BRINDERSON-NEWBERG
A Joint Venture

P.O. Box 590
Bremerton, WA 98310
206/373-4322

1987 MAY -8 AM 10:42

REGION V

May 5,1987

030-22530

UNITED STATES NUCLEAR REGULATORY COMMISION
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

ATTN: Beth Riedlinger

SUBJECT: Amend license no 46-23572-01

Dear sirs,

Brinderson Corp. is currently requesting to amend their license as follows:

- John (Jay) Bartram will be replacing Mr. James Alban as the contact and radiation safety officer for this license. Mr. Alban can remain named in the license, he is currently assigned to a different construction site.

- Add the following names to condition 11 of amendment 1.

NAME	TRAINING
Rod Chervus	Troxler Labs Training course
Jim Godson	Troxler Labs Training course

- Apply for an operating license for use of sealed source non-portable guaging devices. Specifics about the sources and the operations program are attached.

Yours truly,

John (Jay) Bartram, P.E.
CQC Manager

cc:NRC file
Art Seymour

Log Reg-1-V
Remitter
Check No. 1894
Amount $60
Fee Category 3P
Type of Fee Paid
Date Check Rec'd 5/18/87
Date Completed 5/20/87
Rec'd Marian

"Make It Happen"

87 MAY 18 P9:55

8801220615 870820
REG3 LIC20
46-23572-01 PDR

705 11

SPECIFICS FOR APPLICATION FOR OPERATION OF NON-PORTABLE GUAGING DEVICES.

1. Operation of our portable Troxler guage will remain as curretly in our license.

2. Company name and address remain the same.

3. Our Troxler guage will still be used at the licensee's CQC trailer located south of Building 874; Puget Sound Naval Shipyard; Bremerton; Washington. The non-portable guaging devices will be operated at various buildings on the Steam Plant site: Puget Sound Naval Shipyard. See the table on page 4 for specific locations.

4. Contact should be revised to John (Jay) Bartram., who is now the Radiation Safety Officer for this license.

5. Radioactive materials in the non-portable guages are listed in the table on page 4. These materials are already included in our license "for storage only".

6. Non-portable guages will be used to detect levels of coal or ash inside hoppers or chutes. See the table on page 4 for additional information.

7. Individuals named for the license have completed training in the use of radioactive materials in sealed sources for portable guages. At the time of start-up a representative of the guage manufacturer will provide any specific training necessary for the safe operation of the system. Shutters will not be unlocked and operation will not beging until above training is completed. Radiation protection procedures have previously been devised and submitted by the manufacturer. As the scope of this license application does not include servicing of the guages, further formal training is not indicated.

   Prior to our training specific to the guages we plan to receive the guages as shipped from the manufacturer, uncrating of same, then mount the source holders in the operating location with shutters still locked from the manufacturer. The respective manufacturers' representative will unlock the shutters, check the installation, and perform the initial survey. After our personnell are trained, we will operate the guages. At the completion of the construction and testing of the plant, the plant will be turned over to the Navy. The transfer of the nuclear devices will be done in accordance with the NRC regulations.

8. Training for individuals not named that will be operating the guages will be trained by the respective manufacturers' representative as noted in 7) above.

9. All guages will be located indoors in environments common to coal fired steam plants, with coal or ash dust present. Operating temperatures will range from 10 to 120 degrees F. The table on page 4 lists the guages and their installation.

   Leak tests and other guage maitenance will be done through the manufacturer at the interval specified. Inspection of the guages will occur monthly to be sure guage labels are visible, safety devices are in place, and the guage has not been tampered with.

   The emergency proceedure to be followed if the source housing is damaged is attached.

10. Installation of the guages will be done under this license, however the shutter will remain locked out until the licensed manufacturers service representative has performed the training and the initial radiation survey.

    The operators of our Troxler portable guage currently are using film badges. Film badges will be used by the individuals surveying guages received and during installation. When it has been determined that the gages will not give a dose over 1 mr/hour at the face of the guage to the tradesman actually installing the guage, the guages will then be handled by individuals that are not film badged. A calibrated survey meter will be available that will read from 1 to 200 mR.

    For the non-portable guages used here (Ronan X90-SA1 and Kay-Ray 7063P), we request a 3 year leak test interval. Our portable Troxler guage will still be leak tested at 6 months.

    The Department of the Navy by our contract is to furnish and install the radiation caution signs for these guages. We will either prepare or review the proceedures for lock-out, the proceedures will be posted and be a part of the training program. The radiation safety officer will be responsible that these proceedures are followed.

11. At completion of our contract, the non-portable guages will be transferred to the Navy. We will verify prior to transfer that they are in fact a licensee for these guages. If any other requirements for such a transfer are necessary, please notify us.

12. The license amendment fee of $60.00 is attached.

TABLE OF GUAGE INSTALLATIONS

Guage Type	1	2	3	4
Manufacturer	Kay-Ray	Kay-Ray	Ronan	Ronan
Model	7700-10	7700-10	3M-4F6S	3m-4F6S
Storage Container	7063P	7063P	X90-SA1	X90-SA1
Source Size (mCi)	10	10	15	50
Number of Devices	2	1	6	21
Building	Coal Unload	Coal Storage	Boiler	Flue Gas
Vessel Ident.	Unload Hopper	Pile Discharger	Bunker Outlet	18 on FF hoppers 3 on SA hoppers
Vessel wall	3/8"	5/16"	1/4 SS304	1/4"
Vessel liner plate	1/4" SS304	1/4" SS304	NA	NA
Source purpose	Coal level	Coal level	Coal level	Fly Ash level
Lock out Program	Warning signs	Warning signs	Warning signs	Interlock/signs
Install. Sketches	1,2	3,4	5,6,13,14	FF: 7,8,9,10,11 SA: 8,9,10,11,12

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P.O. Box 990
Bremerton, WA 98310
206/373-4322

EMERGENCY PROCEEDURES FOR RADIOACTIVE DEVICES

IN THE EVENT OF AN EMERGENCY WHERE THIS SOURCE HOLDER IS DAMAGED BY FIRE OR IMPACT SUCH THAT A RADIATION LEAK IS POSSIBLE, DO THE FOLLOWING:

1. Immediately rope off the area around the source holder for a minimum of 7 foot radius.

2. Contact Jay Bartram with Brinderson at 373-4322 or 377-7623. He is the Radiation Safety Officer.

3. If unable to contact him immediately, notify the Shipyard Watch Office at 476-3466 (63466 if shipyard phone). Inform them of a possible leak in a 50 millicurie Cesium source.

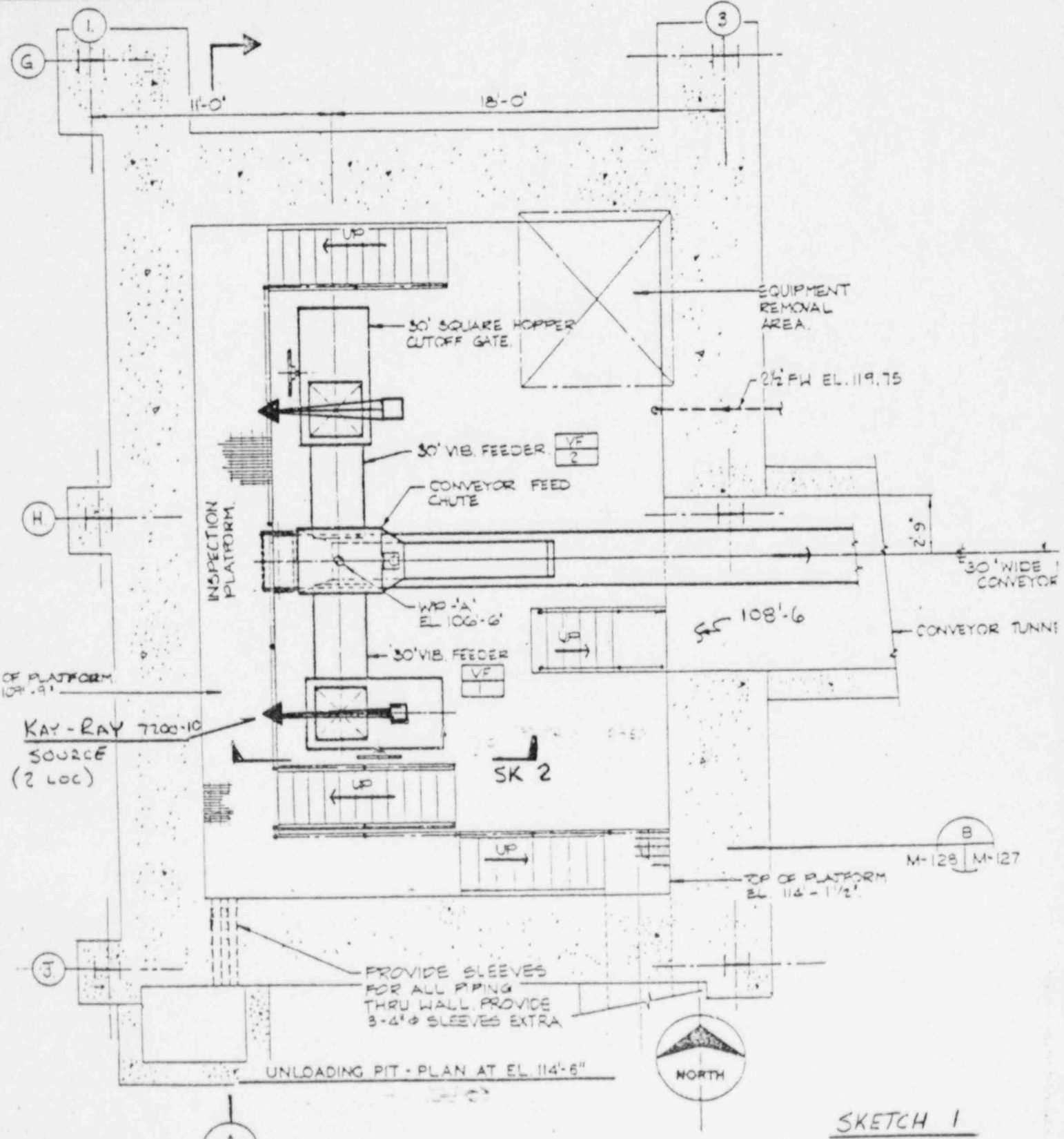
4. The radiation safety officer will notify the NRC at (415) 943-3700.

5. The radiation safety officer will notify the Manufacturer of the device:

Coal Unloading Building	Kay-Ray Inc.	(312) 259-5600
Coal Storage Building	"	"
Flue Gas Area	Ronan Engineering	(606) 342-8500
Boiler Coal Scales	"	"

(Kay-Ray Model 7700-10, 10mCi ea, holder 7063P)
(Ronan Model X90-SA1, 15 mCi @Boiler, 50 mCi @Flue Gas)

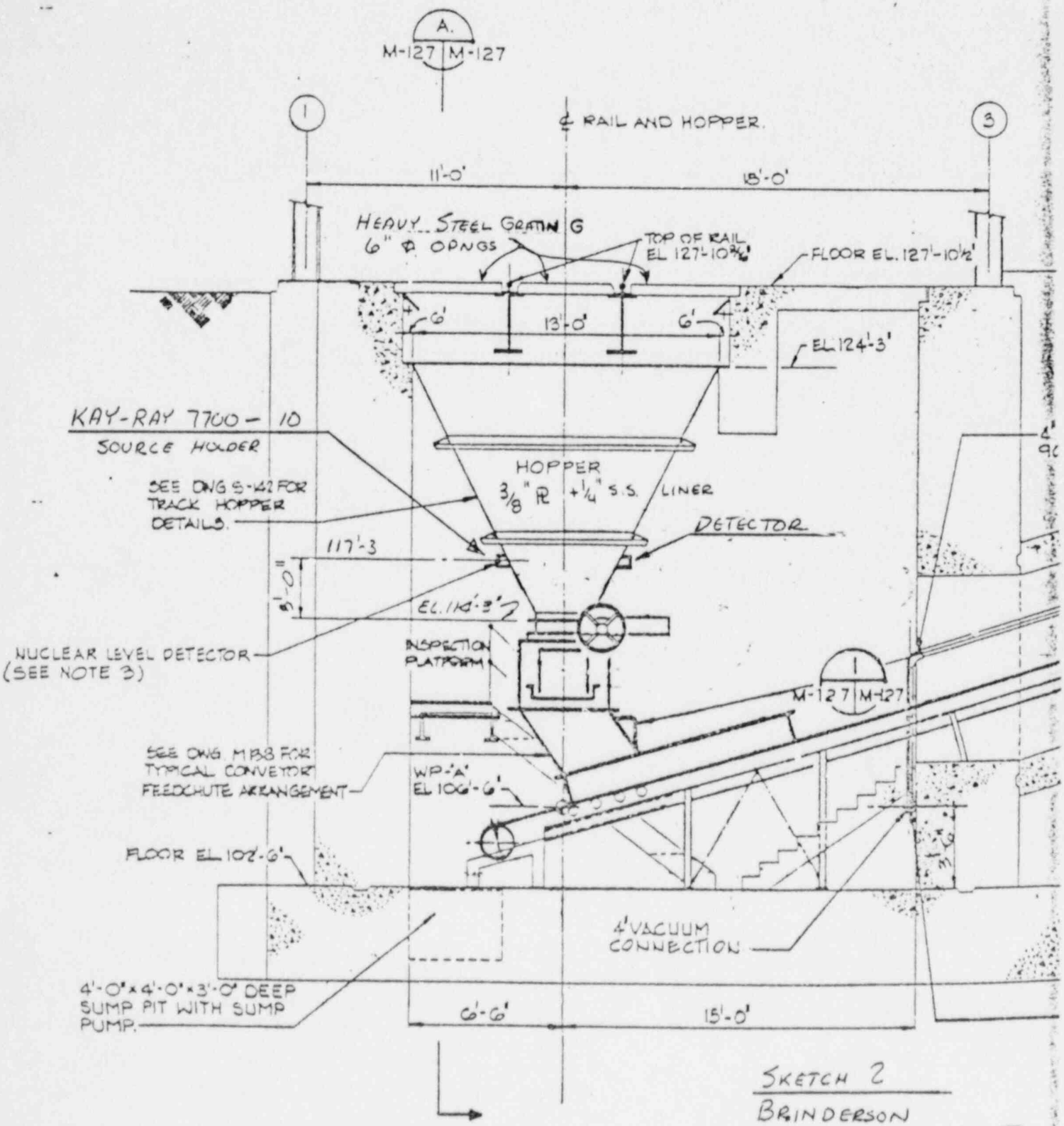
6. AFTER ROPING OFF THE AREA STAY BACK UNTIL INVESTIGATED BY QUALIFIED PERSONNEL.



SKETCH 1

BRINDERSON PSNS STEAM PLANT

46-23572-01



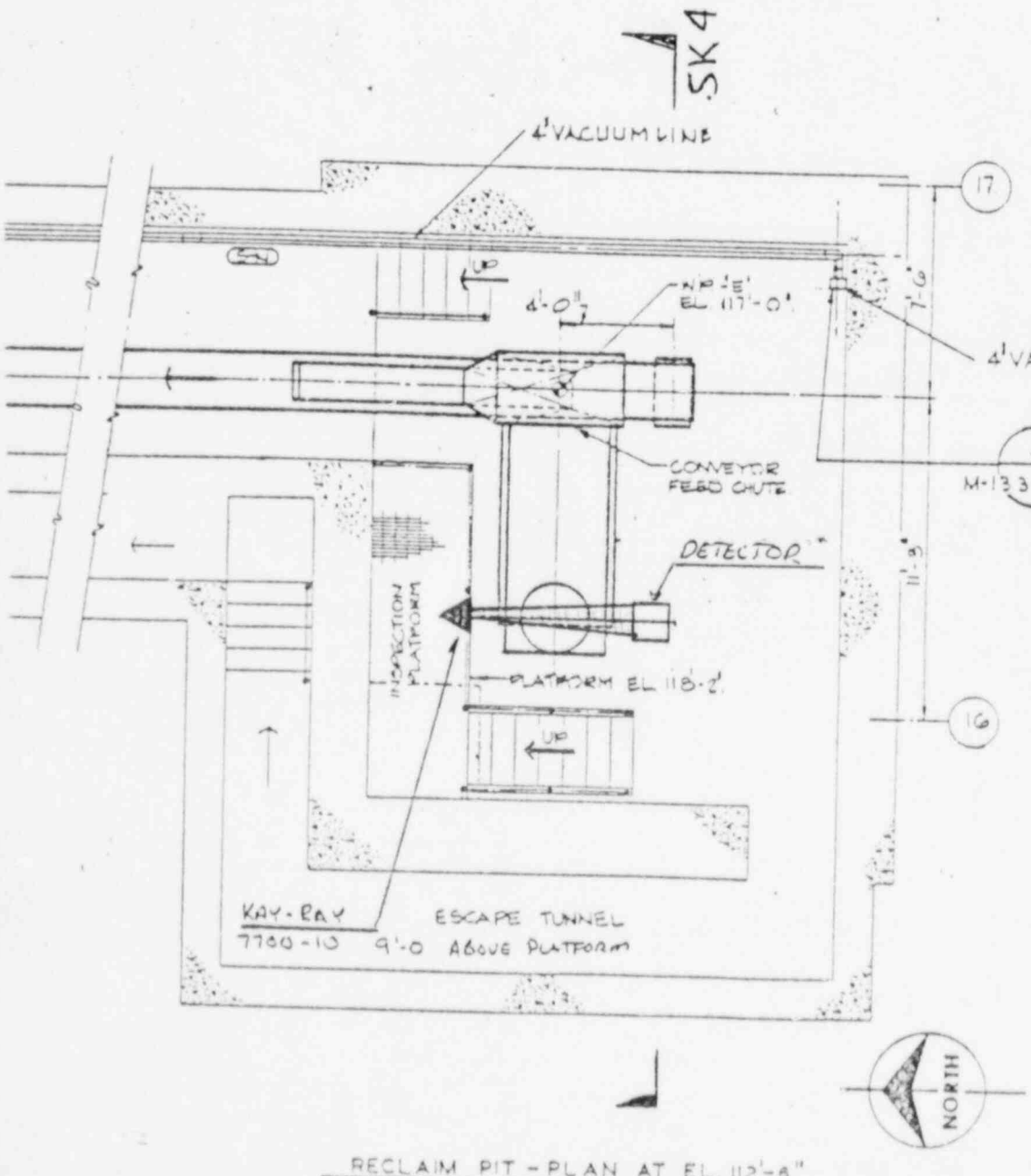
UNLOADING PIT SECTION

SKETCH 2

BRINDERSON
PSNS STEAM PLANT
46-23572-01

DCN 1017 A

SK 4



NOT

1.

2.

3.

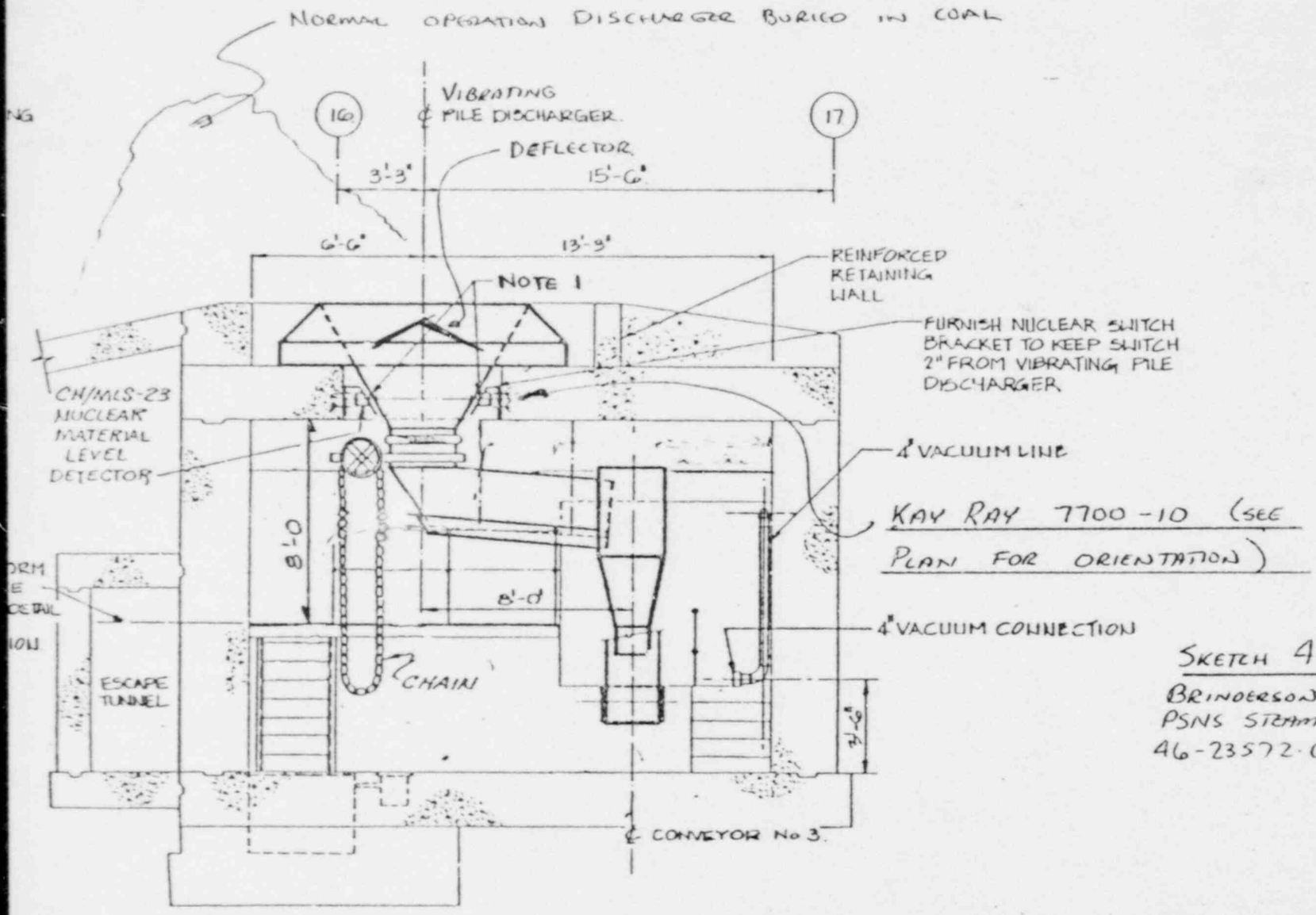
SKETCH 3

BRINDERSON PSNS STEAM PLANT

46-23572-01

RECLAIM PIT - PLAN AT EL. 112'-8"

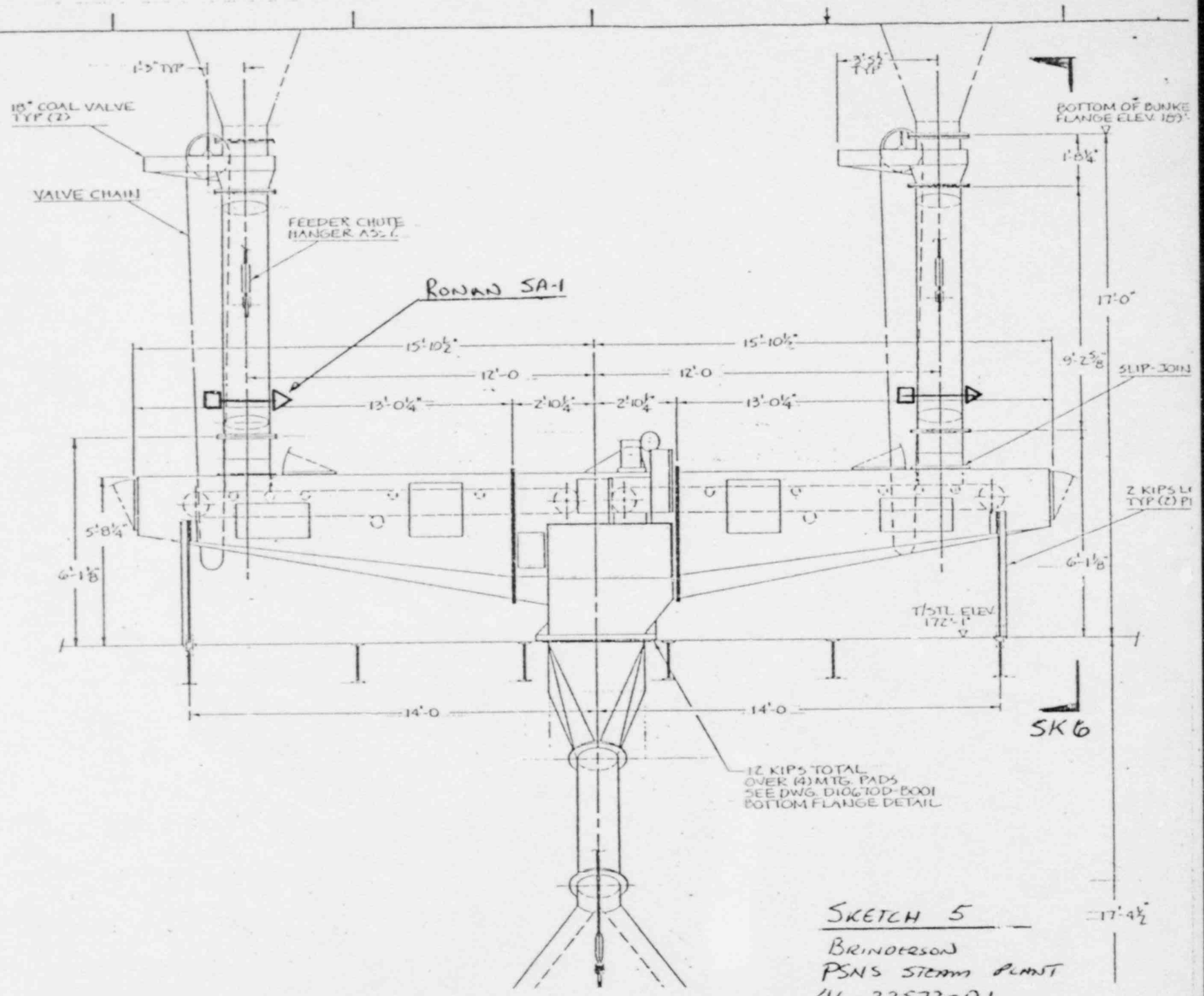
SCALE: 1/4" = 1'-0"



SKETCH 4

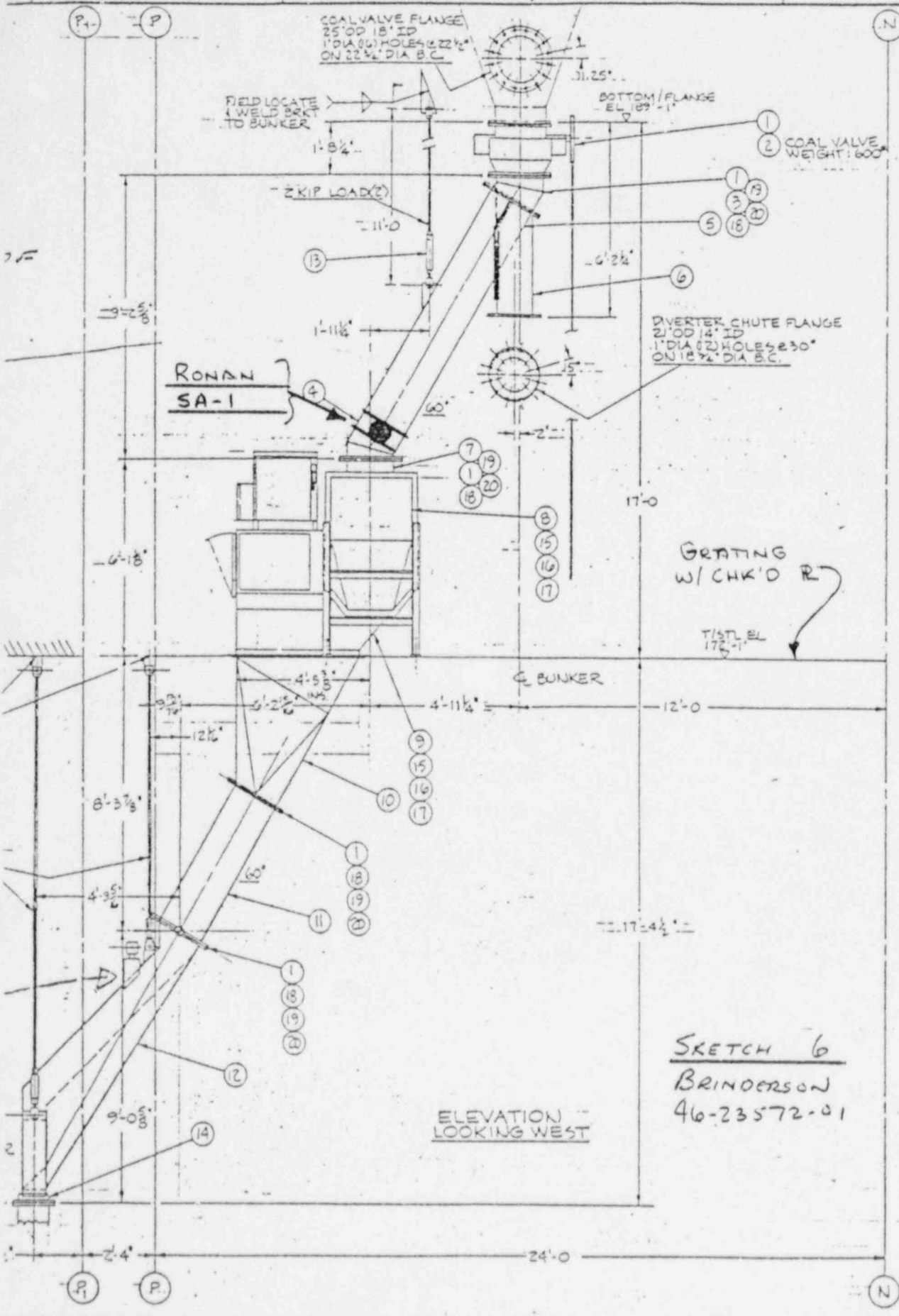
BRINDERSON
PSNS STEAM PLANT
46-23572-01

JOHN E. NEWHOUSE
LICENSE



SKETCH 5

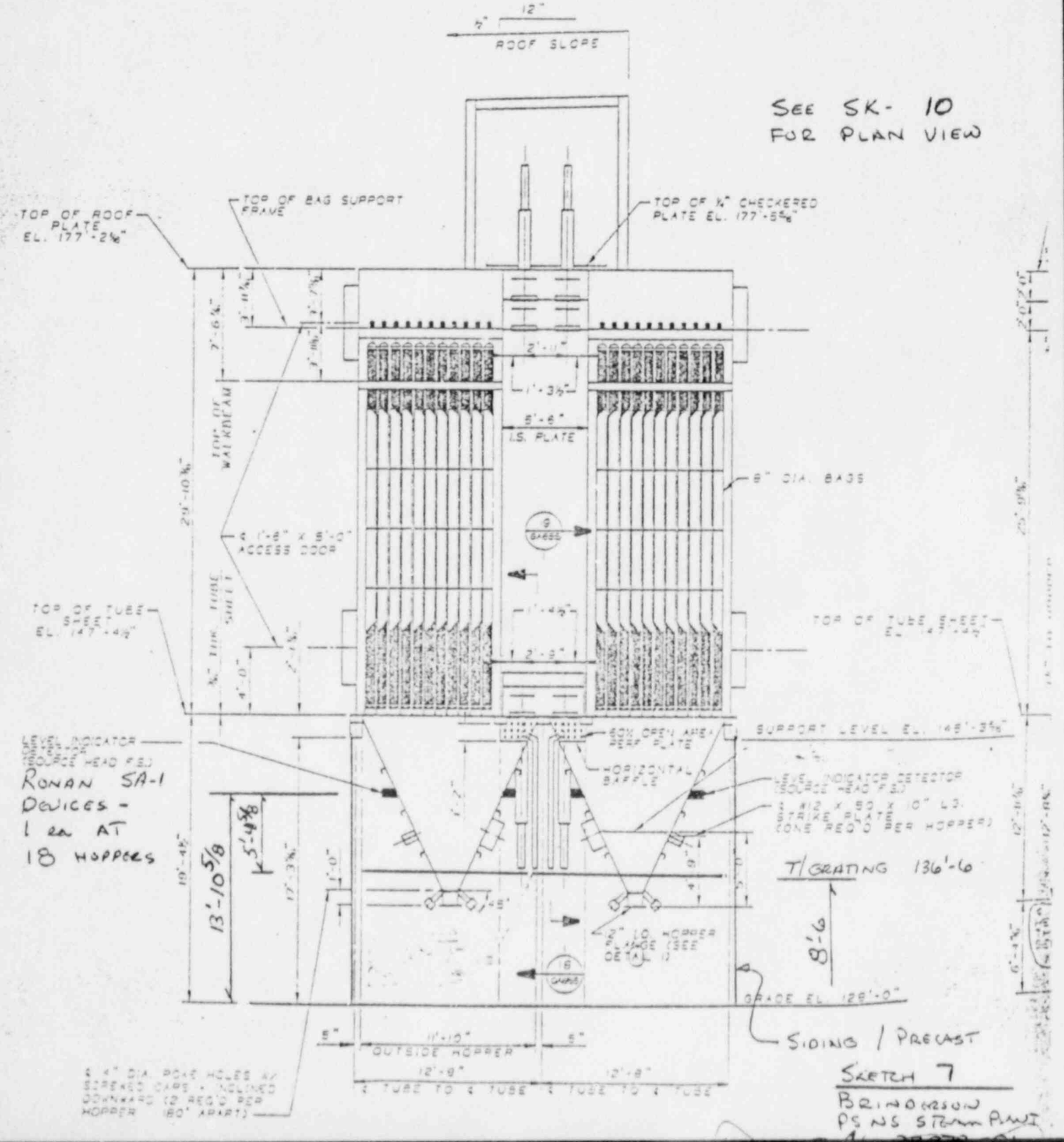
BRINDERSON
PSNS STEAM PLANT
46-23572-01



SKETCH 6

BRINDERSON

46-23572-01



Sketch 7

BRINDERSON PS NS STEAM PLANT

FG-230 A-D9253-KS120

GENERAL ELECTRIC

General Electric Environmental Services, Inc.
200 North Seventh Street
Lebanon, Pennsylvania 17042

PUGET SOUND NAVAL SHIPYARDS
BREMERTON, WASHINGTON

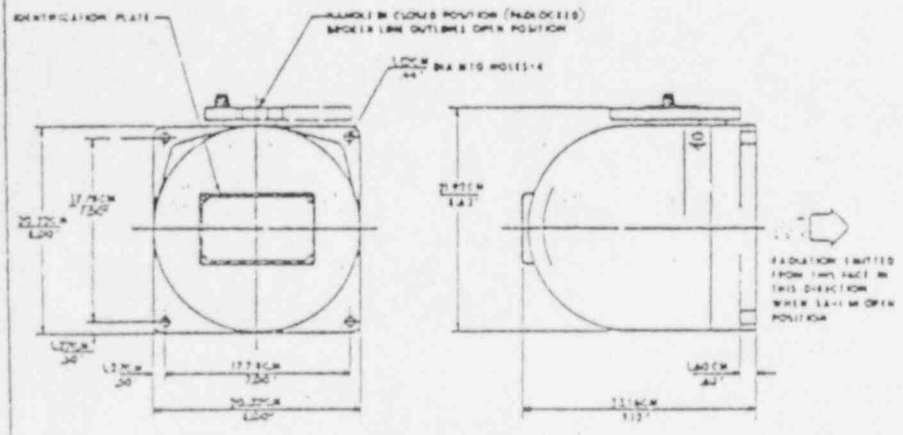
HOPPER LEVEL ALARM INSTRUMENTATION

NO	BY	DATE	REVISION
1	ROB	5/30/84	
2	RDH	7/31/84	
3	RE	12/12/84	

SHEET 2 OF 7

SPEC. NO.	REV.
ET-803	5
CONTRACT	DATE
29961	8-29-83
REQ.	P.O.
	9253
BY	CHK'D	APPR.
RFC		

The following device describes Instrument No's RE-311 and RE-207 as listed on Sheet 1



The standard Ronan Source Holder Model X90-SA-1 is a cast, lead filled ductile iron enclosure equipped with a two-position ON-OFF shutter mechanism which can, by means of a combination type padlock, be securely locked in the off position during shipping, erection, storage or process down intervals. The Cesium 137 sources usually supplied, are sealed in double welded stainless steel capsules and may have activities of from five to five thousand millicuries.

The housing incorporates a manually operated 2-position shutter mechanism

Closed position - Radiation source is shielded for complete safety during storage, shipping, installation and maintenance.

Open position - Produces a highly collimated radiation beam used in actual measurement.

The housing does not require external power or wiring.

Specifications

Radiation Source - Cesuim 137

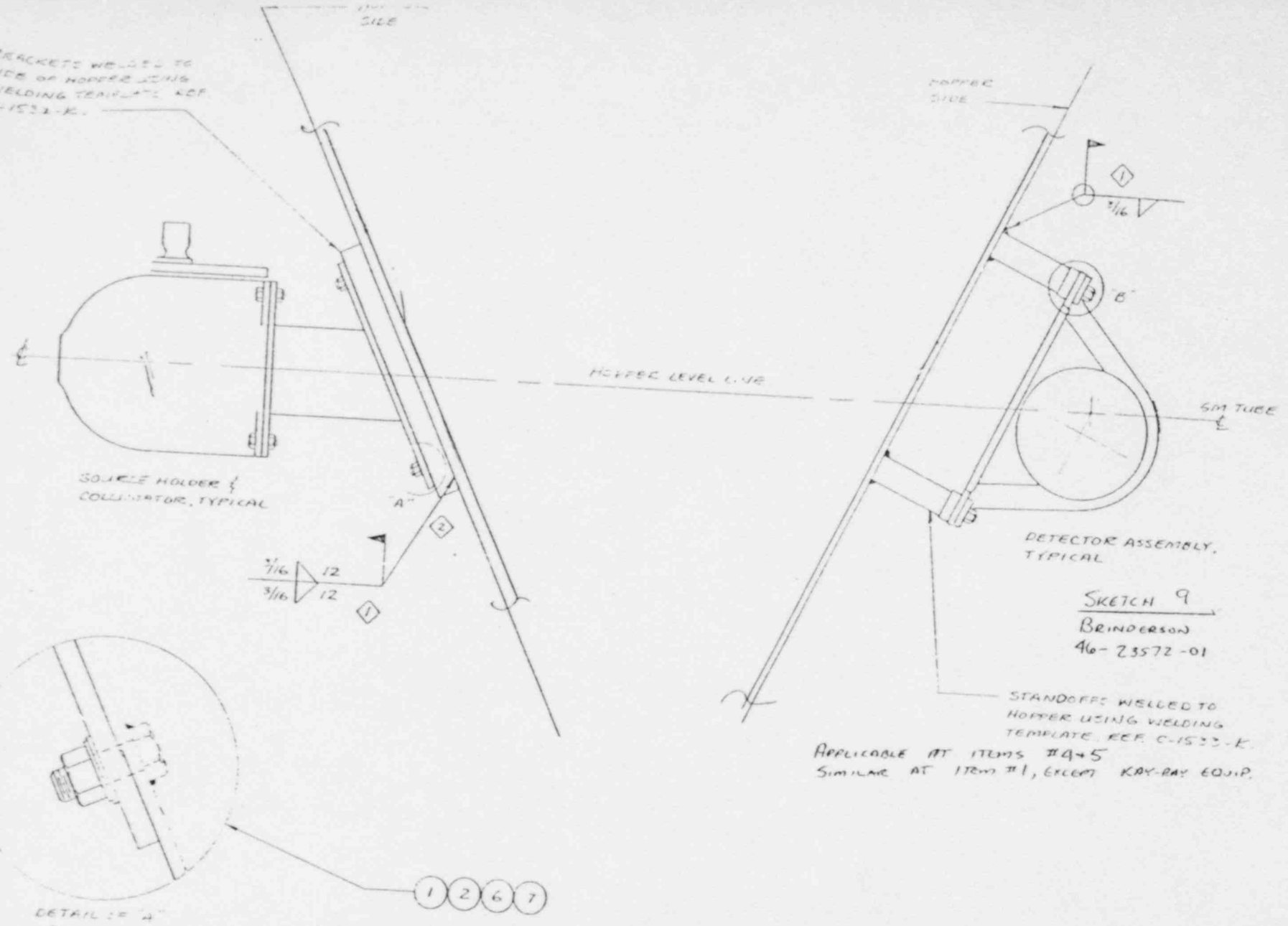
3 Maximum Surface Radiation - <0.06 mR/hr. ABOVE BKGD At 50mm From Surface

Beam pattern: Conical (9" circle at 9 Feet)
Shutter: two position - open and closed (lockable in closed position)
Finish: Manufacturer's standard
Weight: 146 lbs. (66 kgs)

SKETCH 8

BRINDERSON

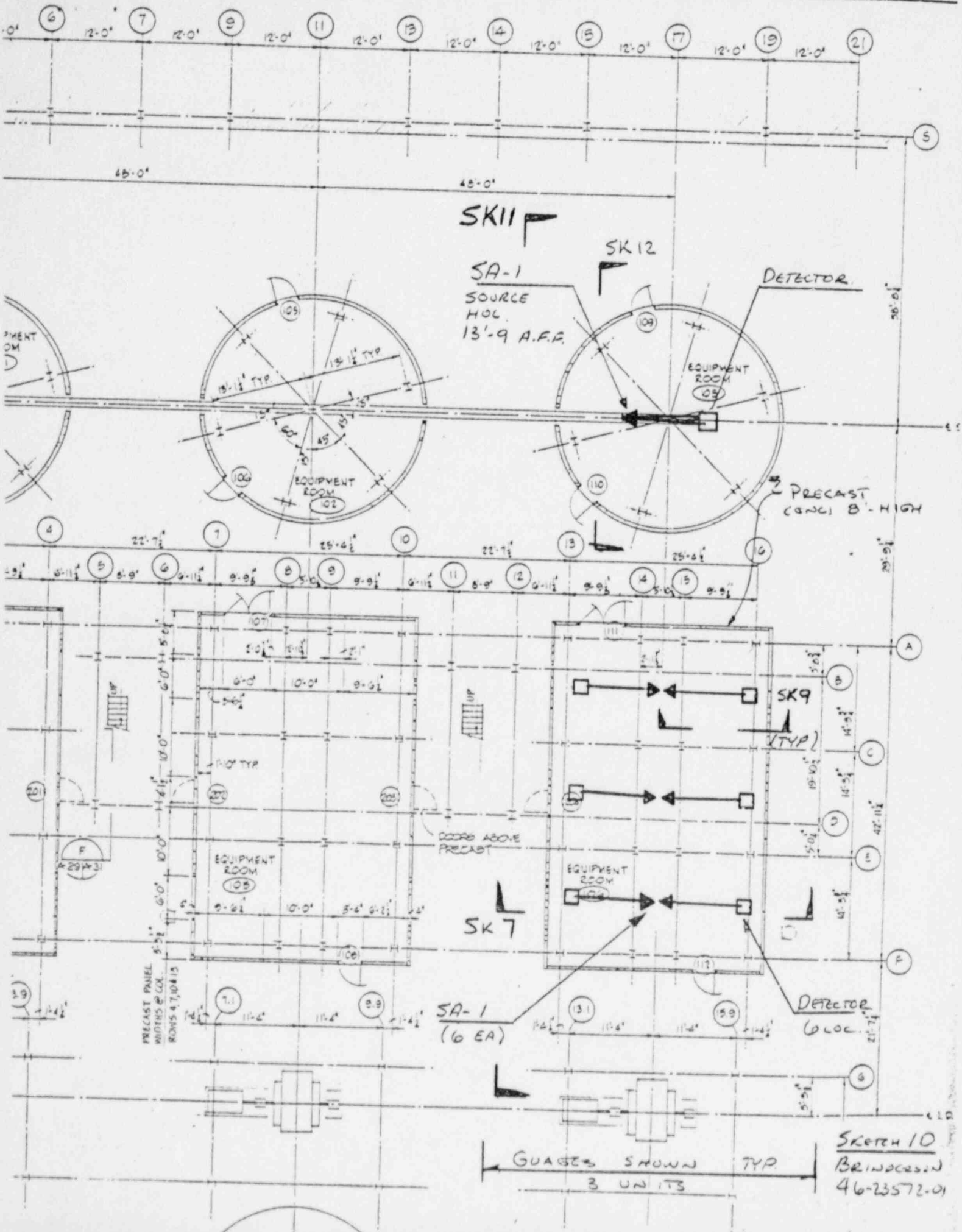
46-23572-01



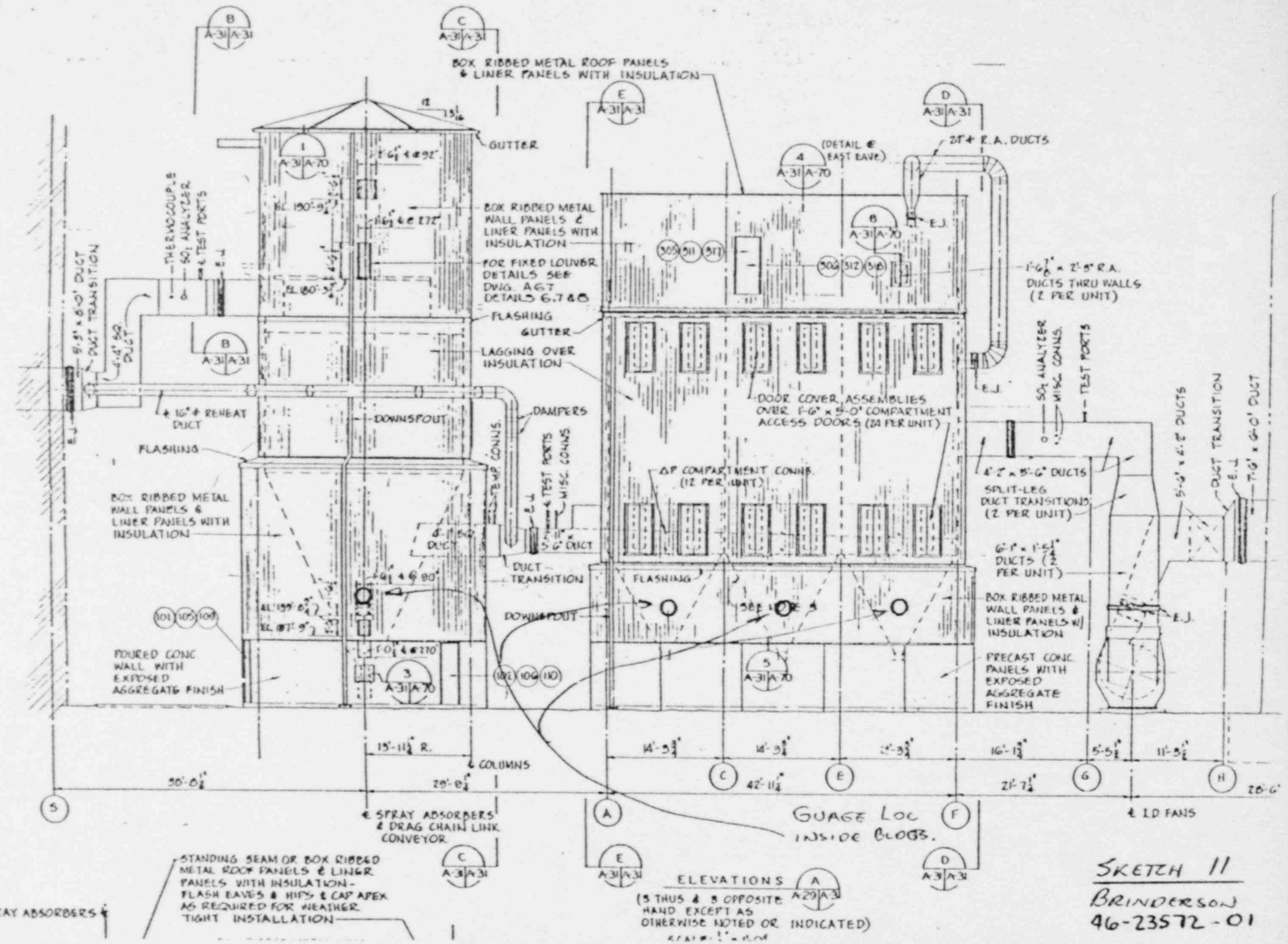
SKETCH 9

BRINDERSON
46-23572-01

APPLICABLE AT ITEMS #4+5
SIMILAR AT ITEM #1, EXCEPT KAY-RAY EQUIP.



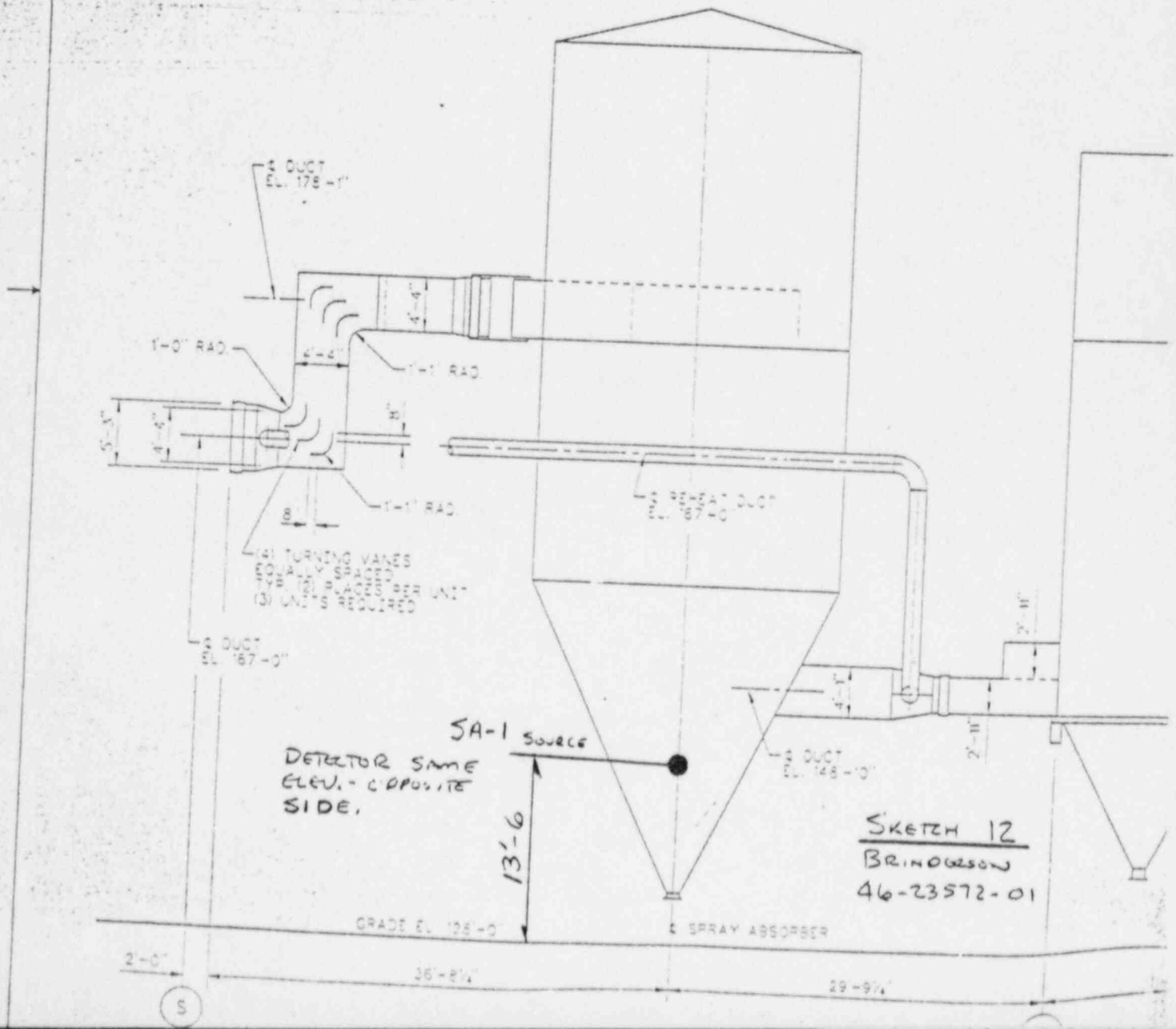
SKETCH 10
BRINDGESIN
46-2357.2-01



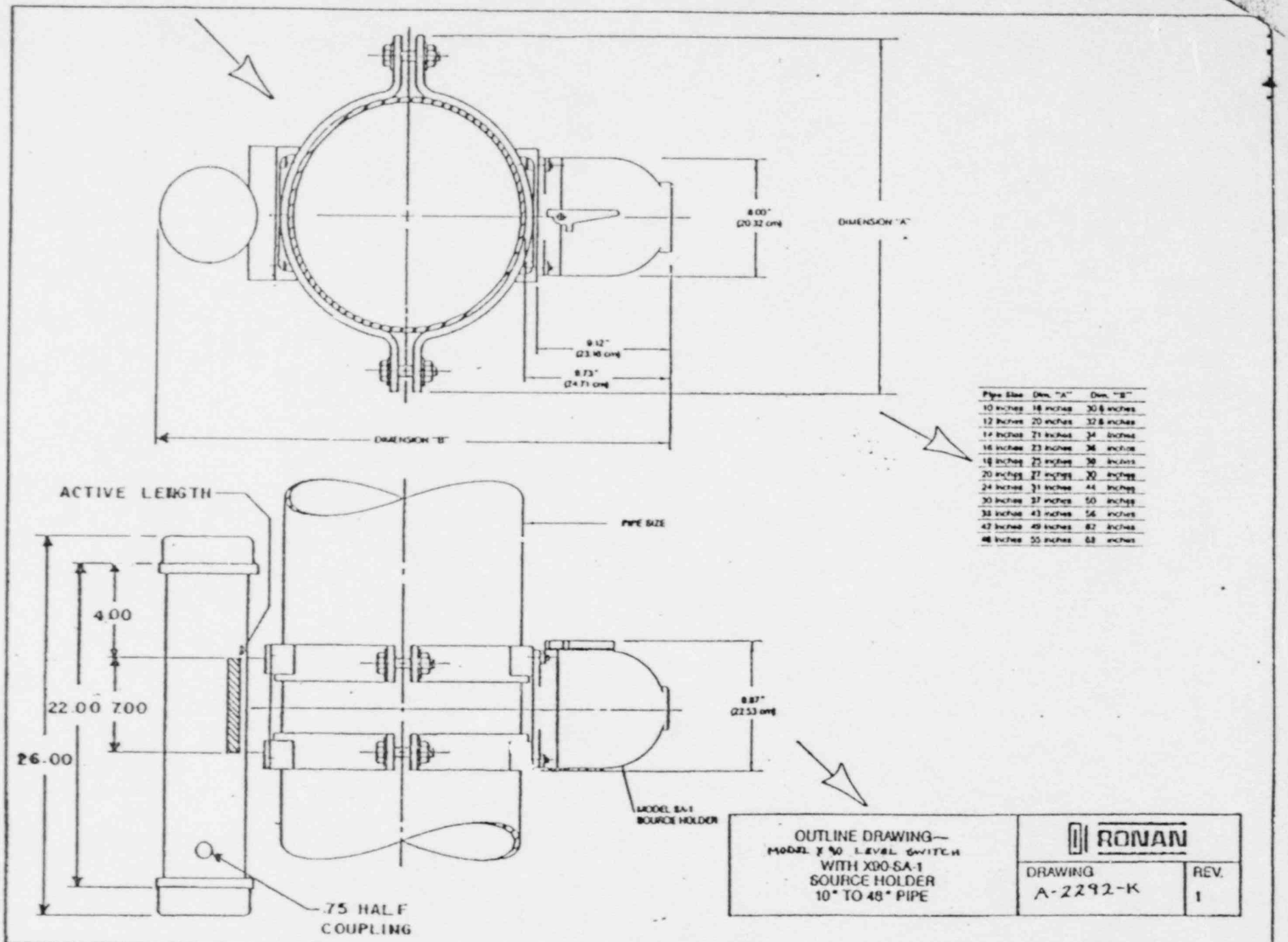
SKETCH 11

BRINDERSON

46-23572-01



SKETCH 12
BRINDERSON
46-23572-01



Pipe Size	Dim. "A"	Dim. "B"
10 inches	18 inches	30 ⅛ inches
12 inches	20 inches	32 ⅛ inches
14 inches	21 inches	34 inches
16 inches	23 inches	36 inches
18 inches	25 inches	38 inches
20 inches	27 inches	40 inches
24 inches	31 inches	44 inches
30 inches	37 inches	50 inches
38 inches	43 inches	56 inches
42 inches	49 inches	62 inches
48 inches	55 inches	68 inches

OUTLINE DRAWING—
MODEL X-90 LEVEL SWITCH
WITH X90-SA-1
SOURCE HOLDER
10" TO 48" PIPE

RONAN

DRAWING	REV.
A-2292-K	1

SKETCH 13

Brinkerhoff
PSNS Steam Plant
Job 23572-01

RONAN

"It is hereby certified that the (material) (equipment) shown and m[illegible] in this submittal, shop drawings, catalog cut(s), etc., and as[illegible] proposed to be incorporated into Contract No. 77-C-2023 is in conformance with the contract drawings and specifications and be installed in the allocated space, and is:

_____ APPROVED.

_____ APPROVED AS NOTED

__✓__ DISAPPROVAL.

Authorized Reviewer _____ Date _____

Signature CQC Rep _____ Date 3.3.87

26 February 1987

PUGET SOUND NAVAL STATION
ATTN: MR. MIKE CORSENTINO
SOUTH OF BUILDING 874
BREMERTON WA 98314

Dear Mr. Corsentino:

This letter is to clarify the radiation and electrical specifications:

1. The radiation beam angle has been minimized by the use of a smaller internal collimator and the addition of an external collimator. The beam will not exceed the outer boundaries of the detector.

2. The maximum radiation on any surface will not exceed .06 mR/hr. This is accomplished by the proper selection of the source holder and additional shielding of the back of the detector.

3. The relay contacts on all switches supplied will have DPDT relays rated for 4 amps at 240 volts AC or .5 amps at 125 volts DC.

4. The detector and electronics are enclosed in a four (4) inch schedule 40 carbon steel pipe and meet the following classifications: Class I, Division I, Groups A, B, C, D; Class II, Division I, Groups E, F, G.

These units will be identical to the units supplied to the Department of Navy on our Shop Order Number KY-0684-PA-1113 and has already been approved.

If there are any further questions, please give me a call.

Yours very truly,

RONAN ENGINEERING COMPANY
MEASUREMENTS DIVISION

Jack H. Adkins
Chief Sales and Service Manager

mc

SKETCH 14
BRINDERSON
PSNS STEAM PLANT
46-23572-01