnant workers at this facility.

No violations were identified in this program area.

11.

RADIOACTIVE WASTE MANAGEMENT

Storage areas; transfer; packaging; control, and tracking procedures; records.

According to the LRPO, there has been no disposal of licensed material. Sources that are no longer are needed are transferred to the manufacturer for disposal. Records of receipt and transfer for 1999 were examined and considered satisfactory.

12.

DECOMMISSIONING

Records relevant to decommissioning; decommissioning plan/schedule; notification requirements; cost estimates; funding methods; financial assurance; and Timeliness Rule requirements; changes in radiological conditions since decommissioning plan was submitted.

This licensee maintains all records of leak tests for future decommissioning purposes.

13.

TRANSPORTATION

Quantities and types of licensed material shipped; packaging design requirements; shipping papers; hazardous materials (HAZMAT) communication procedures; return of sources; procedures for monitoring radiation and contamination levels of packages; HAZMAT training; and records and reports.

According to the LRPO the licensee transports devices containing special form sources and maintains the special form source certification sheets on file. The LRPO described to the inspector how the devices are blocked and braced in the rear of the vehicle and confirmed that the devices are transported in a Type B container (OPL-660). The licensee's shipping papers were reviewed and appeared to contain all the necessary information to meet DOT requirements. The inspector examined a number of the licensee shipping papers and they appeared to meet all DOT requirements. Hazmat Training and refresher training had been completed by Amersham. The records were stated to be at the licensee's corporate office. No violations of NRC requirements were identified.

14.

NOTIFICATIONS AND REPORTS

Reporting and followup of theft; loss; incidents; overexposures; radiation exposure reports to individuals; reporting Part 21 defects and certain equipment failures.

According to the RSO, they have not experienced any incidents, events, or lost/stolen radioactive material or Part 21 defects that would require notification to the NRC.

15.

POSTING AND LABELING

Notices; license documents; regulations; bulletins and generic information; area postings; and labeling of containers of licensed material; markings.

During this inspection, the inspector observed that those areas where radioactive materials were stored had been adequately posted with appropriate radiation postings to warn individuals of the radiation hazards associated with those areas. Also, the inspector observed that the gamma cameras, and overpack transport cases had appropriate labels and markings to meet DOT requirements. An NRC Form 3 and Parts 19 and 20, 21, and 34 postings were observed at the facility.

16.

INDEPENDENT AND CONFIRMATORY MEASUREMENTS

Areas surveyed and measurements made; comparison of data with licensee's results and regulations; and instrument type and calibration date.

The inspector performed independent radiation surveys at the at the entrance to the storage area. The highest reading was measured directly on the surface of safe where the camera were stored in 3.2 MR/hr inside the storage area. Radiation levels in the restricted and unrestricted areas around the radiography storage facility were background (<0.1 mR/hr) The inspector used a Xetex survey 14566 meter calibrated 1/13/99.

17.

VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES

State requirement and how and when licensee violated the requirement. For NCVs, indicate why the violation was not cited. Attach copies of all licensee documents needed to support violations.

None, a clear 591 was provided at the conclusion of the inspection.

18. PERSONNEL CONTACTED

Identify licensee personnel contacted during the inspection (including those individuals contacted by telephone).

Use # to indicate individual present at entrance meeting.

Use * to indicate individual present at exit meeting.

Name	Title	Phone No.	In Person or By phone
#*Kathleen Turner	RSO	360-755-9578	Phone
*#Steve Gundersen	LRPO	406-254-0364	Phone
*Michael Riley, Dusty Bennet, Richard Emar	Radiographer		Person
John Holderith, Field Supervisor			Person

19. PERFORMANCE EVALUATION FACTORS

A.	Lack of senior management involvement with the radiation safety program and/or RSO oversight.	Y		N	X
B.	RSO too busy with other assignments.	Y		N	X
C.	Insufficient staffing.	Y		N	X
D.	RSC fails to meet or functions inadequately.	N/A	X	Y	N
E.	Inadequate consulting services or inadequate audits conducted.	N/A	X	Y	N

REMARKS :(Consider the above assessment and/or other pertinent Performance Evaluation Factors (PEFs) with regard to the licensee's oversight of the radiation safety program)

20. SPECIAL CONDITIONS OR ISSUES

NONE	X	Special license conditions; year-2000 effects of computer software and embedded systems.
PART III - POST- INSPECTION ACTIVITIES		
1.	REGIONAL FOLLOWUP ON PEFs	
None		
2.	DEBRIEF WITH REGIONAL STAFF	
Post-inspection communication with supervisor, regional licensing staff, Agreement State Officer; and/or State Liaison Officer.		
Routine		
3.	YEAR-2000 ISSUES	
Convey, to the NMSS Year-2000 Coordinator, all year-2000 licensee-identified problems and corrective actions taken.		
None		

TO ADVANCE TO NEXT SECTION OF FORM - PUSH PAGE DOWN KEY

APPENDIX A - ATTACHMENT A DECOMMISSIONING TIMELINESS INSPECTION ATTACHMENT									
Licensee:	Anvil Corp				Date of Inspection:	1/3-4/00			
1.	COMPLIANCE WITH DECOMMISSIONING TIMELINESS RULE								
(NOTE: Repeat the answers given in Section 12 of the main body of the inspection record. The issues in subsequent sections are dependent on the answers to these questions.)									
	A.	License to conduct a <i>principal activity</i> <u>has</u> expired or been revoked:	Y		N	X			
	B.	Licensee <u>has</u> made a decision to permanently cease <i>principal activities</i> at the entire site, or any separate buildings, or any outdoor areas, including inactive burial grounds:	Y		N	X			
	C.	A 24-month duration has passed in which no <i>principal activities</i> have been conducted under the license at the site, or at any separate buildings, or any outdoor areas, including inactive burial grounds:	Y		N				
	D.	If "Yes" to either A or B or C above:							
	(1)	Identify Site/Bldg./Area:							
	(2)	Date of occurrence of A, B, or C:							
2.	NOTIFICATION REQUIREMENTS								
	A.	Licensee has provided written notification to U.S. NRC within 60 days of the occurrence of 1.A., 1.B., or 1.C. above.	Y		N	X			
	If "Yes," date of notification:								
	B.	If the licensee is requesting to delay initiation of the decommissioning process, the licensee <u>has</u> provided written notification to NRC within 30 days of occurrence of 1.A., 1.B., or 1.C. above:	N/A		Y		N	X	
	If "Yes," date of notification:								
Basis for Findings: Discussions with the LRPO									
3.	DECOMMISSIONING PLAN/SCHEDULE REQUIREMENTS								

A.	Licensee is required to submit a decommissioning plan per 10 CFR 30.36(g), 40.42(g), 70.38(g), or 10 CFR Part 72?	N/A		Y		N	X
If "No" to 3.A., answer the following items B - F:							
B.	The decommissioning work scope is covered by current license conditions.		Y	X		N	
C.	Decommissioning has been initiated within 60 days of notification to NRC, or NRC has granted a delay.		Y			N	X
D.	If licensee has initiated decommissioning, give date the decommissioning was initiated:						
E.	If decommissioning has been completed, it was completed within 24 months of notification to NRC.	N/A		Y		N	
F.	If decommissioning is still scheduled to be completed, it is on schedule to be completed within 24 months of notification to NRC.	N/A		Y		N	
Basis for Findings:		No Required.					
If "Yes" to 3.A., answer the following items G - J:							
G.	The decommissioning plan has been submitted to NRC within 12 months of notification.		Y			N	
If "Yes," date of submittal:							
If NRC approved, date of NRC approval:							
H.	Has the licensee submitted an alternative schedule request?		Y			N	
If "Yes," date of submittal:							
I.	If decommissioning has been completed, it was completed within 24 months after approval of the decommissioning plan.	N/A		Y		N	
J.	If decommissioning is still scheduled to be completed, it is on schedule to be completed within 24 months after approval of the decommissioning plan.	N/A		Y		N	
Basis for Findings:							
Violations identified, if any:							

END

SAFETY AND COMPLIANCE INSPECTION

1. LICENSEE

Anvil Corporation
1675 West Bakerview Road
Bellingham, Washington 98226

2. REGIONAL OFFICE

REGION IV
US NUCLEAR REGULATORY COMMISSION
611 RYAN PLAZA DR STE 400
ARLINGTON TX 76011-8064

REPORT NUMBER(S) 2000-01

3. DOCKET NUMBER(S)

030-32816

4. LICENSE NUMBER(S)

146-23236-03

5. DATE(S) OF INSPECTION

1/3-4/2000

LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- ☒ 1. Based on the inspection findings, no violations were identified.
- ☐ 2. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1600, to exercise discretion, were satisfied. _____ non-cited violation(s) were discussed involving the following requirement(s): _____
- ☐ 3. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which is required to be posted in accordance with 10 CFR 19.11.

STATEMENT OF CORRECTIVE ACTIONS

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE	DATE
LICENSEE			
NRC INSPECTOR	Kent M. Prondergast	Kent M. Prondergast	1/4/2000