

POOR ORIGINAL

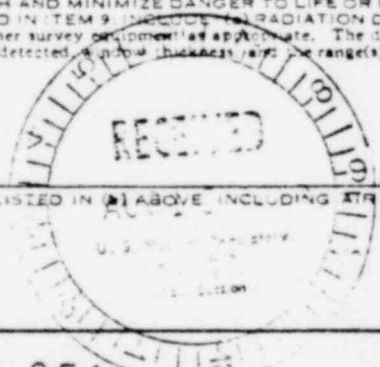
PDR  
40-8949  
Approved by GAO  
R0203

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR SOURCE MATERIAL LICENSE

Pursuant to the regulations in Title 10, Code of Federal Regulations, Chapter 1, Part 40, application is hereby made for a license to receive, possess, use, transfer, deliver or import into the United States, source material for the activity or activities described.

<p>1. (Check one)</p> <p><input checked="" type="checkbox"/> (a) New license</p> <p><input type="checkbox"/> (b) Amendment to License No. _____</p> <p><input type="checkbox"/> (c) Renewal of License No. _____</p> <p><input type="checkbox"/> (d) Previous License No. _____</p>		<p>2. NAME OF APPLICANT</p> <p>Uflex International Company</p> <hr/> <p>3. PRINCIPAL BUSINESS ADDRESS</p> <p>1100 17th Street, N.W. Washington, D.C. 20036</p>																	
<p>4. STATE THE ADDRESS(ES) AT WHICH SOURCE MATERIAL WILL BE POSSESSED OR USED</p> <p>National City Public Warehouse National Stockyards, Illinois 62071</p>																			
<p>5. NAME OF PERSON TO BE CONTACTED CONCERNING THIS APPLICATION</p> <p>Bruce W. Podhurst</p>		<p>6. TELEPHONE NO. OF INDIVIDUAL NAMED IN ITEM 5</p> <p>202 833-8277</p>																	
<p>7. DESCRIBE PURPOSE FOR WHICH SOURCE MATERIAL WILL BE USED</p> <p>Material will be stored at the warehouse prior to delivery of UF6 to enrichment plants or prior to delivery of U3O8 to hex plants for conversion to UF6.</p>																			
<p>8. STATE THE TYPE OR TYPES, CHEMICAL FORM OR FORMS, AND QUANTITIES OF SOURCE MATERIAL YOU PROPOSE TO RECEIVE, POSSESS, USE, OR TRANSFER UNDER THE LICENSE</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:20%;">(a) TYPE</th> <th style="width:30%;">(b) CHEMICAL FORM</th> <th style="width:20%;">(c) PHYSICAL FORM (Including % U or Th.)</th> <th style="width:30%;">(d) MAXIMUM AMOUNT AT ANY ONE TIME (kilograms)</th> </tr> </thead> <tbody> <tr> <td>NATURAL URANIUM</td> <td>Uranium hexafluoride</td> <td>Solid (57.5%U)</td> <td>1,543,400 kgs U as UF6</td> </tr> <tr> <td>URANIUM DEPLETED IN THE U-235 ISOTOPE</td> <td>Uranium ore concentrate</td> <td>powder (34.8%U)</td> <td>962,300 kgs U as U3O8</td> </tr> <tr> <td>THORIUM (ISOTOPE)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>(e) MAXIMUM TOTAL QUANTITY OF SOURCE MATERIAL YOU WILL HAVE ON HAND AT ANY TIME (kilograms)</p> <p>2,505,700 kgs U</p>				(a) TYPE	(b) CHEMICAL FORM	(c) PHYSICAL FORM (Including % U or Th.)	(d) MAXIMUM AMOUNT AT ANY ONE TIME (kilograms)	NATURAL URANIUM	Uranium hexafluoride	Solid (57.5%U)	1,543,400 kgs U as UF6	URANIUM DEPLETED IN THE U-235 ISOTOPE	Uranium ore concentrate	powder (34.8%U)	962,300 kgs U as U3O8	THORIUM (ISOTOPE)			
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<p>9. DESCRIBE THE CHEMICAL, PHYSICAL, METALLURGICAL, OR NUCLEAR PROCESS OR PROCESSES IN WHICH THE SOURCE MATERIAL WILL BE USED, INDICATING THE MAXIMUM AMOUNT OF SOURCE MATERIAL INVOLVED IN EACH PROCESS AT ANY ONE TIME, AND PROVIDE A THOROUGH EVALUATION OF THE POTENTIAL RADIATION HAZARDS ASSOCIATED WITH EACH STEP OF THOSE PROCESSES.</p> <p>See Supplement Sheet 1</p>																			
<p>10. LIST THE NAMES AND ATTACH A RESUME OF THE TECHNICAL QUALIFICATIONS INCLUDING TRAINING AND EXPERIENCE OF APPLICANT'S SUPERVISORY PERSONNEL AND THE PERSON RESPONSIBLE FOR THE RADIATION SAFETY PROGRAM (OR OF APPLICANT IF AN INDIVIDUAL). AS NO PROCESSING IS INVOLVED, supervisory personnel will be advised of the officials to contact and precautions to take in accordance with requirements of the U.S. NRC and the State of Illinois.</p>																			
<p>11. DESCRIBE THE EQUIPMENT AND FACILITIES WHICH WILL BE USED TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE OR PROPERTY AND RELATE THE USE OF THE EQUIPMENT AND FACILITIES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE RADIATION DETECTION AND RELATED INSTRUMENTS (including film badges, dosimeters, counters, air sampling, and other survey equipment) as appropriate. The description of radiation detection instruments should include the instrument characteristics such as type of radiation detected, window thickness, and the range(s) of each instrument.</p> <p>See Supplement Sheet 2</p>																			
<p>(b) METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED IN (a) ABOVE INCLUDING AIR SAMPLING EQUIPMENT (for film badges, specify method of calibrating and processing, or name supplier).</p> <p>Not Applicable - Storage only</p>																			



11(c) VENTILATION EQUIPMENT WHICH WILL BE USED IN OPERATIONS WHICH PRODUCE DUST, FUMES, MISTS, OR GASES, INCLUDING PLAN VIEW SHOWING TYPE AND LOCATION OF HOOD AND FILTERS, MINIMUM VELOCITIES MAINTAINED AT HOOD OPENINGS AND PROCEDURES FOR TESTING SUCH EQUIPMENT.

Not Applicable - Storage Only

12 DESCRIBE PROPOSED PROCEDURES TO PROTECT HEALTH AND MINIMIZE DANGER TO LIFE AND PROPERTY AND RELATE THESE PROCEDURES TO THE OPERATIONS LISTED IN ITEM 9. INCLUDE (a) SAFETY FEATURES AND PROCEDURES TO AVOID NONNUCLEAR ACCIDENTS, SUCH AS FIRE, EXPLOSION, ETC., IN SOURCE MATERIAL STORAGE AND PROCESSING AREAS.

See Supplement Sheet 3

(b) EMERGENCY PROCEDURES IN THE EVENT OF ACCIDENTS WHICH MIGHT INVOLVE SOURCE MATERIAL.

Supervisory personnel would notify proper authorities for instructions.

(c) DETAILED DESCRIPTION OF RADIATION SURVEY PROGRAM AND PROCEDURES.

All regulations imposed by the U.S. Nuclear Regulatory Commission and all state and local regulations will be complied with.

13 WASTE PRODUCTS: If none will be generated, state "None" opposite (a), below. If waste products will be generated, check here  and explain on a supplemental sheet:

- (a) Quantity and type of radioactive waste that will be generated. None  
 (b) Detailed procedures for waste disposal.

14. IF PRODUCTS FOR DISTRIBUTION TO THE GENERAL PUBLIC UNDER AN EXEMPTION CONTAINED IN 10 CFR 40 ARE TO BE MANUFACTURED, USE A SUPPLEMENTAL SHEET TO FURNISH A DETAILED DESCRIPTION OF THE PRODUCT, INCLUDING:

- (a) PERCENT SOURCE MATERIAL IN THE PRODUCT AND ITS LOCATION IN THE PRODUCT.  
 (b) PHYSICAL DESCRIPTION OF THE PRODUCT INCLUDING CHARACTERISTICS, IF ANY, THAT WILL PREVENT INHALATION OR INGESTION OF SOURCE MATERIAL THAT MIGHT BE SEPARATED FROM THE PRODUCT.  
 (c) BETA AND BETA PLUS GAMMA RADIATION LEVELS (Specify instrument used, date of calibration and calibration technique used) AT THE SURFACE OF THE PRODUCT AND AT 12 INCHES.  
 (d) METHOD OF ASSURING THAT SOURCE MATERIAL CANNOT BE DISASSOCIATED FROM THE MANUFACTURED PRODUCT.

### CERTIFICATE

(This item must be completed by applicant)

15. The applicant, and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 40, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

BY: \_\_\_\_\_

(Signature)

Dated

Aug 13, 1979

Edlow International Company

(Print or type name)

Vice President

(Title of certifying official authorized to act on behalf of the applicant)

WARNING: 18 U.S.C. Section 1001; Act of June 25, 1918; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

POOR ORIGINAL

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Edlow International Company  
Suite 404  
1100 17th Street, N.W.  
Washington, D.C. 20036

SUPPLEMENT SHEET 1

9. The source material will not be processed in any way, only stored temporarily, at this location. While material will be received, possessed, transferred, or imported into the U.S. against the license, Edlow will not use the material in or for a nuclear process.

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Washington, D.C. 20036

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SUPPLEMENT SHEET 2

11a. A respirator and fire extinguisher will be stored in the immediate area of the source material.

The uranium hexafluoride will be stored in Department of Transportation specification 7A cylinders. These cylinders are described as model 48X or 48Y. Copies of the specifications for these cylinders and their valve protectors, taken from U.S. E.R.D.A. publication ORO-651-Rev.4, "Uranium Hexafluoride: Handling Procedures and Container Criteria", are attached (attachments 1 and 2).

Uranium ore concentrate will be stored in standard 55 gallon drums which weigh approximately 55 pounds empty and hold approximately 800 pounds of concentrate. A copy of the applicable drum specification from British Nuclear Fuels Limited which is typical of drum specifications is also attached (attachment 3).

Access to the material will be limited by means of barbed wire topped fencing and police, guard, and operating personnel. The source material will be stored at the National City Public Warehouse operation of the St. Louis National Stockyards, a major warehouse company. Fencing of the perimeter of the property will be completed shortly at which time the only access to the Stockyards and the warehouse facilities therein will be through the main gate. A second, interior fence will be erected around the UF6 cylinders and any U308 drums stored outdoors. Material stored outdoors will be stored on a brick or crushed rock surface. Drums of U308 might also be stored indoors in which case they will be located in a secure, sprinklered warehouse building.

National City Public Warehouse, a division of St. Louis National Stockyards, is an incorporated city, National Stockyards, Illinois, which has its own police and fire departments on-site. It is patrolled by watchmen and its own police continuously.

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Suite 404  
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Washington, D.C. 20036

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SUPPLEMENT SHEET 3

12a. The UF6 will be stored outside and will not be located near explosive or flammable materials. A mobile crane with a minimum of 25 tons lifting caps will be used to move the cylinders. Cables will be attached from the crane to the four lifting points on the cylinder. Two tag lines will also be attached which will be controlled by men on the ground to insure that a cylinder in motion does not swing over a cylinder on the ground.

Drums will be unloaded by a fork lift outfitted with a drum clamp. The drums will either be stored in the fenced outside area with the UF6 cylinders or inside in a secure, sprinklered warehouse. In either case they will be stored away from flammable or explosive material.

Access to the warehouse property during normal business hours is through a guarded gate in the Stockyard perimeter fence. Unauthorized persons in the warehouse would be challenged by watchmen or warehouse supervisory and operating personnel. After business hours the warehouse is locked and protected by electronic alarms and police and guard patrols.

Responsibility for storage and handling of the containers will be held by Mr. Len Whittich, Vice President, Mr. B.M. Cuppy, Warehouse Manager, and Mr. Don Tolar, Foreman. These people are employed by the St. Louis National Stockyards which is a contractor of Edlow International Company.

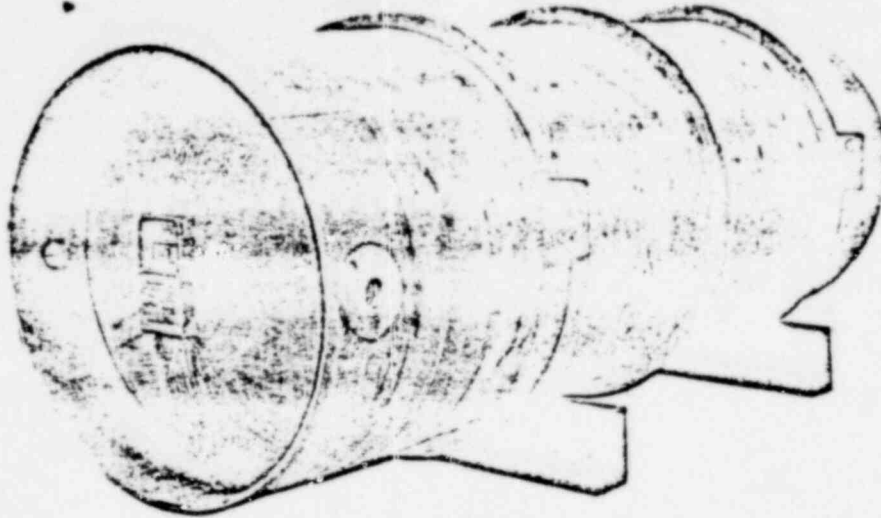
Written emergency instructions will be furnished to the National City Public Warehouse as follows:

In the case of any emergency in which there is fire or the threat of fire, notice should be given immediately to the fire department noting that the items involved are uranium hexafluoride and if applicable, triuranium octoxide. Notice should then be given to Edlow International Company, telephone (202)833-8237. For nights, weekends, and holidays, alternate telephone contacts are Jack Edlow (301)229-4992, Diane Harmon (703)379-2799, Samuel Edlow (202)363-4634, or Bruce Podhurst (703)751-2629.

In the case of emergency in which fire is not an immediate threat, contact should be made immediately with Edlow International Company, telephone (202)833-8237. For nights, weekends and holidays, alternate telephone contacts are Jack Edlow (301)229-4992, Diane Harmon (703)379-2799, Samuel Edlow (202)363-4634 or Bruce Podhurst (703)751-2629. Instructions will then be given by Edlow staff as to what steps should next be taken.

1042 055 1380S

POOR ORIGINAL

UF<sub>6</sub> CYLINDER MODEL 48Y

## GENERAL DATA

Other Descriptive Terminology Used - 14-ton

ENGINEERING DRAWING REFERENCE	UNION CARBIDE CORPORATION, PGDP: E-S-12292-C
Nominal Diameter	48 in.
Nominal Length	150 in.
Wall Thickness	5/8 in.
Nominal Tare Weight	3,200 lb (2,359 kg)
Maximum Net Weight	27,560 lb (12,501 kg)
Nominal Gross Weight	32,760 lb (14,860 kg)
Minimum Volume	142.7 ft <sup>3</sup> (4.04 m <sup>3</sup> )
Basic Material of Construction	Steel
Service Pressure	200 psig
Hydrostatic Test Pressure	400 psig
Isotopic Content Limit	4.5% U-235 max with moderation control

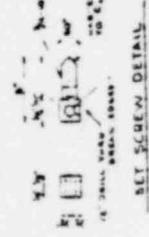
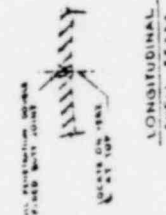
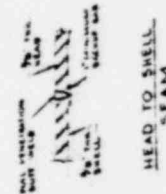
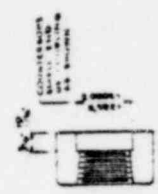
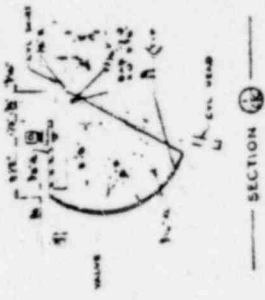
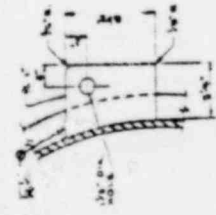
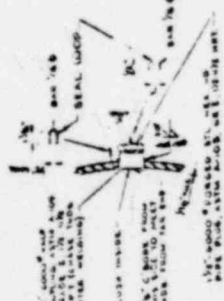
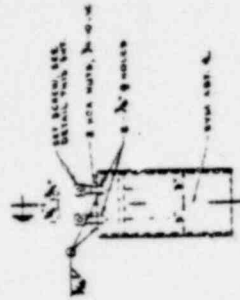
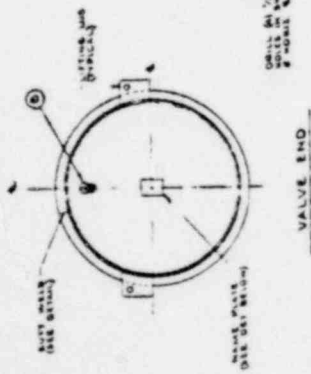
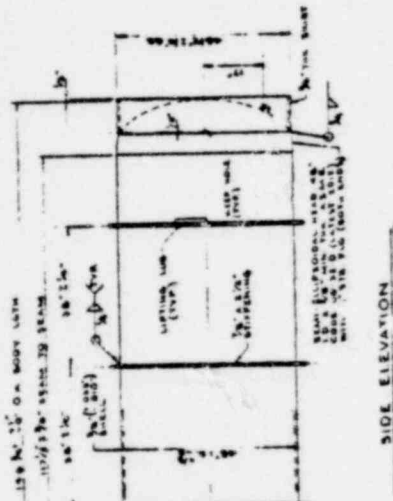
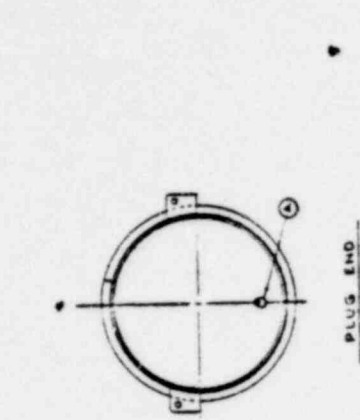
Valve Used - 1-in. Valve.

NOTE: Previously built 48F cylinders are similar in design, but do not have certified volumes; refer to table 3 for fill limits and other data applicable to this cylinder.

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WTC NO	U 518DA	UCC NO	00000000
DES TEMP 210°F	TYPE 40Y	DESIGN PRESS 200 PSIG	00000000
WATER CAP 00100LBS/200°F		TARE WT 10000 LBS	00000000
TIME FOR WPT'S HOME			00000000

NAME PLATE  
(See next sheet)

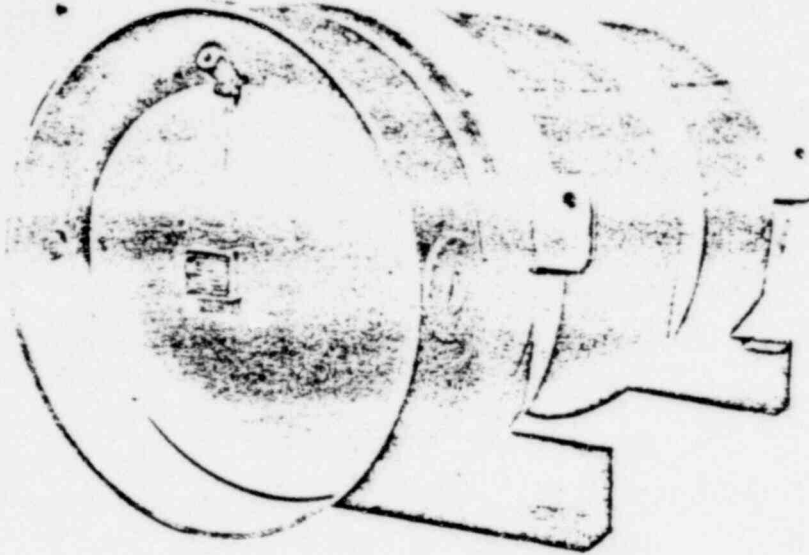
REFERENCE DOCUMENTS\*  
 Drawing: E-S-12232-C  
 Specification: JSP-555  
 Inspection: ME&I-11C  
 QA Plan: QA-E-7

\*UNION CARBIDE CORP., N.D. PADUCAH PLANT DOCUMENTS.

UF6 CYLIN R MODEL 48Y

UF<sub>6</sub> CYLINDER MODEL 48X

POOR ORIGINAL



## GENERAL DATA

Other Descriptive Terminology Used - 10-ton

ENGINEERING DRAWING  
REFERENCEUNION CARBIDE CORPORATION  
PGDP: E-S-12292-B

Nominal Diameter  
 Nominal Length  
 Wall Thickness  
 Nominal Tare Weight  
 Maximum Net Weight  
 Nominal Gross Weight  
 Minimum Volume  
 Basic Material of Construction  
 Service Pressure  
 Hydrostatic Test Pressure  
 Isotopic Content Limit

48 in.  
 121 in.  
 5/8 in.  
 4,500 lb (2,041 kg)  
 21,030 lb (9,539 kg)  
 25,530 lb (11,580 kg)  
 108.9 ft<sup>3</sup> (3.084 m<sup>3</sup>)  
 Steel  
 200 psig  
 400 psig  
 4.5% U-235 max with  
 moderation control

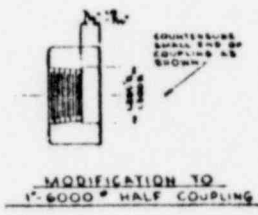
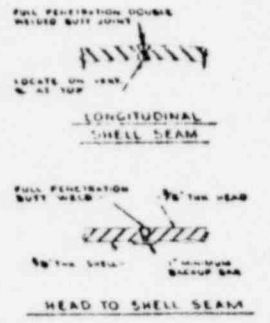
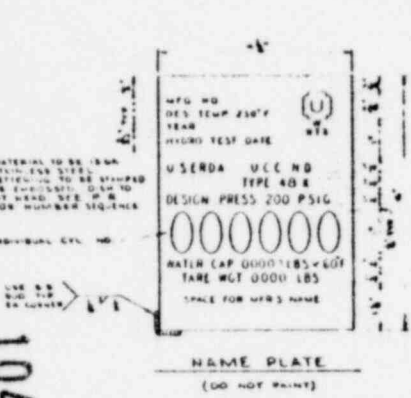
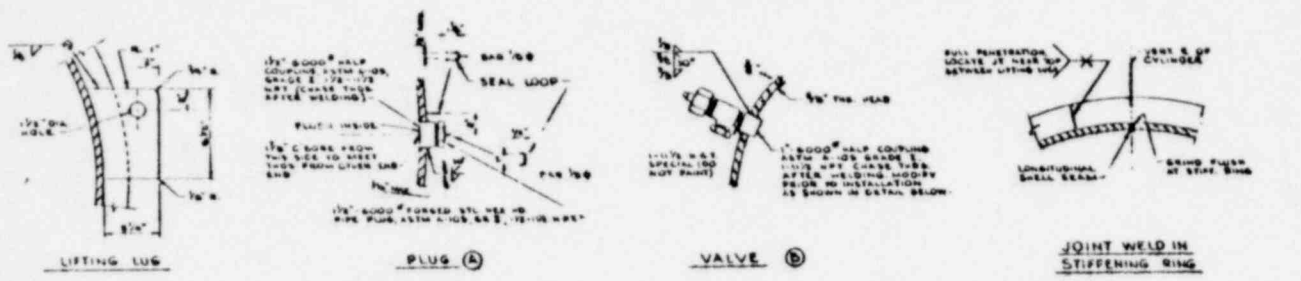
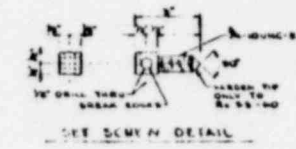
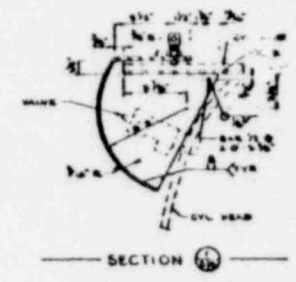
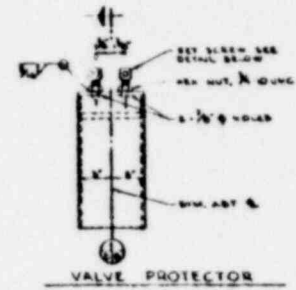
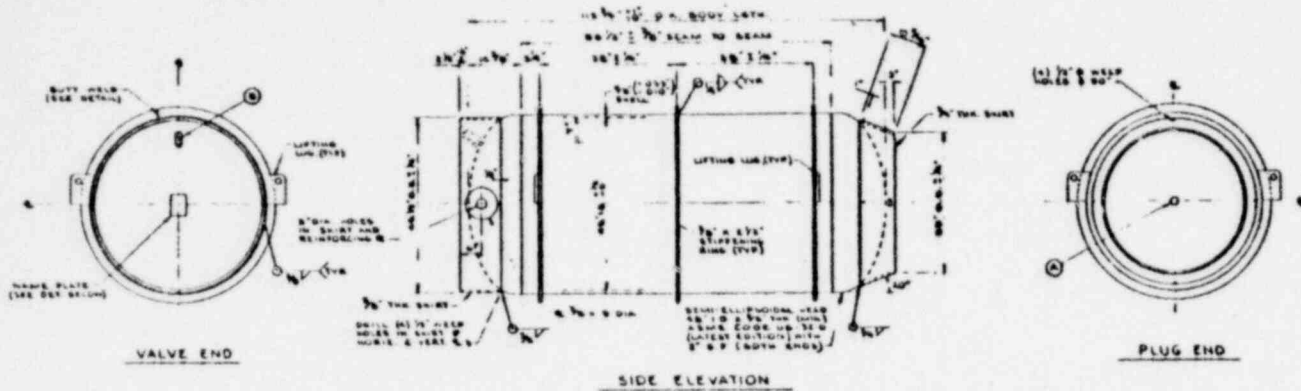
Valve Used - 1-in Valve.

NOTE: Previously built 48A cylinders are similar in design, but do not have certified volumes; refer to Table 3 for fill limits and other data applicable to this cylinder.

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REFERENCE DOCUMENTS \*

Drawing: E-S-12292-B  
Specification: JSP-554-R-O  
Inspection: ME&I-11C  
QA Plan: QA-E-7

\*UNION CARBIDE CORP., N.D. PADUCAH PLANT DOCUMENT.

POOR ORIGINAL

1042 059  
CYLINDER MODEL 48X

**POOR ORIGINAL**SPECIFICATION OF DRUMS FOR URANIUM ORE CONCENTRATE

The drums for uranium ore concentrate shall conform to the following specification:

Height including lid and lug on the clamping ring	:	approximately 90 centimetres
Height excluding lid	:	approximately 88 centimetres
Outside diameter (without lid)	:	approximately 60 centimetres
Volume	:	approximately 215 litres
Gauge of Steel	:	minimum 1.2 millimetres

Each drum shall have a fully-opening head with a rubber sealing ring and a closure assembly of a type approved by BNFL.

The lot number and the drum identification number shall be marked in letters and figures not less than four centimetres high on the lid and between the top chime and top rim of each drum. The name of the Customer shall be so marked on the lid.