TABLE OF CONTENTS	FIELD LOG	PAGE No.
Project Title	1988 Construction of Closure Unit	One
Field Notes for June 13TH		2 & 3 &
14TH	Excavate Pit	5, 6 & 7
15TH		9, 10 & 11
16TH		13, 14 & 15
17th		17, 18, 19 & 20
18th	do	21, 22, 23 & 24
June 20th	Ex. & Haul Waste Met'l	25, 26, 27 & 28
June 21		29 & 31
June 22		33, 34 & 35
June 23		36, 37 38 & 39
June 24		41, 42, 43 & 44
June 25		45, 46 & 47
June 27		49 & 51
June 28		53 & 55
June 29	(Rained)	57 & 59
June 30		61 & 63
July 1st		65 & 67
July 5	(filled Pit w/16,000 cy)	68, 69, 70 & 71
July 6	(Location of soil Test)	73, 74 & 75
July 7		77
July 8		79, 80 & 81
July 9		85, 86 & 87
July 11		89, 90 & 91
July 12		93 & 95
do July 13	do (Started excavating Key way	97, 98 & 99

TABLE OF CONTENTS

		PAGE No.
Field Notes for July 14th	Excavate & Haul Waste Mat'l	101, 102 & 103
July 15	" " " "	105, thru 108
July 16	Started - Placing Clay Cap	109, 110 & 111
July 18	(rain)	113 & 115
July 19		117 & 119
July 20	Completed - Placing Clay Cap	121, 123 & 124
July 21	Placed Select Fill	125 & 127
July 22	" " " - completed	129 & 131
July 23	Started Hauling Top Soil	133, 134 & 135
July 25	Page 138 - Location of Soil Test (Rained)	137, 138 & 139
July 26	Completed hauling Top Soil	141, 142 & 143
July 27	Started Installing Fence	145 & 146
July 28	Hydro seeded fill area	147, & 148
July 29	Istalled Fence	149
August 1		153
2		155
3	walked Job Site w/ Alessio Sent Invoice to CECO	157
do do 4	do Inspected Job Site with CECO Steel	158
As built Drawing		161, 163, 165 & 167
Construction & As built Schedule		169
~~As~~ Drawing Showing location of stakes for Elevation		172
As built Elevations		173
Comments on the Construction Schedule		168

TITLE

PROJECT NO

BOOK NO.

1

Construction Log
for
Waste Storage Area, Lemont, Illinois
The Ceco Corp. Oak Brook, Illinois
by Sidney A. Rasnick June 13, 1988

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE			DATE
DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

2 Photographs taken on 6/13/88

The following photos were taken to document existing conditions of the pit.

1-1) Standing at the S.W. corner of Pit Looking North
1-2 " " " " " " " " NE
1-3 First cut into pit
1-4 at S.W. corner looking east

Note: This is not going to be the location of this corner at the completion of the pit. This corner will move 15'-0 north and 30'-0 west.

1-5 75' from stake (west) and 50' north looking North
1-6 " " " " " " " east
1-7 at water level looking South
1-8 " " " " west
1-9 " " " " east
1-10 " " " " north
1-11 at existing S.E. corner Looking West Level ✓
1-12 " & down @ 20° ✓
1-13 North - Level
1-14 " down @ 20°
1-15 " down @ 45°
1-16 N.E. Level
1-17 do " down @ 20°
1-18
1-19 N. E. bank Looking South level
1-20 " down @ 20°
1-21 do do do North - Level

1-22 Excavated Test Pits 15'-0 from east end @ South Side
1-23 75'-0 " " "
1-24 225' from west end
1-25 do do do 225' " " " do

TITLE Day One

Arrived at Job site 5:45AM Weather - Clear

Contractor Mobilized the following equ, on site:
1- Case 125B 1/4 cy track Back Hoe
1- D8H Dozer
1- Office trailer
1- Decotamination trailer (8 x 36±)
1- Fuel Tank

Contractor leveled an area for the trailers, dozed a ramp down into the pit and excavated 3 small test holes in the side of the waste material. Based on these test holes the material has some water in it and will not be to dusty.
See phot #22 through #25

Tomas Riley of NUS Engineering and Kevin Kenney NUS's Project Health & Safty Officer arrived on site at 9:45 AM at 4:00 PM kevin Kenney conducted a 3 hr Health & Safty meeting with the following workers.

Contractors Men
Phil Garlin
Paul (Buck) Wisneski
James Alessio
Billy Wisneski Jr.
Rick Baranak
Ron Cheney
Jim Johnston
Joe Sleyco
Mike Seneker
Larry Sexton
Stephen Lakotiela
William Welch

NUS
Sidney A. Rasnick
Tom Riley

Note names were added to this page on 6/29/88
S.A. Rasnick

SIGNATURE Sidney A. Rasnick 6/13/88
DISCLOSED TO AND UNDERSTOOD

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site:

James Alessio

Dale Dey

Mike L. Semko

Joe Slyzko

Steve Lakotich

Len Alessio

Ron Cherry

Billy Wisneski Jr.

Equipment

D8H work 11 hours

D6

Cat 977K track Loader

Cat 988 Loader

Bill Wisneski

Jim Johnston

Work started @ 7:00 AM and Ended @ 6:30 PM

16 Site Conditions:

weather clear and windy

No visible dust due to find fome the Waste Mat'l.

Some dust at the dozer as the top 6" was cut in the ~~pip~~ pit area.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE			DATE
Sidney A. Rasnick			6/14/88
DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

6 Photographs taken on 6/14/88

1-#26 S.W. corner of Cecos property

1-#27 Existing property line stake @ 385'± from S.W. corner

1- thru 36 Show material being dozed

Roll#2 photos 1, 2 & 3 Cross cutting to mix and compact.

2-4 & 5 Pushing material from cut at west end.

2-6 thru 9 Case 125B back hoe being used to rip material ~~and to~~

2-10 Cut existing stock pile with dozer to drain water out of pit.

2-11, 12 & 13 Cut through material on north side that shows how material compacts

2-14 & 15 same as above (11, 12 & 13) only on the South side

Contractor mobilized 1- Truck mounted Loader (Cat 977K) and one rubber mounted Loader (Cat 988). A portable power plant was set up for the office lights and a Cellular Mobile Telephone was installed.

Three(3) labors started removing the tires from the north side of the waste pile and loading them in the bucket of the Cat 988. The loader stayed off the pile and hauled the Tires to the Tire storage area as shown on the design drawings.

The three labors and the Cat 988 operater were all in Level, suits including dust respirators. Keven Kenny informed me that it was good that they wished to wear the respirators how ever condition at this ~~dow~~ time do not dictate the need for them.

Jim Alessio started at the S.W. corner of the site (photo 26, checking the distance from there to the S.W. corner of the pit. The distance to the existing stake was approx 920'-0. The drawings show 594'-0. The instructions from the design engineer (Tom Riley)

Excavation of Pit

Excavation was started by cutting material at the west e. and dozing the fill down and into the low area that has stand water. Some of the first lifts into the low (water) areas was 4' to 5' deep, then this fill area was cut to 2'-0 and the material was compacted as more fill material was dozed to the east.

The standing water is perched water that has seeped out of the serounding slag fill. This is understandable when you chen the amount of moisture that is in the slag that is being excava to construct the pit. The slag is porous and has an ablity to retain the rain water. We are placing fill material on bed rock and compacting it very tight and based on this there should be little or no water in ~~this~~ the area of the pit.

SIGNATURE Sidney A. Rasnick DATE 6/14/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site:

Mike L Seneker

Joe Sleyks

Steve Takotich

James W Abssio

Len Abssio

Ron Cheney

Billy Wisneski Jr.

Dale [illegible]

Equipment

D8H worked 11½ Hrs

D6 worked 8½ Hrs

Cat 988 Loader worked 8 Hrs

Cat Loader (Track) Down

Case 125B worked 4 or 5 Hrs.

Bill Wisneski

Jim Johnston

16 Work started @ 8:00 AM and ended @ 7:00 PM

I left the job site at 6:30 PM and Tom Riley and a Survey team left at 7:30 PM

Site conditions:

at 8:00 AM overcast and calm at 1:00 PM clear and windy

No dust from excavation of the pit

There was no visible dust comming off of the waste pile

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/15/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

10 Photographs taken on 6/15/88

SCIENTIFIC BINDERY PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

Notes

Three labors continued loading tires onto the front end loader and placing them in the tire storage area.
All four men were suited up but without respirators due to the low amount of dust in the air.

The D8, D6 & Caf 977 (track) loader all worked cutting material off the west and north bank of the pitt & spreading the fill on the east end of the pitt (Please see photos 2-1 through 2-10)

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick

DATE 6/15/88

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

12 ~~Photographs taken~~ on

SCIENTIFIC BINDER PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

13

6-16-88

Contractors Men on Site — Equipment

Bill Wisnoski
Len Alessio
Ron Chung
James W. Alessio
Mike L. Semper
Joe Slayka
Steve Lakatich
Billy Wisnoski Jr.
Dale D[illegible]
Jim Johnston

arrived at 5:00 AM

1-D8H (12 Hrs.)
1-D6 (12 Hrs.)
1-Case 125B
1-Cat 98E
1-Cat (Track) Loader Down 977K (5½ Hrs)

8:00 AM — New cat 977L arrived on site at approx. 10:00 AM and started working at 12:00 AM.

9:00 AM — This loader will be used to load the dump trucks

Unloded water truck off Lowboy

15
16 Work Started 5:00 AM — Work ended _____

Site conditions:
Weather @ 5:00 AM clear, calm 52°
@ 1:00 PM, clear, windy and cool
No visable dust.
Pit was tested for Gas & Ox. using the LEL/O2
There was no change in the reading. OK.

No visable dust at 1:00 PM

Contractors Safty Man was on site a took dust samples

3 men with a loader and operator continued removing tires & cuting liner. They were all in "D" with out resperators.

Man on Case loader suited up at 1:00 PM and moved onto the waste pile.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick — DATE 6/16/88

DISCLOSED TO AND UNDERSTOOD BY — DATE — WITNESS — DATE

Photographs taken on 6/16/88

2-16 & 17 Shows depth of dry material, all material below is damp, no dust and good compaction

2-18 Shows that there is no dust as the dozer works

2-19 Shows leading edge of fill that is under compacted, this material will be cut down and pushed on out

2-20 Same as above, only showing how stumps and large material is push out of the fill

2-21 & 22 Show how the leading edge of the fill was cut down and compacted.

2-23 & 24 Moving large material that will be pushed out of the fill area.

SCIENTIFIC BINDERY PRODUCTS CHICAGO

Jim Alessio started staking out an off set line on the south side of the pit and setting ~~Leve~~ cut & fill stakes.
shot

~~West End of pit~~ Pit moved to the west approx. 25'-0 to balance cut & fill and to enlarge the work area at the N.E. Corner for the scrap iron works. This makes a total of approx. 55'-0 that the pit has been moved to the west.

Both Ed Bear & Tom Riley agreed with the change and the contractor also agree. This helps the contractor, now he will not have to haul some 4,000 ±cy of material.

The contractor is to furnish as-built drawings showing the location of the pit.

The survey crew had an even 10'-0 error in the elevation calculations. The owner of their company is to furnish field notes and a letter certifing that the lines are OK.

The contractor is to furnish NUS with a copy of this information and also a letter certifing the over all location and elevation is corect.

The Case 125B was moved onto the waste pile at 1:00PM and started excavating and stock piling material.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/16/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

17

Contractors Men on Site

Len Abasio
Billy Wisneski Jr.
Dal D[illegible]
James Abasio
Steve Pakatich 7 to 10
Mike L. Simpson 8 to 10
Joe Slusko " "
Bill Wineski
Jim Johnston

in at 5:00 AM

Equipment

		Hrs. Worked.
D8H	5:30 to 5:30	11½
D6	5:30 to 5:30	8
977 L		4
988		1
125B id		
Water truck		

Two EUCLIDs were moved on site

18 Work Started 5:00 Ended 5:30

20 Site Conditions:
Weather - 5:00 AM Clear, calm & Cool 50°
1:00 PM clear & 82°

LEL/O2 ~~me~~ reading were taken by the contractors Health & Safty man. OK

There was no dust due to the wind and very little dust due to the dozers, some dust for a short time at the west end when the dozed the first 6" of top mat'l.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/17/88

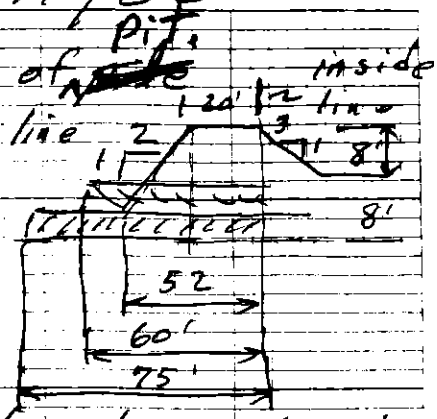
DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

18 Photographs Taken on 6/17/88

2-25 Fill being placed on north side of ~~side~~ pit.

2-26 Show over build, 60' from inside line

2-27 Show over build of 75' and the location of stumps and larger material.
This area will be drest up at completion.



2-28 Shows Case 125 B excavated and stock pile waste material

TITLE

Notes

3 men and a loader with operator completed moving all the tires and covered up the new pile of tires with mew material that was left over from covering the waste pile.

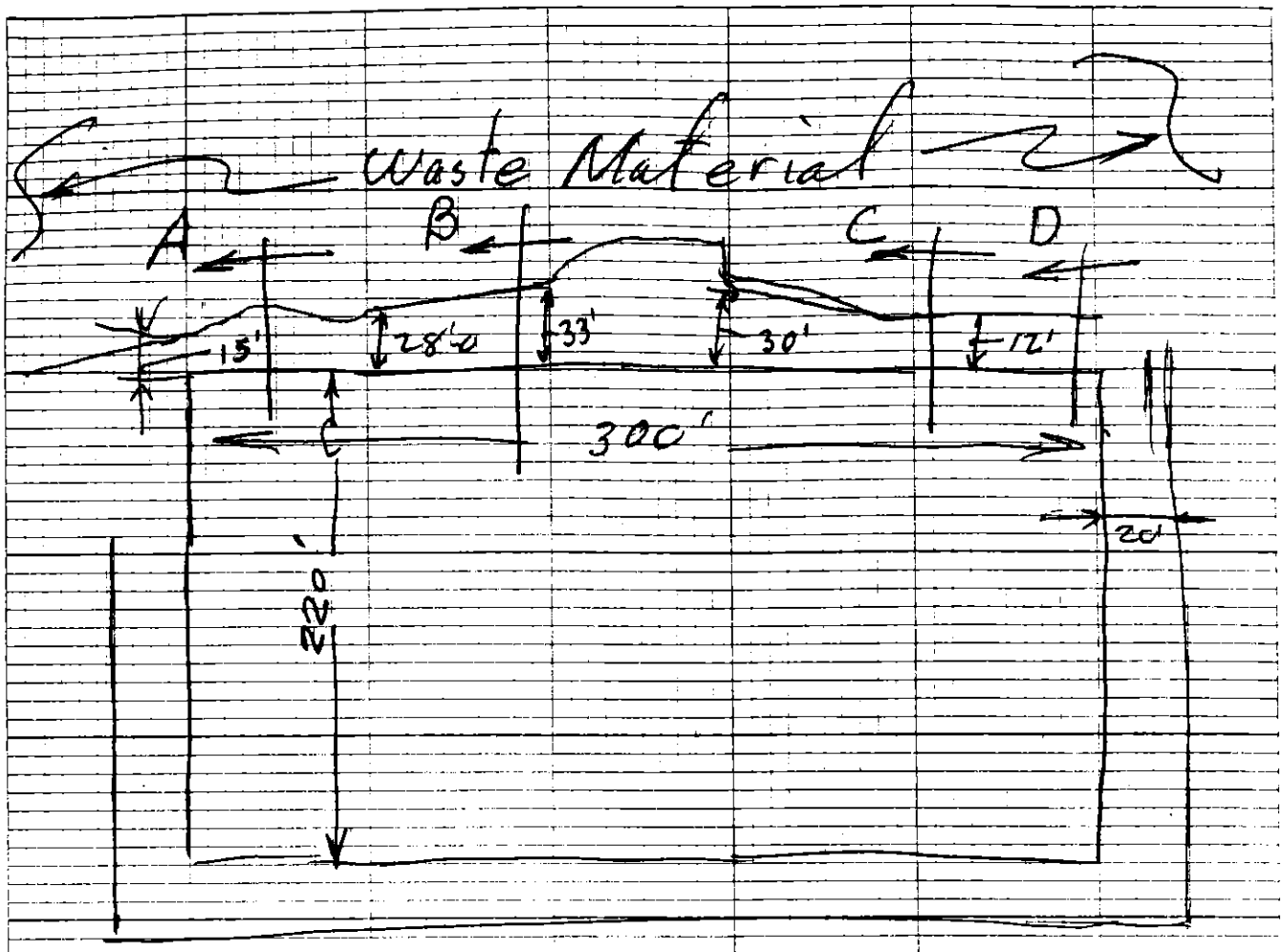
Please note that these tires were on the cover & in the road and should be clean. They are being covered to keep rain water from standing in them.

Two sides of the pit was fine graded by back ~~plad~~ blading with the D8

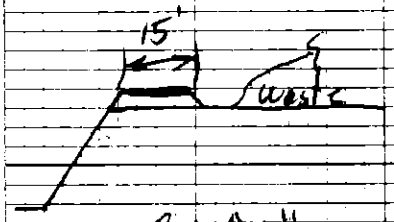
ANTIFOR INTERNATIONAL PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/17/88

DISCLOSED TO AND UNDERSTOOD BY DATE



Map showing edge of waste material and pit



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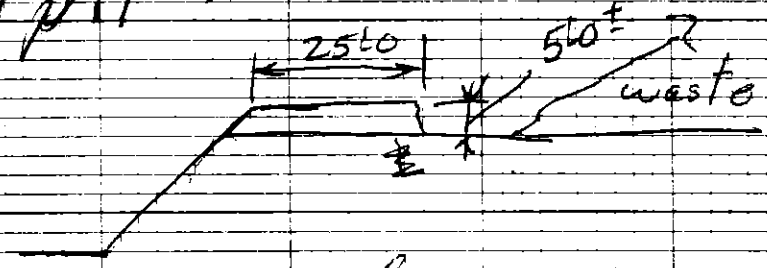

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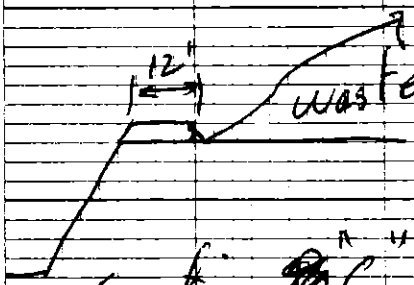

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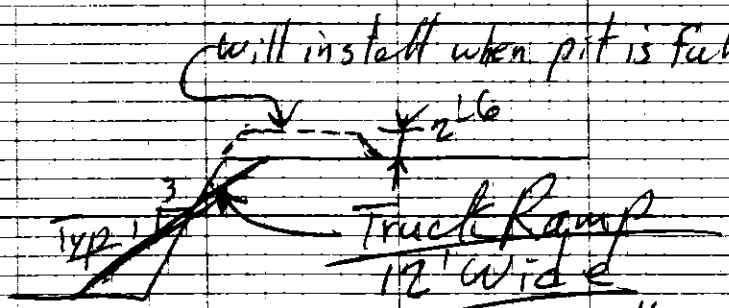


Section "D"

SCIENTIFIC BINDERY PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Lee Alessio

Ron Cheney

James W. Alessio

Billy Wisneski Jr.

Bill Wisneski

Jim Johnston (Health & Safty Man)

D8H
D6
Cat 977L
Cat 988
125 B Hoe
Water truck
2-EUCLIDs

2-12cy Truck were moved on site

Started working at 7100 AM Stoped 5:30
I arrived at 5100 AM because that is when the Contactor was sheduled to start.
Site Conditions:
Weather Clear & Cool @ 7:00AM

No visible dust.
There was some dust when trucks were loaded at the barrow pit and when the darrow material was dumped on the east berm of the pit

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/18/89

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

22 Photographs 6/18/88

TITLE Notes

PROJECT NO

BOOK NO.

Continued working on Pit with D8, Cat 977L work for approx One Hr. on pit then Loaded the smaler EUCLID and they hauld in some material for the east end of the pit

Jim Johnston the contractors safty man moved in 2-Truck loads of 55 Gal. Drum and set up the clean, decon., and Hot zone as shown on page #24

The contractor mobilize 2-6 wheel dump trucks & 2-Euclid truck, moved the loader (Cat 977L) to the barrow pit (approx. ½ mil east) and hauled in approx. 600 cy of fill mat'l, plating 100 cy on the north berm of the pit and 500 cy on the east berm.

The barrow material is from the flag stone quarry next to the job site. This ~~material~~ is good fill material for compaction but is hard to work on the slopes. The to 3 to 5 foot of will is some areas of the north and east berm was constructed with this material. To do this the berm had to be over built in width by 5' to 6'.

Because the pit was relocated to the west (some 60'±) the bottom of the east berm was over built by 50' to 60'. I instructed the contractor to use as much of this material as possible to build the east berm. Due to this and over building the top (5' wide) the out side slop of the east berm will be on a 3+ to 1 slope.

Also due to the difficulty in getting compaction on the face of the inside slope using the barrow material I instructed the contractor to leave it as is (2½± to 1 slope).

The out side slope of the east berm should be seeded.

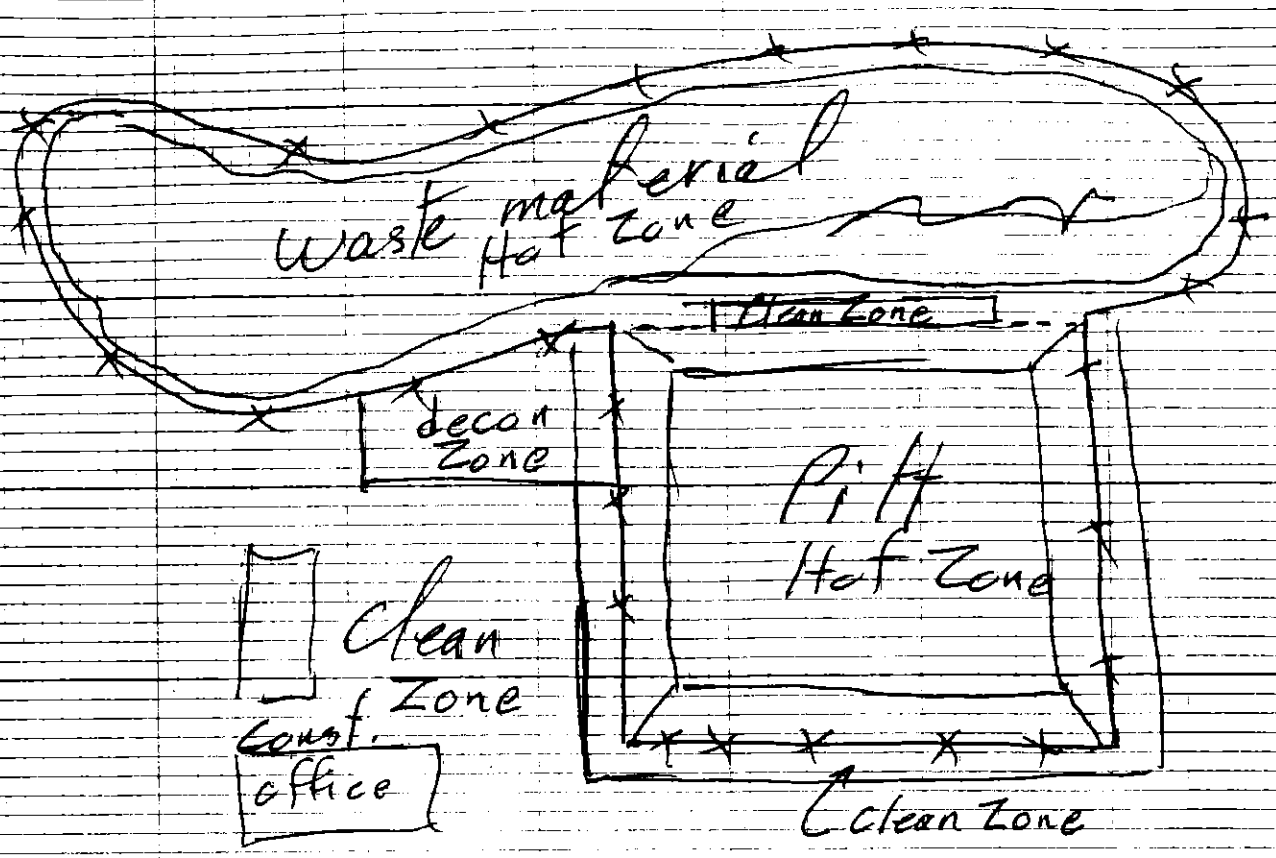
As of 5:30 PM the Contractor had cut, moved and compacted in place some 12,000 cy and had hauld from barrow approx. 600 cy.

The Contractor will have to haul 100 to 150 cy to complete the north berm after the waste material has been hauld. Also there is some finish work to do on the outside of the berms

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/18/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE



SCIENTIFIC ENGINEERING PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

Contractors Men On Site

Ron Cheney
Bill Wisnesky
Joe Slagles
Phil [illegible]
Dale [illegible]
Billy Wisnesky Jr.

Equipment

D8
Cat 977L
2- EUCLIDS
2- 6 wheel Dumps
1- Water Truck

D6 & Cat 988 Loader removed from Site.
Case 125B Decon'ed and removed from Site.

changed out the 977 with a 6cy loader.

Work Started at 7:00 AM Ended 4 30 PM
Started hauling Waste Material @ 8:00 AM

Site Conditions:
weather - Overcast & calm @ 5:00 AM
Hot (104°) and strong winds @ 1:00 PM

It is starting to get dusty in the area of the pit were the contractor worked last week. The top 6" of the waste material is dry but below that there is no dry dust.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rosnick DATE 6/20/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Monday

 Photographs 6/20/88

2-~~30~~ 29 North inside slope of Pit
2-30 East " " " "
2-31 South " " " "
2-32 South outside slope of pit (Note stakes are at 25' from top of inside slope)

2-~~34~~ 33 East outside slope (over built 5'-0 in places)
2-~~35~~ 34 North outside slope (over built 5'-0 also NE Corner is cut down by 3'-0 for a ramp into the pit)

2-~~36~~ 35 West inside slope of Pit
2-36 Pit Area looking east

Roll 3-#1-5 To show how area was roped of for Health & Safty

3-~~7~~ #6 & 7 ~~#8~~ Constructing ramp inside pitt with waste.

#8 thru #11
3-~~12~~ Dumping on ramp
~~#11 & 13~~

#12 & 13 Loading Trucks with Waste

TITLE

PROJECT NO

BOOK NO.

Notes

At 7:30 AM the contractor held a 15 min safty meeting with the workers explaining the Hot and clean zones and what gear they were to wear.

Started loading and hauling waste material to the pitt at approx. 10:00 AM I clocked the hauling and they were getting approx 200 cy/hr.

At 1:00 they traded out the 2¾ cy loader with a 6 cy load. The production went up to 330 cy/hr. I belive that they will level off around 400 cy/hr. after the work becomes a routine and if the equipment holds up.

6cy loader looses power after it heats up.

In the fill area they keep dozing and cutting down the fill, trying to fine grade. You can not fine grade large rocks and per the spec. they can go up to a 24" lift.

2:00 PM - Due to the dozer operator trying to fine grade the fill area it is now covered with loose fill and large rocks. The typ of hauling equ. will not be able to travel through the fill area with out some help.

I instructed the Contractor to quit trying to fine grade the large rock and use the D8 tracks to compact the fill and to push the rock back down in to the fill material and as the material is dumped knock it down to a 18 or 24" lift, walk it down with the dozer and then run over it with the trucks hauling the next load.

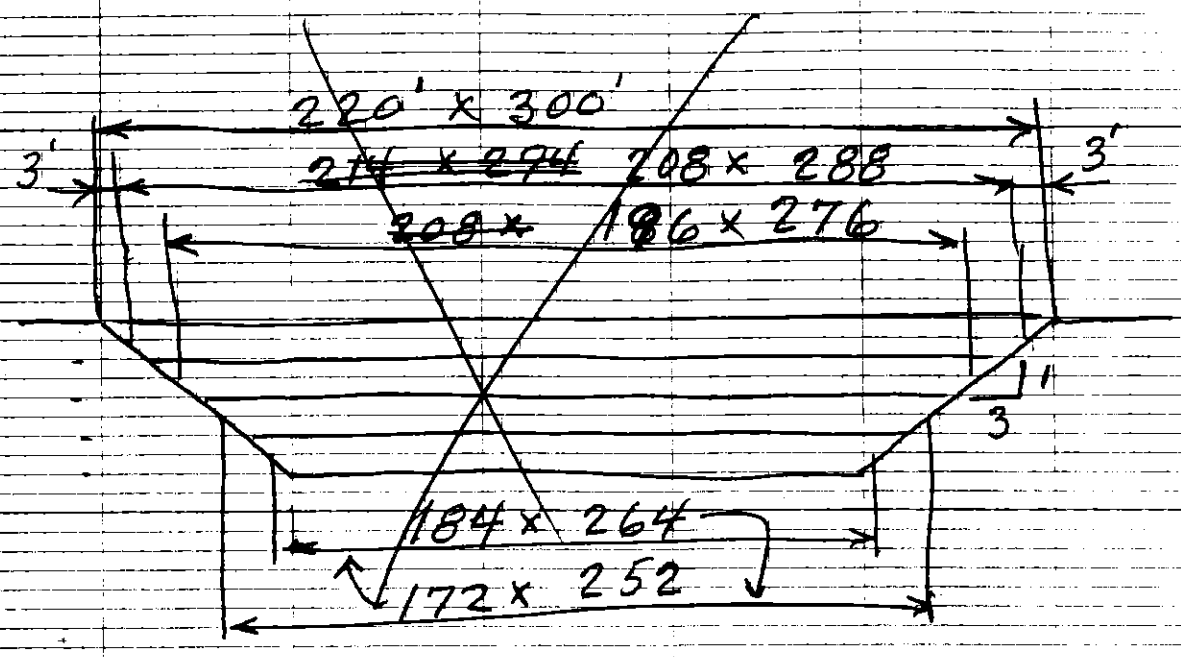
CLIENT FOLDER PRODUCTS CHICAGO 60605

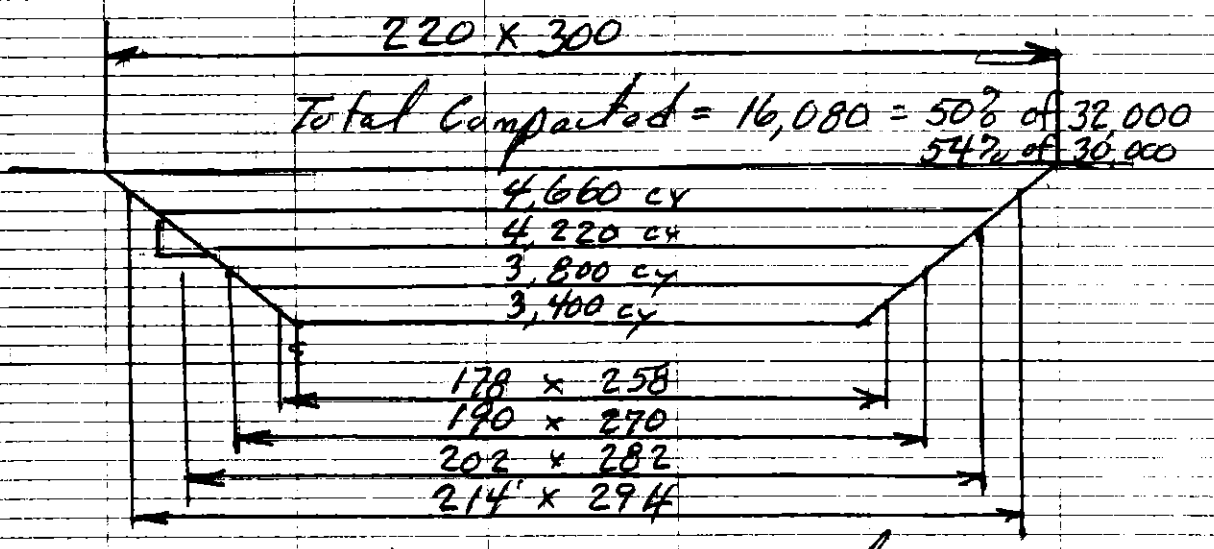
SIGNATURE Sidney A. Rasnick

DATE 6/20

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Calculation for the quantity of waste material in the pit





	w/20%	w/25%	w/30% Compaction
1st	4,080 cy	4,250 cy	4,420 cy
2	4,560	4,750	4,940
3	5,064	5,275	5,486
4	5,592	5,825	6,058
Haul =	19,296	20,100	20,904

SCIENTIFIC BINDER PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Bill Wisneski
Bill Wisneski Jr.
Buck Wisneski
Joe Sleyco
Ron cheney
Phil Garbin
Mike Seneker
Dale Denny
Rich Baranak
Jim Johnston (Safty Man)

Equ.

Same as for 6/20/88

The bcy loader is out of service.

Work Started at 5:00 AM Stoped 5:1 PM
Started hauling Mat'l @ 7:30 AM & stoped @ 4:30 PM

Site Condition

Weather Clear & Cool at 5:00 At 1:00 PM it was 101°
It rained last night and the site is in very good condition.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick

DATE 6/21/88

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

Tu.

TITLE Notes

PROJECT NO

BOOK NO.

Continued loading and hauling waste material to the fill area.

The trucks are dumping with out being spoted and the Contractors Superintendant is now on one of the loaders. I suited up and instructed the drivers how to back into the waste pile to be loaded and the I went to the fill area and showed them were to dump so that the material can be spread into a 24" lift with out pushing the material 50 to 100'.

Ed. Baer of NUS arrived at the job site

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60625

SIGNATURE Sidney A. Rasnick DATE 6/21/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Bill Wisneski
Bill Wisneski Jr.
Ron Cheney
Dale Denny
Rick Baranek
Joe Sleyco
Mike Senecker

Equipment

Same as 6/21

Started work 5:00 AM Stoped 5:00 PM

Started hauling @ 6:30 AM stoped at 4:30 PM

Site Condition clear

No dust.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/22/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Wen.

34 Potographs 6/22/88

Roll #3 - ~~16~~ 14, 15 & 16 { Truck starting ~~entering~~ 2nd lift.

3 - ~~16 & 17~~ { Truck traveling over 1st lift

3 - ~~16~~ 17 started excavating dry material

3 - 18 & 19 D8 & Cat 988 trying to compact wet material

3 - 20 ~~Cat 988 77 compacting material~~ clark Loader

TITLE Notes

PROJECT NO

BOOK NO.

Contractor continued hauling waste material from the east end of the pile some of the material is very wet.

The filled in a large area with the wet material and are not able to get it compacted.
I instructed the contractor to cut 12" off the wet fill area and add some dry material. After doing this they walked it down with the loader and dozer and was able to compact the material

SIGNATURE Sidney A. Rasnick DATE 6/22/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Bill Wisneski
Bill Wisneski Jr.
Buck Wisneski
Joe Sleyco
Ron Cheney
Phil Garbin
Mike Seneko
Dale Denny
Rich Baranak
Bill Welch

Equipment

Same as for 6/22

Started Work 5:00 AM Stoped @ 5. P.M

Started Hauling @ 7:30 Stoped @ 4:30
One hour lunch

Clear & windy
No Dust at waste stock pile or in the pit

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Resnick

DATE 6/23/88

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE Thu.

Photographs

3-20 Clark 275C Compacting
3-21 D8 Compacting
3-22 thru 25 Truck recompacting same area
3-26 27 & 28 Truck hauling over fill & dumping
3-29 Parts of the membrane that was covering the waste material
27 & 28

29 - Voided

TITLE

Notes

In The area were the loader is compacting the material became very mudy due to the rain the night befor. The contractor had to place a 1'0 lift of dry material in the mudy areas and mix it with the wet material. After the loader work in this area more dry material was mixed in and the truck maded several passes to compact it. The contractor lost 3 or 4 hrs., reworking the wet areas, due to the rain.

Due to the difficulty that the six wheeled dump trucks are having traveling through the 24" lifts most of the lifts are being placed in 12" & 18" lifts.

Please note that the membrane cover is being loaded in to the trucks as the loader comes to it. After it is dumped in the fill area it is ran over by the dozer and due to the fill be inplaced in 12", 18" & 24" lifts it will be at many elevation all over the pitt area.

SIGNATURE Sidney A. Rasnick DATE 6/23/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site	Equipment
Bill Wisneski	D8
Bill Wisneski Jr.	Cat 977L
Ron Cheney	Clark 275C 3Hrs.
Dale Denny	2- 6 wheel Dump trucks
Rick Barangk	1- Semi Dump
Bill Welch	2- Euclids
Jim Allesion 2Hr.	
Buck Wisneski 2Hr.	
Jim Jonston (Safty Man)	

Work Started @ 5:00 AM Stoped 7:30 PM
Started hauling @ 6:30 AM and stoped @ 5:00

Site Conditions
Wether 5:00 AM cloudy and coot
2:00 PM clear and 98°
No dust ~~on~~ at waste pile or in the Pitt

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/24/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Fr.

42 Photographs 6/24/88

3-30, 31 & 32
D8 Compacting fresh lift

3-33 thru 36 Loading Semi Dump.

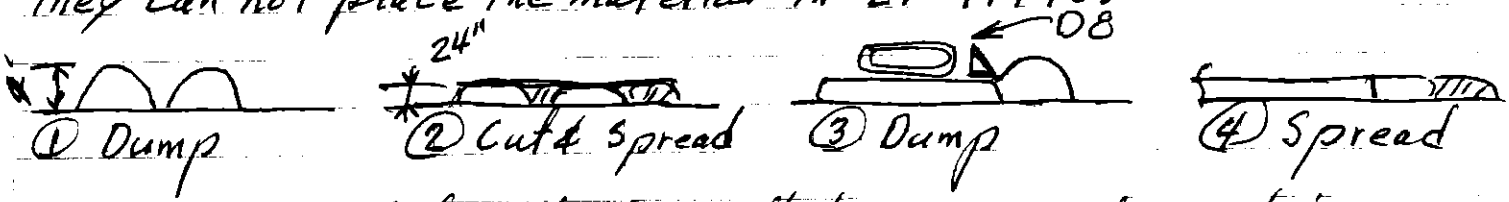
Notes

The contractor continued hauling waste material with four trucks and one loader (Cat 977). However befor they could travel through the material that was placed in the pitt on the 23rd 8 to 10" of material had to be cut off and compacted with the D8 and a loader.

The contractor continued with the same method hauling 3 to 4 hours and then knocking the material down and compacting it with the D8 and loader with final compaction being achive when the hauling equipment travels over it for the next lift.

On three previous occasions I instructed and demonstrated to the Contractor the relative easy method for placing and compacting the fill material. It should be noted that the contractor is on schedule and the material is being compacted to the compaction as required by the spec's. Based on this I have not voiced a strong objection to their method. How ever it it is costing the contractor money and is very hard on the hauling equ.

For the recored the fallowing method of placing and compacting the waste material in the fill area that has been proposed by the specification and as been deminstrated by me to work. The reason for these notes is to explain and document that the Contractor is not entitled to an extra because they can not place the material in 24" lifts.



Please note that with this method you are only pushing material 5 to 10' and the D8 is constantly running over the newly spread material. Also you can haul over this mat'l or back up to it and dump.

The contractors plan was to work late today however at 4:30 or 5:00 PM all the hauling equipment is down and out of service. (Cont. to page 44)

SIGNATURE Sidney A. Rasnick DATE 6/24/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

The only equ. running is the D8 & the Cat 977.

The Contractor had some of the men working on the equ., and had the D8 and the loader cutting and pushing material up to 300' from 6100 to 7130 PM.

SCIENTIFIC SINCERA PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

Contractors ~~Equ.~~ Menon Site Equ.

Bill Wisneski (Part time)
Bill Wisneski Jr. Same as
Buck Wisneski
Joe Sleyco
Ron Cheney
Mike Senetker Small Euclid deconed
Dale Denny and moved off site
Cat 955 track loader moved
on site.

Work started 5:00 AM Stoped 2:30 PM
Started Hauling with one EUCLID @ 9:00 AM Stoped @ 2:00 PM

Site Conditions
5:00 AM Clear & Windy 2:00 Clear 103° and Windy

No dust at the waste material stock pile or in the fill area. Some dust at one location of one haul road.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/25/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Sat.

46 Photographs 6/25/88

Roll #4 1 through 11 Decon Equ.

#12 & 13 All Equ. out of service

#14 water truck with front end out and Semi will not run or dump

#15 D8 & Cat 977 only Equ. running.

Roll #4- 16 & 17 Level fill area and complete Compaction

#4-18, 19 & 20 Area of excavation at waste material stock pill

TITLE Notes

PROJECT NO

BOOK NO.

At 5:00 AM one man arrived on site and started excavating and stack piling waste material.

6 to 6:30 AM the other men arrived and started working on the equipment. The D8 & Cat 977 continued dressing up the fill area.

At 9 or 9:30 AM the EUCLID is back on line and started hauling material.

It should be noted that the Contractor started dumping, knocking down the material per the method that I had explained on 6/20/88. The EUCLID has no problem traveling over the fill material and dumping in front of the material that had just been dumped and spread.

I clock the loading and hauling and found that the EUCLID was making a round trip every 5 min. with 18cy of material.

In this short time 3 men (D8, Cat 977 and one truck) loved spread and compacted some 600 cy of material.

SIGNATURE Sidney C. Rasnick 6/25/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site		Equipment
Ron Chaney	- Loader / Foreman	Equ. in use
Bill Wiseski	- D8	D8
Dale Denny	- 6W Dump	Cat 977
~~Rich Baranak~~	- EUCLID	Mack Truck
Phil Garbin	- Semi	18cy EUCLID
Larry Sexton	- Decon	Semi Dump truck
Buck Wiseski		

One Dump & the 6cy Loader are being Deconed & will be moved off site.

Started at 5100 AM (One Man) Staped 7130
Started Hauling @ 7130 with 2 Trucks

Clear & cool @ 5100

Temp droped 40° on Sunday from 103° to 63°

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney G. Rasnick DATE 6/27/88

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

Monday

TITLE

Notes

Contractor continued hauling waste material.
The D8 Dozer stayed in the pitt spreading and compacting material as it was hauled in.
At the end of the day the pitt started looking more like a controled fill area. How ever there is still low areas @ The NE & SE corners.

SIGNATURE Sidney A. Rasnick DATE 6/27/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Ron Chaney
Bill Wiseski
Bill Wiseski Jr.
Larry Saxton
Dale Denny
Phil Garbin

Equipment

Same as for 6/27/88

A 35 Ton Payhauler was moved on site.

Work Started @ 5:00 AM Stoped @ 5:00 PM
Started hauling @ 6:30 with only the EUCLIN

Hot and Windy
~~There is starting to some dust at the haul road.~~
The haul road is starting to get dusty They will need to use the water truck on Wen.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/28/88

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

Tu

TITLE

PROJECT NO

BOOK NO

Notes

Contract started hauling with only the EUCLID and then added one 6 wheel dump truck.

A 35 Ton Pawhauler was moved on site but only made two trips befor there had to be some work on it. The pay hauler work for about 1½ hrs. hauling 12± cy.

The EUCLID had problems dumping so only hauled 10± cy per load.

The contractor place some material in the SE corner that will need more compacting. They also started hauling to the low area of the NE corner to bring it up level with the other area. This was not completed how ever befor the end of the work Day.

SIGNATURE Sidney A. Rasnick 6/28

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Ron Chaney
Bill Wiseski
Bill Wiseski Jr.
Dale Denny
Phil Garbin

Equipment

Work Started @ 5100 AM

Rained - Pitt to wet to work Contractor ~~cotra~~ worked on equipment and pushed waske material into stock Piles

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 6/29/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Wen.

TITLE

PROJECT NO

BOOK NO.

Notes

Mr. V.F. Hill from NUS's Houston office was on site to review the completed work and the projected schedule. Mr. Hill left the site approx. 2:00 P.

Ed Baer arrive on site and will take over Sid. Rosnick duties for Thru & Fr. (6/30 & 7/1).

At 5:00 only one truck (Payhauler) was running, but no work ~~was~~ in the pitt area was performed due to rail.

V.F. Hill, Sid Rosnick and The contracter reviewed the work schedule and agreed the contracter should change the completion date ~~from~~ 7/18/88 to 7/25/88. Sid Rosnick will draft a new projected schedule and issue it next week

SIGNATURE Sidney G. Rosnick DATE 6/29/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO

BOOK NO.

Contractors Men on Site	Equipment
Ron Chaney	Terex Scraper
Bill Wisneski	D8 Dozer
Bill Wisneski, Jr.	Cat 977
Dale Henry	Payhauller
Phil Garbit	~~[illegible]~~ Euclid
Lenny Alessio (10:00 A)	FL 14-B loader
Bill Welch (10:00 A)	955K loader

Work started @ 5:00 AM Finished @ 5:00 PM

Clear & Cool @ 5:00 AM Temp: ~55°F
Clear & pleasant @ 12:00 Temp ~70°F
Windy

NOTES (CONT'D. FROM PG. 63)

Slight dust problem in loading areas developing.

Bill called Bob Sleyko to check on their lab for sand cone and shear testing. Said he could have info. by tomorrow (Friday). Costs, turnaround time, etc. Is this work a change order?

Les Hudek concerned that the power take-off ~~being~~ on his Euclid is not being shut-off after each dump. Probably needs adjustment as Alessio driver does try to "kick" it off each time. Les said that failure to shut-off could burn out hydraulic pump.

Restated NUS's need to see the lab analyses for the clay. Sleyko said he sent it to Riley ~ 1 week ago. Said he would FAX a copy to Riley and one to me @ MICH. office.

SCIENTIFIC BINDERY PRODUCTS

SIGNATURE DATE 6/30/88

SCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE Thur.

Contractor ~~pickup~~ continued hauling to NE corner of pit to level off the existing low area. Some spots throughout waste fill were still soft from rain but scraper was used to cover these.

At 8:15A, Mr. Alessio, Sr. was onsite and took over operation of the scraper from Wisneski. The 977 was down @ 8:00A and the FL14-B placed into operation. 977 back on line @ 8:30A.

Dozer used to level, compact and dress up the fill surface. @ 8:30AM, Scraper, payhauler and Euclid were hauling and placing waste.

By 9:30A soft spots were essentially filled and compacted and waste hauling from pile to pit picked up considerably. Bill W., Sr. back on scraper, Alessio on loader.

High sky and wind seems to be helping dry out the material. Talked to Bill. Wisneski re: having their lab do the density testing (sand cone) and direct shear analyses. Tom Riley said he could be here next week to watch sampling.

Payhauler was down for couple of hours with hydraulic line problem. Mechanic called.

With Alessio Sr. spotting the dumps and the payhauler, Euclid and scraper hauling and being fed by 2 loaders, work was done with much less wasted effort and more production was made.

3:00P – Payhauler back down again.

(CONT'D. ON PAGE 61)

SIGNATURE Edward L. [signature] 6/30/88

DISCLOSED TO AND UNDERSTOOD ... NESS

TITLE

PROJECT NO.

BOOK NO.

Contractor's Men Onsite

Don Cheney
Bill Wisniski
Bill Wisniski, Jr.
Hale Henry
Phil Carlson
Jerry Alessio
Bill Welch

Equipment

Terex Scraper
D8 Dozer
CAT 977
Raytheon
Euclid
FL14-B
955K Loader

Work started @ 5:00 AM

Clear & Cool @ 5:00 AM ~55°F

Clear & Warm @ 12:00 ~75°F

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE

DATE 7/1/88

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE Friday

TITLE

PROJECT NO

BOOK NO

Notes:

Payhauler back on line @ 9:30A

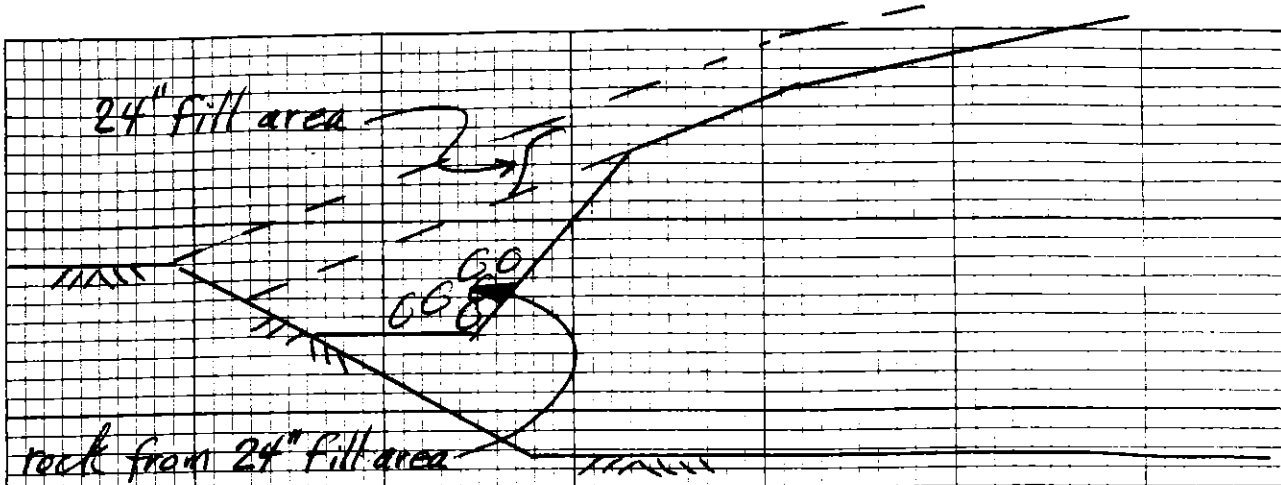
Should finish hauling and compacting eastern 3/4 of original pile by day's end.

SIGNATURE Edward L. [signature]

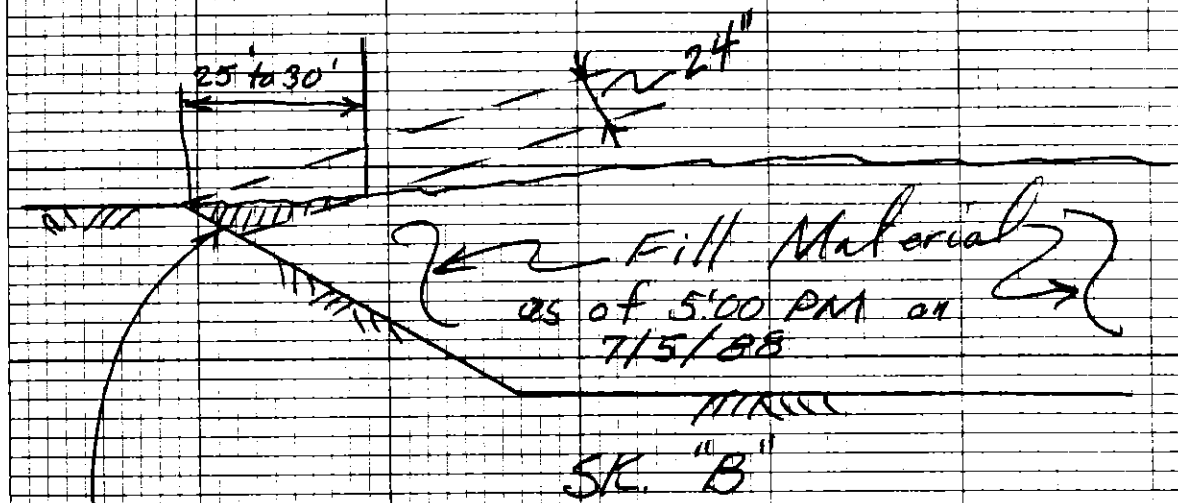
DISCLOSED TO AND UNDERSTOOD

7/1/88

Friday



SK "A"



SK. "B"

This area was removed and rework to remove the rocks and then replaced and re compacted.

SCIENTIFIC BINDERY PRODUCTS CHICAGO

TITLE Notes

The fill area was at an elevation were the last or upper 24" of material needs to be started (or planned). On 6/29 I prepared a sketch showing how the contractor was proposing to place and remove the rock in the fill area (See SK A). The plan was to place the upper 24" in shallow lifts and have the dozer and a loader rake the rocks into the area at the toe of the fill.

This plan was presented to Ed Baer on 6/29 for His review and approval. Ed approved the plan for removing the rock in the fill area as the material was beeng placed.

At the end of the work day (7/5), the contractor had filled in the area where the rocks was to be placed and part of the upper 24" of the fill at the toe of the fill ~~This material~~ The material in the area of the upper 24" will have to be removed to insure that there is no rocks over 6" in that area. (See SK-"B"). Also see photographs listed on Page 70.

I ask the Contractor what typ of plan or method were they going to use now that the had filled in the area where they were going to place rock.

On 7/5/88 the contractor had placed approx 16,000 cy in the fill area. There is approx. 9,000 cy in the stock pile and this will compact down to approx 6,500 cy in the fill.

If they do not have any problems removing the 6" and larger rock out of the upper 24" of fill and if their equ. holds up they should have no problem placing all the material in the fill area this week.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/5/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Tu.

70 Photographs 7/5/88

Roll #4 33, 34, 35 & 36

Taken at 5:00 PM to show work completed and amount of waste material in stock pile

Contractors Men on Site

Ron Charney
Bill Wisneski
Bill Wisneski Jr.
Dale Denny
Phil Garbin
Lenny ~~Les~~ Alessio
Bill Welch

Equ.
D8
Cat 977
Cat 955
Terex TS18 Scraper
Euclid
One 6 wheel Dump
Water truck

The FL 14-B loader was moved off site on ~~Sat~~ Fr. 7/1/88. The Payhauler went down on 7/1/88 and was moved off site on 7/5.

Work Started 5:00 AM
Started hauling at 6:00 AM

Stoped 5:00PM

Site Condition: Hot & Dry

Fill area & haul roads were very dry & dusty due to the three(3) days off.
The area was watered 3 or 4 times to control the dust.

SIGNATURE Sidney A. Rasnick DATE 7/5/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO

BOOK NO.

ntractors Men on Site

Ron Chaney
Bill Wisneski
Bill Wisneski Jr.
Dale Denny
Buck Wisneski
Phil Garbin
Lenny Alessio
Bill Welch

Equ.

Same as for 7/5/88 only that one more 6 wheel dump was moved on site

Started Work 5:00 AM

Stoped 5:00 PM

Started Hauling material @ 6:30 AM & stoped @ 4:45 PM

Site Conditions:

Hot & Dry Material being hauld and in the fill area is damp with no dust.

CLIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick

DATE 7/6/88

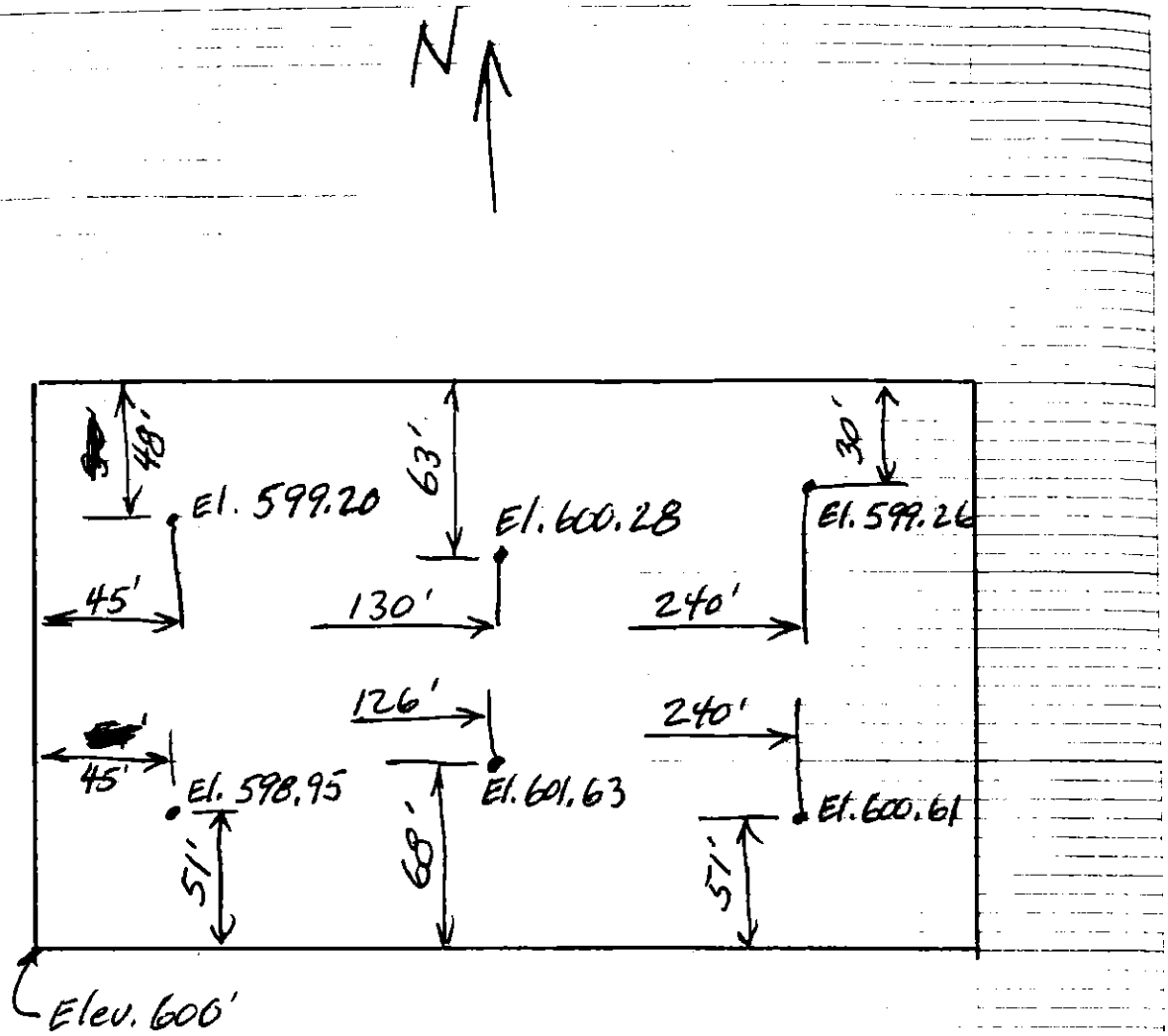
DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

Wen.



Location of Soil Test

Location and elevation per Contractors Independent Land Survey Co.

I was advised by the contractor that they have located a rock rake and it will be on site 7/7/88.

Contractor continued hauling material to the fill area and compacting it with the hauling Equ.

It should be noted that starting on 7/1/88 the D8 dozer has been operated by a highly experienced operator and that He stays full time in the fill area.

This has been the first time that the fill area has been managed in ~~an~~ orginized lifts.

Contractor stoped hauling for several hours waiting for the rock raked. I was informed that the rake was being repaired.

Tom & I tested six areas in the fill area and tom took dirt samples.

SIGNATURE Sidney A. Rasnick DATE 7/6/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

ontractors Men on Site	Equ.
Ron chaney	Same as 7/6/88
Bill Wisneski	
Bill Wisneski Jr.	One of the 6-wheel
Buck Wisneski	Dump trucks is down and
Dale Denny	is not being used
Phil Garbin	
Lenny Alessio	
Bill Welch	

Started @ 5:00 AM Stoped @ 5:PM

Started hauling @ 6:30

Site Condition Hot & Dry

water truck sprayed the haul area to control the dust.

Note
Contractor Continued hauling waste material to the fill area

SCIENTIFIC BINDERY PRODUCTS

SIGNATURE Sidney A. Rasnick DATE 7/7/88

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

Thu

TITLE

Contractors Men on Site

Ron Chaney
Bill Wisneski Jr.
Dal Danny
Phil Garbin
Buck Wisneski
Lenny Alessio
Bill Welch
James Alessio

Equ.

Same as 7/6/88

~~Cat~~
Cat 955 with homemade rock rake moved on site

Work Started @ 5100 AM

Stoped @ 5: PM

Started hauling @ 6130

Hot & Dry

SIGNATURE Sidney A. Rasnick

DISCLOSED TO AND UNDERSTOOD

7/8/88

Fr.

80 Photographs 7/8/88

Roll #5 #1 thru 6

Take to show how home made rock rake was being used to remove the rock

Contractor continued hauling at a slow pace.

Contractor furnished me with two men and a level, I staked fill area and shot grades of existing material in fill. I calculated the approx. amount of material remaining to be placed in the fill and shot in grade elev. for the top of the waste fill area at completion.

I fixed the elev. for the first 35' in and will adjust the top of the fill if needed.

The rock rake was moved on site.

It should be noted that this is a home made rake and not a standard eq. of eqll. It is fabricated from used rail road track, rail splices and structural bar (B6) material.

The rake only lasted 10 to 15 min. They spent all day rewelding it.

The contractor lost most of the day and only hauld 1½ to 2 Hours.

Contractor removed the ~~a~~ material that was placed with out removing the rock for the 24" upper lift. (See SK "B" page 68)

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/8/88

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

Fr.

TITLE

PROJECT NO.

BOOK NO.

ontractors Men on Site

Equ.

Ron Chaney
Bill Wisneski
Bill Wisneski Jr.
Dale Denny
Phil Garbin
Lenny Alessio
Tom ~~Cha~~ Walch

Same as befor

Started Work @ 5:00 AM

Stoped @ 3:00 PM

Started hauling @ 6:30

Site Condition

Hot & Dry

There is some dust from an area to the east of the steel Mill.

The water truck was used to controll the dust at the site.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick

DATE 7/9/88

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE Sat.

Photographs 7/9/88

Roll #5 #7 thru #14

Taken to show changes in how the rocks are being removed from the Top 24" of the waste fill area.

PROJECT NO.

BOOK NO.

TITLE Notes:

Home made rake fell apart.

Lenny Alessio moved to the fill area with the 977 Loader.

The material is being placed in very shallow lifts and the rock are being removed with the loader.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/9/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Ron Chaney
Bill Wisneski Jr.
Buck Wisneski
Dale Denny
Phil Garbin
Lenny Alessio
Bill Welch

Equ.

~~Same as~~

Same as for 7/9/88

Demobed one 955 and removed it from the Job.

work started @ 5:00
Started hauling @ 6:15

Site Conditions:
Clear & Cooler than Sat.

...ENT HL BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick

DATE 7/11/88

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE Monday

Photographs 7/11/88

Roll #5 - #15 through #21 Taken to show progress through 7/9/88

TITLE

PROJECT NO.

BOOK NO.

Contractor continued hauling material and placing it in shallow lift. in the fill area so as to remove the rock.

At 1:00 PM the 955K loader went down, Lenny Alissio worked on the 955 and the 977L Loader was moved from the fill area to load the EUCLID & the One 6wheel Dump. The TS18 scraper was idle.

3:30 PM 955 loader and TS18 back on line, Lenny and the 977 Loader are back in the fill area.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick

DATE 7/11

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men On Site

	Equi.
Ron Chaney	
Bill Wisneski Jr.	D8
Buck Wisneski	Cat 977L Loader
Dale Denny	Cat 955K Loader
Phil Garbin	EUCLID
Lenny Alessio	One 6 Wheel Dump
James Alessio	" " " Idle
Jim Alessio	TS18 Scraper
Bill Welch	Water Truck
	D800 Case Backe Hoe

Work Started @ 5100 AM End 6:15 PM

Started hauling @ 6:15 AM Stoped at 6:15 PM

Stite Condition Clear @ 89%

Water truck was use on haul area for dust control, No dust at Loading of fill area.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/12

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Tu.

TITLE Note:

Contractor continued hauling to fill area and removing rocks from the upper 2-0.

Ran out of space to dump rocks and had to excavate a deep hole with the back hoe.

SIGNATURE Sidney A. Rasnick DATE 7/12

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Tu.

TITLE

PROJECT NO

BOOK NO.

Contractors Men On Site

Ron Chaney
Dale Denny
Phile Garbin
Lenny Allessio
Bill Welch

Equ.

Same as for 6/12

977 Loader Idle
TS 18 Scraper Idle

Started Work 5:00 AM

Ended 6:30 PM

Started hauling @ 6:15 AM

Site Clear and cool @ 6:5

No dust.

SIGNATURE Sidney A. Rasnick

DATE 7/13

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

Wen.

Photographs 7/13/88

5-~~15~~ 22 thru ~~29~~ 30 Taken to show how material was scraped from hard rock.

5-~~30~~ 31 thru 36 Taken to show excavation of Key way

Roll #6 - #1 ~~thru~~

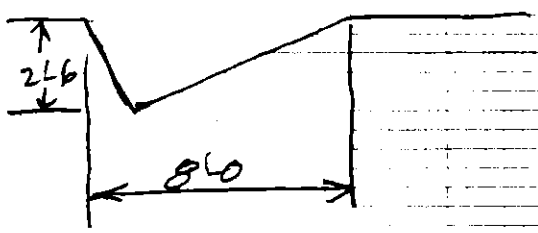
Change in Key way

~~Clay placed in West Key way~~

Key way

Was

Changed To



TITLE

Contractor completed hauling waste material

Used the D8 to scrape the area that was under the waste stock pile. This is the third time that most of the area was scraped.

It should be noted that for over 95± % of the area the material under the waste pile was compacted (very hard) slag and was easy to identify. In the softer areas the contractor excavate over 1-0 of additional material to insure that all of the waste was removed (See Photographs 5-#22 through #30)

Lenny Alessio started excavation of Key way using the Case D800 back hoe.

The Key way as it is being excavated is over 2-0 deep and is 6-6 to 7-0 wide. As it is being excavated it is being scarifyed to reciev the clay.

At 4:30 or 5:00 PM They started hauling clay from stock Pile. Cat 955 was to wide for Key way I instructed D8 operator to cut out side edge off and slope

Placed 5 or 6 loads and had problems with water truck.

Sidney A. Rasnick 7/13

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Ron Chaney
Bill ~~Wieski~~ Wisneski
Bill ~~Wieski Jr.~~ Wisneski
Dale Denny
Phil Garbin
Lenny Alessio
Bill Welch

Equ.
TS1B
D8
Cat 977
Cat 955
Vibratory Sheep foot Roller
2-Water Trucks
2- 6wheel Dumps

Testing Lab
Paul Andreuccetti
Tony Portillo

EUCLID out

Started work at 5:00 AM

Stoped

Started hauling Clay @ 6:30 AM

Dry & Hot

No Dust.

SIGNATURE Sidney A. Rasnick

DATE 7/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE Th.

102 Photographs 7/14/88

Roll #6 - #2 through #5
Taken to show clay fill in Keyway

TITLE

I staked out the waste fill area for asbuilt elevation. See pages 172 & 173. As built by Survey Co.

2-men from the Test Lab arrived on site, I gave them a copy of the specification & 5 coppies of page 172 for mapping their test.

Contractor started hauling clay from pit, spreading it with the Cat 955 that is also pulling the roller. They plan on bringing out a small angle blad Dozer for this work.

Clay is very good material after it is scarified with the loader, water added and then compacted it becomes so dense that the Cat 955 has a hard time ripping it.

All equipment was deconed per the Health & Safty plan on the waste fill area. The water truck stayed in a clean area and a 3" hose with a fire pump nozzle. Some very hard material had to be loosend by hand with a pick befor that area was cleaned with the high pressure hose.

SIGNATURE Sidney A. Rasnick 7/14

DISCLOSED TO AND UNDERSTOOD BY

TITLE

Contractors Men on Site

Ron Chaney
Dale Denny
Phil Garbin
Lenny Alessio
Bill Welch

Testing lab
Paul Andreuccetti
Tony Portillo

Const. Equ.

D8
D6
Cat 955 w/ Sheep Foot
Cat 977 w/ Disc
Water Truck

Work Starte @ 500 AM Stoped @ 5:00 PM

1st Truck of clay arived @ 7:40 AM stoped @ 4:05

Site Condition clear & very Hot

water truck sprayed the haul road to the Gate & black top

SIGNATURE Sidney A. Rasnick DATE 7/15

DISCLOSED TO AND UNDERSTOOD BY DATE

Fr.

106 Photographs 7/15/88

Roll #6

Taken to show how clay was recieved and spread over waste fill with the dozers.

TITLE

PROJECT NO

BOOK NO

Field Notes

Waste material was sprayed with water at 5:00 PM on 7/14. Material did not need any additional water. Water was placed on the clay in the Key way after it was disc.

The first truck of clay arrived @ 7:40 AM (Bottom Dump @15cy) ~~and was~~ placed on the key way and was spread from the north over the waste material.

It took several loads placed on the north Key way and spread south with the D8 & D6 befor the sheep foot roller could be started on the fill area.

The roller traveled east & west making several passes until the feet were on top of the clay.

The first Test taken was in an area that had not been completly compacted and the density was 93%. Paul with the testing lab informed me that the clay as it is now arriving does not need any added water.

The clay in the fill area was not watered any on this first day and first lift.

Paul informed me that the compacted clay has droped To 7 & 8% moisture and would need to be watered the next day befor discing in preparation for the next lift.

The material was ~~lifts were~~ placed in a 8" loose lift using stakes at 30' @ 40' c/c to show the required depth. On each side of the east west ℄ stakes were placed on 20'-centers. This was to insure that the top would not be that

The total waste fill area was completly covered this first day of hauling clay. There was 11 bottom dumps hauling for 9 hrs.

SIGNATURE Sidney A. Rasnick 7/15

DISCLOSED TO AND UNDERSTOOD BY WITNESS

7/~~16~~ 15 Notes Cont.

It should be noted that most of the equ. was deconed on Thu. 7/14 (see note on page 103). the remaining equ. was deconed befer the 1st day was recieved. The decon area was cleaned up and all clothing was buried in the wast fill area in a pit that was left open just fer decon.

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

Ron Chaney
Bill ~~Wlesk Jr.~~ Wisneski Jr.
~~Dale~~
Phil Garbin
Lenny Alessio
Bill Welch

Equ.

Same as on 7/15

Testing Lab:
Paul Andreuccetti
Tony Portillo

It should be noted that the lab Technicians stayed off of the waste fill material and stayed in a clean area at all times.

Work Started @ 5:00 AM

Stoped @ 3:30 PM

1st Truck of clay arrived @ 7:40 AM & the last one @ 3:15

Site condition Hot, windy & over cast

The haul road became dust and the contractor sprayed water on it to control the dust.
Also there was dust in the air from the steel mill. There was no dust in the fill area.

At approx 2:45 PM it started raining. The rain lasted for approx. 10 or 15 min. and was only about 1/8" to 1/4"

SIGNATURE Sidney A. Resnick

DISCLOSED TO AND UNDERSTOOD BY

DATE 7/16

WITNESS

Sal.

110 Photographs 7/16/88

Roll #6

Taken to show how the first lift was prepared to recieve clay for the 2nd Lift.

Rock that were removed by hand from the 1st lift.

TITLE
Field Notes

In preparation for the 2nd lift of clay, lost grade stakes was replaced, the area north of the East West ℄ was sprayed with water and disc.
The other areas will be watered and disc befor clay is placed in the next lift. Based on the day befor it will be noon befor the contractor will have the north section covered with the 2nd lift and we did not wish to ~~to~~ have any area disc for a long period of time and dry out.

The contractor used an excess amount of clay for the 1st lift, at the north side getting started and in leveling up the fill area. Some areas of the waste fill especialy next to the Kew ways were as much as a foot low. These areas had to be filled in with clay to maintain the 600' elevation and to insure of good drainage on the slopes.

It should be ~~that~~ noted that the clay at the time it is recieved has a good moisture content with no hard clay clots, how ever there are some rocks. All rocks are being removed as the material is being spread with the dozers.

The contractor completed the Key way on the east side (approx 80'-0).

Material was not recieved as fast as it was on the 15th and the trucks only hauled for 8 Hrs.

It started ~~raing~~ raining around 2145 and the fill area became to moist to get good compaction with the sheep foot roller. The material recieved after it started raining was spread with the dozers and will need to be processed on monday.

Sidney A. Rasnick 7/16

DISCLOSED TO

TITLE

PROJECT NO

BOOK NO.

Contractors men on Site

Ron Chaney
~~Do~~
Phillip Garbin
Bill Wisenski
Bill Wisenski Jr.
Lenny Alessio
Bill Welch

Contractors Equ.

Same as befor

Lab Testing Technician on Site
Tony Portillo

Work Started @ 5:00 AM
1st Truck arrived @ 7:50 AM

Ended @ 10:30

Site Conditions

Cool & Cloudy

It started raining @ 8:45

SIGNATURE Sidney A. Rosnick

DATE 7/18

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE Monday

PROJECT NO.

BOOK NO.

115

TITLE

Field Notes

Contractor sprayed water on areas that are to recieve clay and then disc that same area.

Three men worked on rock removal.

The first load of clay arrived at 7150.

Contractor recieved approx. 12 loads of clay befor it started raining.

Clay pit was rained out.

I talked with the Testing Lab Technician and He informed me that the water from the rain will help get a good moisture content and that the ~~next~~ day after an area had been compacted the moisture content was droping down to 8% befor it was sprayed and disc for the next lift.

The contractor stoped work on the clay fill. ~~and~~ Two (2) men started working on re routing the steel mills haul road.

Cliff from Ceco and a man from the Ill. EPA was on site to review the job progress and see that the waste material was moved and was completely covered.

Ed Baer was also on site.

SIGNATURE Sidney A. Rasnick DATE 7/18

DISCLOSED TO AND UNDERSTOOD DATE WITNESS DATE

TITLE Contractors Men on Site

	Equ.
Ron Chaney	
Phil Garbin	D8
Buck Wisenski	D6
Bill Wisenski Jr.	Cat 977
Lenny Alessio	Cat 955 w/ roller
Bill Welch	Disc
	Water Truck

Started Work @ 6:00

1st Truck Arrived @ 7:40

Site Condition

Clear - slightly muddy on the fill area.

Contractor had to water the haul road in the afternoon to controll the dust, How ever in the A.M. the contractor had to remove mud from the Highway.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/19

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

TU.

TITLE Field Notes

Contractor Disc The total fill area east & west and then north & south. Only the very top of the 2nd lift was muddy due to the rain.
Contractor recompacted part of the 2nd lift and the area that had not been compacted befor it started raining.

The 3rd lift was placed, ~~and~~ compacted & Tested.

It should be noted that almost all of the test that was made by G&A was made on the upper most lift and after the top was alowed to dry. The 1st, 2nd & 3rd lift. were sprayed with water and disc after the samples for the test were taken. ~~Taken~~ Test of the top lift will give low results.
~~More accurate resalts~~
Taking samples below the top lift will give more accurate ~~resal~~ test. For example test the 1st lift after the 2nd lift has been placed and compacted.

SIGNATURE Sidney A. Rasnick DATE 7/19
DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

PROJECT NO.

BOOK NO.

TITLE Contractors Men on Site

Same as for 7/19/88

Equ.

Same as for 7/19/88

Work Started @ 6100 AM

Ended @ 5130 PM

1ST Truck arrived @ 7.40 AM

Site Cond.

Clear & Calm

Contractor watered the haul road to control the dust.

SIGNATURE Sidney C. Resnick

DATE 7/20

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

Wen.

Field Notes

The 3rd lift was disc in preparation for recieving material for the 4th lift. The contractor sprayed water only on areas that were dry. Moisture content was running from 11% to 13% for the material inplace.

To verify the accuracy of the testing procedure that was being used by G&A Soil Testing and to comply with the ~~testing~~ specification the Contractor had PSI on site.
PSI & G&A made five (5) test at the same location with PSI test results being slightly higher than G&As for both moisture and density.
All density Test taken were over 90%

G&As drilling rig was on site and samples were taken for the inplace permeability test of the clay.

SIGNATURE Sidney G. Rasnick
DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS

7/20

 Photographs 7/20/88

Roll #7

#1 thru #6 4th lift of clay recieved and spread.

#7, 8 & 9 4th lift compacted

#10 & 11 leveling up low spots

#12 thru 19 Taking samples of clay for permeability Test.

Note these samples were not used
7/27/88 L.A. Rasnick

TITLE

Contractors Men on Site

	Equ. Used
Ron Chaney	D8
Lenny Alessio	D6
Bill Welch	

Work Started @ 6:00 AM
1st Truck arrived @ 7:40

Stoped @ 5:30 PM

Site Condition
Clear & Calm

SIGNATURE Sidney A. Rasnick

DISCLOSED TO ... DATE

WITNESS

DATE ~~7/20~~ 7/21
Thur.
~~Wen~~

Photographs 7/21/88

Roll #7

#20 thru #32 recieving & placing select fill

#33 → reworking low areas in the clay fill after the asbuilt elevation were taken

Roll #8

#1 thru #4 reworking low areas in the clay fill

TITLE Field Notes

Contractor Started placing select fill material over the clay cap. This material was being hauled from the same pit as the clay by the same trucks.

There was no rock in the material, only some brick and chunks of concrete. These were removed as well as the tree roots.

The material has some clay in it but could be used for Top soil.

Sidney A. Rasnick 7/21

DATE WITNESS DATE

TITLE Contractors Men on Site

PROJECT NO.

BOOK NO.

	Equ.
Ron Chaney	D8
Lenny Alessio	D6
Bill Welch	

Started Work @ 6100 AM Stopped @ 5130PM

1st Truck arrived @ 7140 AM

Site Cond.
Clear & Mild.

IDENTIFIED BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/22

DISCLOSED AND UNDERSTOOD BY DATE WITNESS DATE

Fr.

Photographs 7/22/88

Roll #8

#5 thru #10 completing select fill

TITLE Field Notes

Continued hauling and placing the select fill material.

Completed hauling the select fill. Grade stakes were place to show the top of the Top Soil that ~~was~~ (is) to be recieved on Sat.

SIGNATURE Sidney A. Rasnick DATE 7/22

DISCLOSED TO DATE WITNESS DATE

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site

	Equ.
Ron Chaney	D8
Lenny Alessio	D6
Bill Welch	

Started Work @ 7:00 AM Stoped @ 4:00 PM

1st Truck arrived @ 7:30 AM

Site Cond. Over cast & cool

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney G. Rasnick DATE 7/23

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE Sat.

Photographs 7/23/88

#11 thru #17 Recieving Top Soil

TITLE
Field Notes.

End Dumps started hauling the last 6" of Top soil to be placed on the fill area.

This material is from stock pilles located in the same area as the clay.

The lab tested the material to see if lime would be required. The Ph was 6.8
Lime will not be required per the hauler (Brown & Lambart) this same material is being used by the state highway for top soil.

The seeding Co. was on site and went over how they are going to Hydromulch and seed the fill area.

The amount of seed in the specification of 13#/acre will be increased to 200#/acre and will be mixed with the mulch and the fertilizer.
The fertilize will be change from 50-50-60 to 18-18-18.

Also the mulch will be held in place with pin or stakes

The seeding is in line with the State of Ill. Highway Dpt. specifications

SIGNATURE Sidney A. Rasnick 7/23
DISCLOSED TO AND UNDERSTOOD BY WITNESS DATE

TITLE Contractors Men on Site

PROJECT NO.

BOOK NO.

Ron Chaney — Equ.
Lenny Alessio — D8
Bill Welch — D6

2 men from Patrick Engr.

Started Work at 7:00

Site Cond. Cloudy & raining
Rain started at 5:00 AM and stoped @ 7:00 AM

SIGNATURE Sidney A. Rasnick

DATE 7/25

DISCLOSED TO AND UNDERSTOOD BY

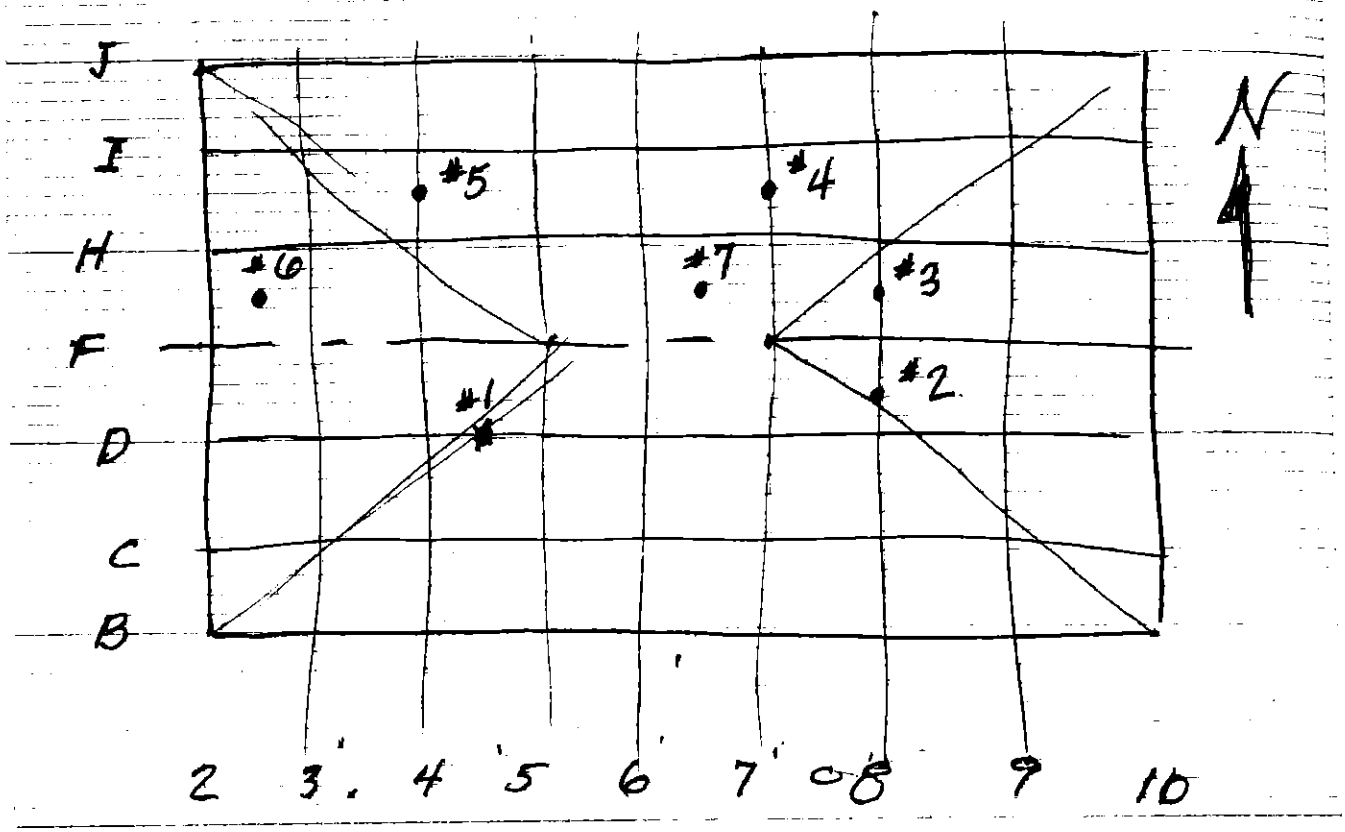
DATE

WITNESS

DATE Monday

Photographs 7/25

Roll #8 - 18 & 19 taken of Patrick Engr. Drill rig.



Location of Samples

Added Note 8/3/88 S.A. Rasnick
These samples were taken to replace the samples that were taken by G & A Testing.
G&A Testing used a split tube and not the shelby Tube, Patrick Eng. Did not the way they were taken or hauled

TITLE Field Notes.

Contractor worked on the roads around the fill area.

The pit where the soil was coming from closed due to muddy conditions. No material was recieved on site.

The samples that had been taken to test the permeability of the clay cap were damaged at the lab.
*Patrick Engineering had two men & a drilling rig on site to take more samples using 2.9" Shelby Tube.

Contractor moved all the equ. that was not being used off of the site

*Patrick Engineering Inc.
Engineers, Architects, Hydrologists, Geologists & Surveyors
346 Taft Avenue
Glen Ellyn, Illionios 60137
(312) 858-7050
Jeffry C. Schuh, P.E.

SIGNATURE Sidney A. Rasnick 7/25
DISCUSSED TO AND UNDERSTOOD BY DATE

TITLE Contractors Men On Site

PROJECT NO.

BOOK NO.

Ron Chaney
Lenny Alessio
Bill Welch.

Equ.
D8
D6

Started work @ 7:00 AM
1st Truck arrived @ 7:40 AM

Site Condition:

Clear

SIGNATURE Sidney A. Rasnick

DISCLOSED TO AND UNDERSTOOD BY

WITNESS

DATE 7/26

Tu.

142 Photographs 7/25/88

#20, 21 & 22
Completion of hauling TopSoil

TITLE Field Notes

PROJECT NO

BOOK NO.

Contractor continued placing top soil on fill area.

Contractor completed placing top soil on fill area @ 2100 PM

All equ. was moved off site.

Sidney A. Rassick

DATE 7/26

TITLE

PROJECT NO.

BOOK NO.

Contractors men on Site

Ron Chaney No Equ.

Site Condition Hot & clear

Sub contractor started installing Fence, ~~arrived~~ @ 10:30 AM

Contractor completed taking asbuilt elevations

Contractor used the Fence subcontractors post hole drill to ream out the seven test holes that was made by Patrick Engr on 7/25 and placed bentonite* in the holes. See photographs Roll #8 - #23 through #27

* General Purpose GPG 30 Bentonite

~~The seven~~

DENTFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 7/27

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Wen.

 Photographs 7/22/88

TITLE

PROJECT NO.

BOOK NO.

Contractors Men On Site

Buck Wisneski and one Labor arrived @ 3:00 PM

Equ: Case 660 Loader/Hoe 2½ Ton / Dump Truck

I arrived at Job Site at 7:00 AM

Allied Landscaping arrived @8:30 AM with Two(2) Farm tractors, Two(2) Dump Trucks and a water tank Truck/w hydro seeder and 438 lbs of seeds.
The landscaper worked for 5 Hrs with the tractors leveling up the top soil and conditioning the soil for seeding

The specification call for 13#/acre of a premixed seed. This should have been 100 to 150#/acre. The contractor used the following:

)39# Bag w/ 8% Ladino-Hard Seed, 61% Ky 31 Fescue, 15% Annual Ryegrass and 15% Linn Pere Rye

1-50# Bag w/ 23% Linn Perrygress, 27% Alta Fesce & 50% Kentucky Bluegrass

3-50# Bags of Annual Ryegrass

5-40# Bags of Kentucky Bluegrass

439# over 82,500 ± S.Ft 82,500 SF/43,560 = 1.9 Ac. or 231#/Ac.
The seeds, 18/10/18 Fertilizer and "Silva-Fiber" wood fiber mulch (with added Tackifier) were added to the water in the hydro seeder and prayed over the conditioned top soil.
The tackifier is a white paste material that tacks the mulch and seed to the top soil.
Alessios men worked on the road and cleaning up the Job site.
The fencing subcontractor was not on site.

SIGNATURE Sidney A. Rasnick DATE 7/28

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Thr.

Photographs 7/28/88

Roll #8

thru 36

Hydro seeding

SCIENTIFIC BINDER PRODUCTS CHICAGO

TITLE

PROJECT NO.

BOOK NO.

Contractors Men on Site — Same as for 7/28

Equ. used — Same as for 7/28

Contractors men continued working on the access road and dressing up the site.

The fencing subcontractor arrived back on site with a larger drilling rig.

The drilling rig pre drill all the post holes and left the job site at approx 2:00 PM

The fencing sub used manual post hole digger to clean out the holes. ~~and~~ The completed setting (in concrete) 50% of the fence post.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick — DATE ~~7/29~~

DISCLOSED TO AND UNDERSTOOD BY — DATE — WITNESS — DATE 7/29 Fr.

There was no work on this day

SIGNATURE

DISCLOSED TO

WITNESS

7/30

Sat.

TITLE

PROJECT NO

BOOK NO.

The fencing crew was the only men on site and they continued cleaning out the post holes and setting Post.

I talked with James Alessio and He informed me that they would have in hand the hard copy of all the test reports that have been made.

All so they are working on an ~~hard copy of the~~ asbult drawing that will be sent to Pitt. when completed.

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60665

SIGNATURE Sidney A. Rasnick

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE 8/1/88 Mon.

TITLE

PROJECT

BOOK NO

The fencing crew continued working on fence

I talked with Ron Plunk from Allied Landscaping and He gave me a price of $4100.00 for setting up a watering sytem and keeping the grass watered for 21 Days. If watering is needed after the 21 Days the cost will be 600.00/week.

SIGNATURE Sidney A. Rasnick

DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

~~7/29~~
8/2/88
Tu.

TITLE

PROJECT NO.

BOOK NO.

Fencing Crew continued working on fence.

Jim Alessio and I walked the job site

I mailed NUSs Invoice to Ceco to day after Ed Baer & I had reviewed the test reports on the clay that was received on 8/1/88

I did not allow Alessio 100% on their invoice for the seeding and placing of Top soil due to the fact that the preliminary test on the top soil showed 4% more clay that the spec. calls for.

The seeding sub contractor informed me that the top soil is from the same pit that He is using on the Interstate and that there would be no problem in growing grass on this job site, He also explained that the top soil that was used on this project was good ~~for soil~~ for reducing soil

SIGNATURE Sidney A. Rasnick DATE 8/3/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

Wen.

TITLE
Last Entry of field Notes
See pages 161 through 167 for Asbuilts and
170 & 171 for elevations.
172 & 173

Alessio moved a dozer back on site to dress up the north & east slopes ~~of the~~ out side of the fence line.
Fencing Sub completing the installation of the fence

Meeting at Job Site
Ceco : Cliff Lake
Richard Cline

DUDEK:

Alessio Inc. James (NAZ) Alessio

NUS Edward L. Baer
Sidney A. Rasnick

Sidney A. Rasnick 8/4/88
DATE

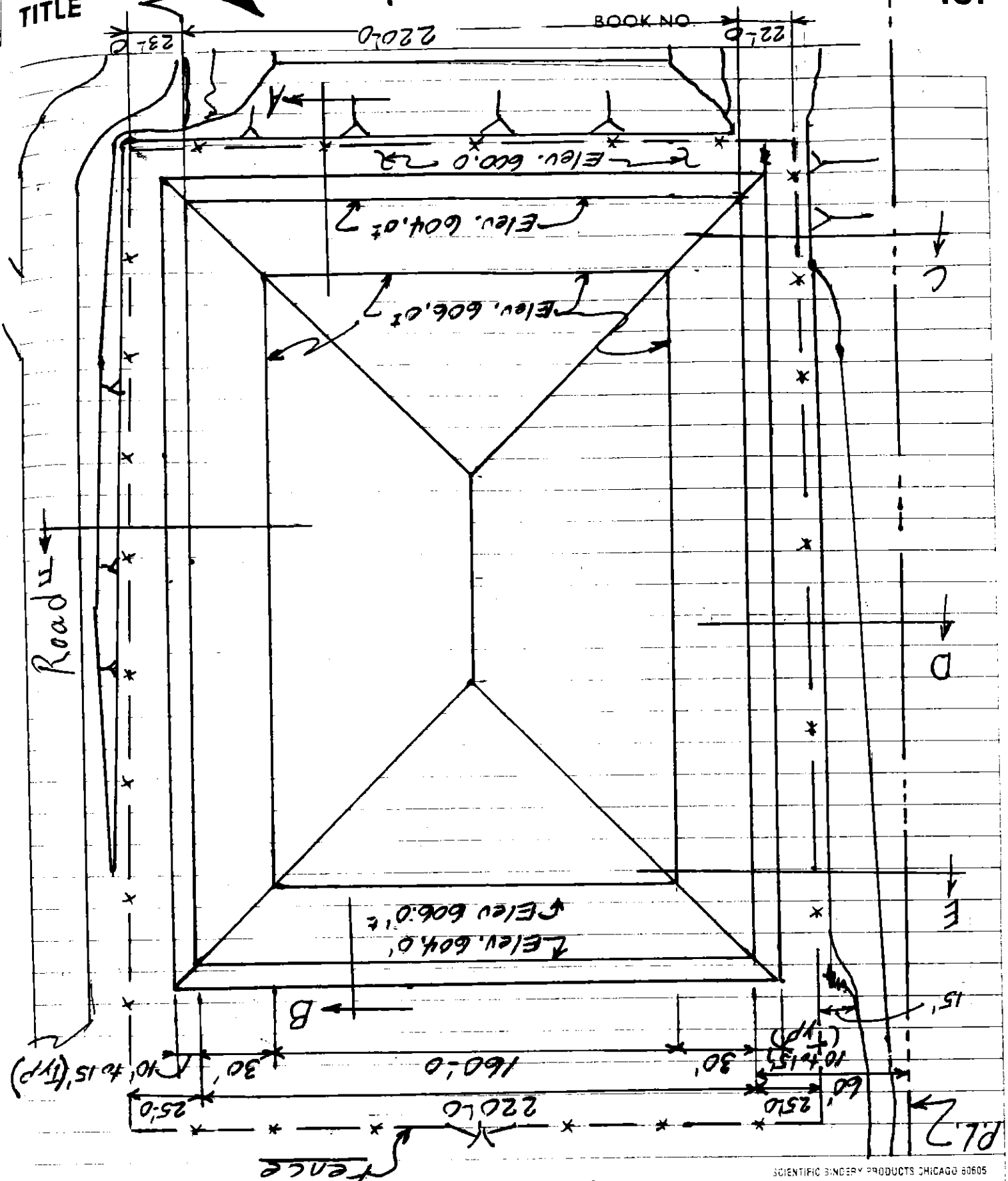
Out standing Test report and other information from Alessio

(1) Copy of field notes from Huff & Huff
(2) Asbuilt drawings
(3) Lab Test on select fill
(4) Lab Test on Top Soil
(5) 2-Lab Test on clay ~~from~~ using samples from clay pit
(6) Invoice to Ed for completed contract
(7) Invoice to Pitt. Pa. for completed contract and retainage
(8)

TITLE

PROJECT NO.

BOOK NO.

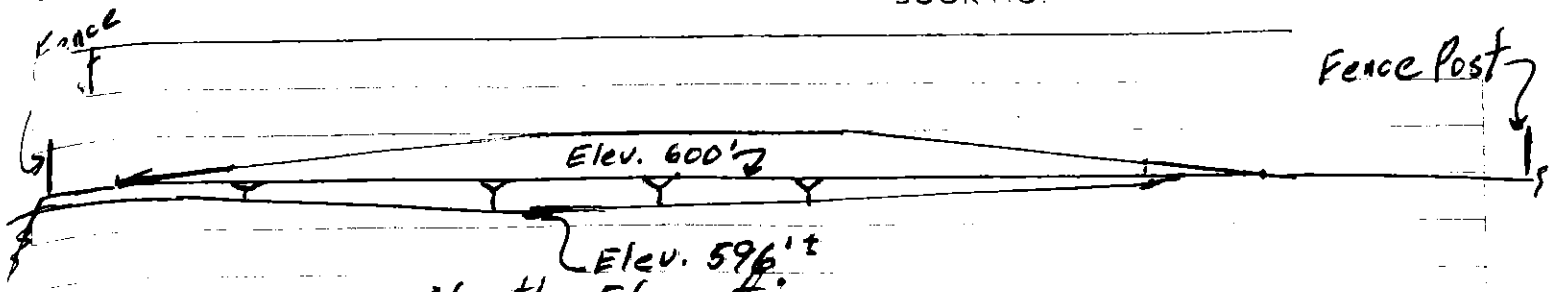


SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

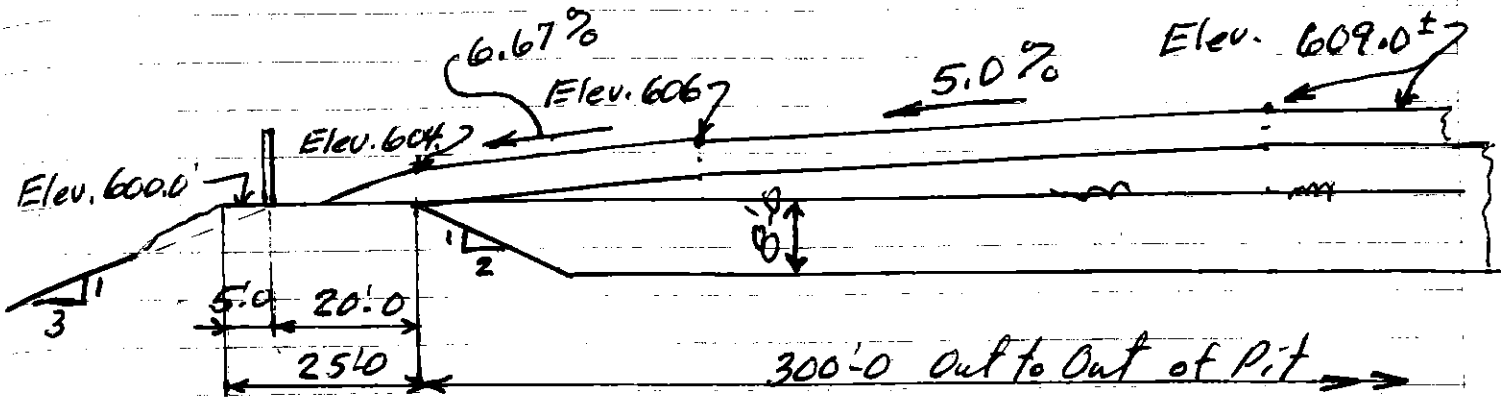
SIGNATURE Sidney A. Rasnick DATE 8/2/81

DISCLOSED TO AND UNDERSTOOD DATE WITNESS DATE

Note: The key way for the clay is not show on the following sections. Please see pages # 98 & 99



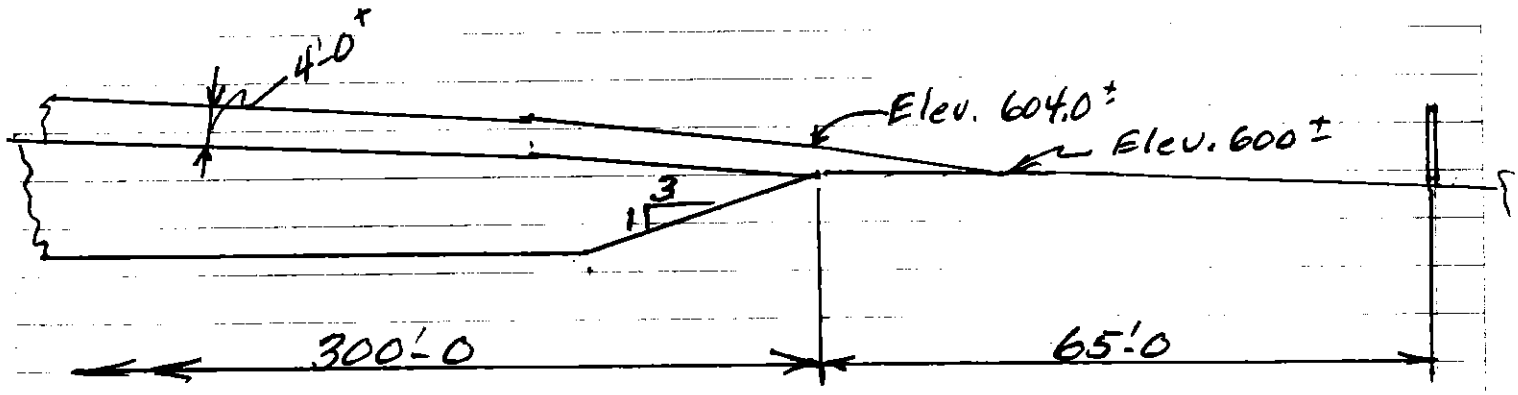
North Elevation



Sec "A"

(Note See Page (7) for Elevations)

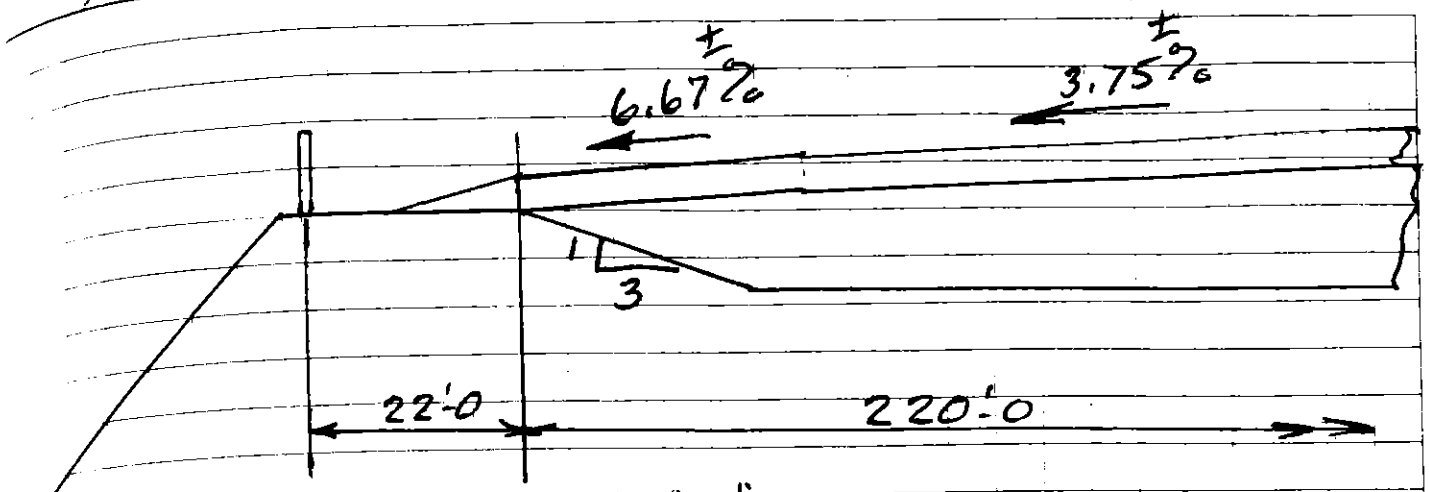
173



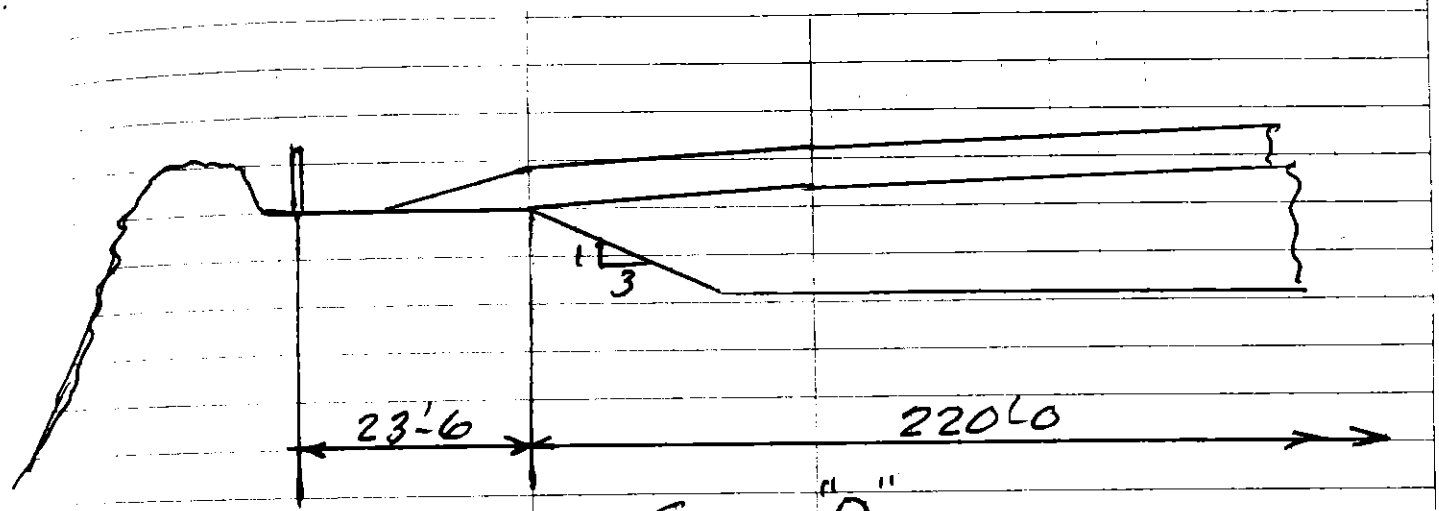
Sec "B"

SIGNATURE Sidney A. Rasnick DATE 8/2/83

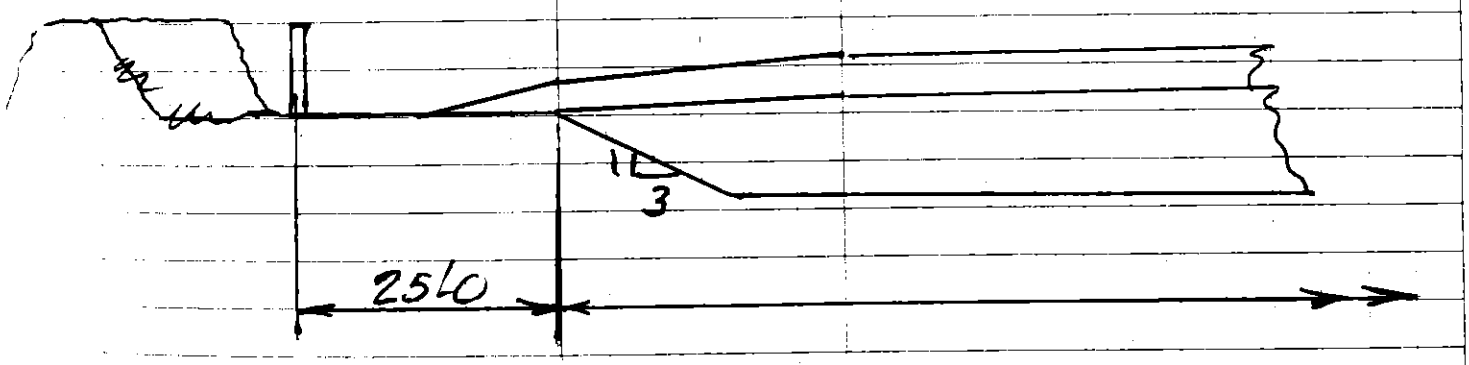
DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE



Sec. "C"



Sec "D"

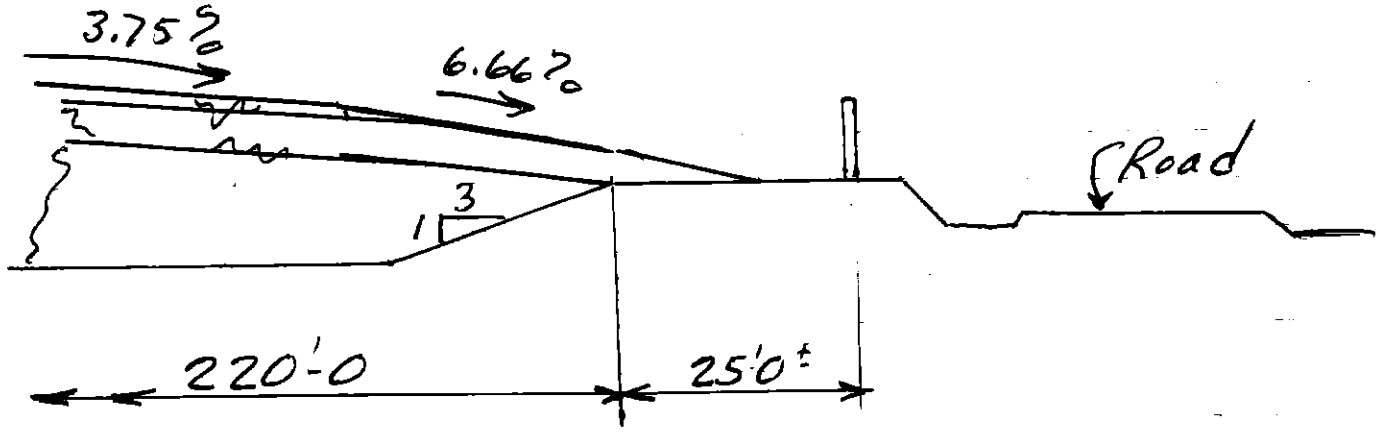


Sec "E"

SCIENTIFIC BINDERY PRODUCTS CHICAGO 60605

SIGNATURE Sidney A. Rasnick DATE 8/2/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE



Sec. "F"

SIGNATURE Sidney A. Rasnick DATE 8/2/83

DISCLOSED TO AND WITNESSED BY WITNESS DATE

Comments on the Construction Schedule.

After reviewing the Contractors schedule with asbuilt schedule, the Contractor performed as scheduled for all activities except installing the Fence.

The fencing subcontractor would not start untill He could work on all four(4) sides of the fill area. He belived that He could install all the post in one day and could complete the total job in 3 Days. It took them 4 Days just to install the post and they did not work on the 28th & 30th.

It should be noted that hauling the waste took 20 days (as scheduled), how ever this work could have been performed in 10 or 12 Days.

Sidney A. Rasnick
8/3/88

SCIENTIFIC BINDERY PRODUCTS

TITLE

PROJECT NO

BOOK NO.

Construction Schedule

(1) Contractors Construction Contract Schedule (31 Working Days)

Based on Working 6 Days/week - 12 Hrs/Day

Week Ending → | 6/18 | 6/25 | 7/2 | 7/9 | 7/16 | 7/23 | 7/30 | 8/6

Mobilize — 6/13
Construct Foundation (Pit) — 6/16 – 7/8
Ex. & Place Waste Mat'l — 20 Days — 7/12
Const. Clay Cap — 6 Days
Place Select Fill, Top Soil & Seed — 7/11 – 7/14
Install Fence — 7/16
Demobilize — 7/18

(2) Adjusted Contractors Schedule (Added 7 Days)

Mobilize — 6/13
Construct Pit
Ex & Place Waste Mat'l — 6/16 – 7/16
Const. Clay Cap — 7/20
Place Select Fill, Top Soil & Seed — 7/23
Install Fence — 7/22 – 7/25
Demobilize — 7/26

(3) As built Construction Schedule

Mobilize — 6/14
Construct Pit — 6/18
Ex. & Place Waste Mat'l — 6/20 – 7/15 — 20 (~~18~~ Days)
Const. Clay Cap — 7/14 – 7/20
Place Select Fill — 7/21 – 7/22
Place Top Soil — 7/23 – 7/26
Seed — 7/28
Install Fence — 7/27 – 8/4
Inspection by CECO — 8/4

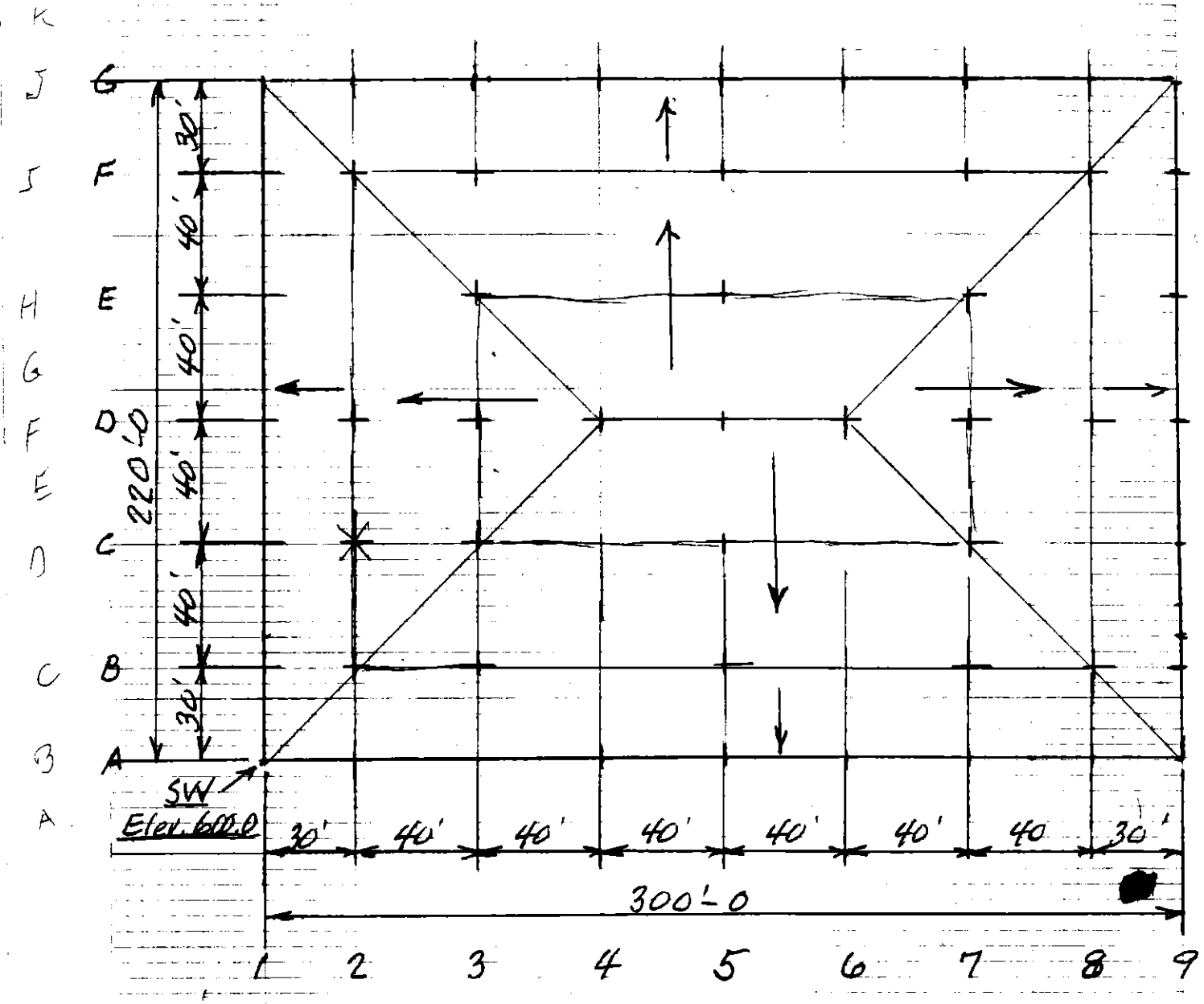
SIGNATURE Sidney A. Rasnick DATE 8/3/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE

DENT PIC BINDER PRODUCTS CHICAGO

The following was used to establish a grade for drainage and to allow for the 2'-0 of select. fill.

See page 172 & 173 for as built elevations



Top of Waste

	Grade	Elev	Cut	Fill
A1	600'			
A2				
A3				
A4				
A5				
A6				
A7				
A8				
A9	do			
D1	600			
D2	600.0			
D3	602.5			
D4	604			
D5	604			
D6	604			
D7	602.5			
D8	600			
D9	600			
G1	600'			
G2				
G3				
G4				
G5				
G6				
G7				
G8				
G9	do			

	G	El.	C	F
B1	600			
B2				
B3				
—				
B5				
—				
B7				
B8				
B9	600			
E1	600			
E2	—	—		
E3	602.5			
E4	—	—		
E5	~~604~~ 602.5			
E6	—	—		
E7	602.5			
E8	—	—		
E9	600			

	G	Elev	Cut	Fill
C1	600			
[illegible]				
C3	602.5	4'-3¼		
—				
C5	602.5 ~~604~~	2'-3½		
—				
C7	602.5			
—				
C9	600			
F1	600			
F2				
F3				
F4	—	—		
F5				
F6	—	—		
F7				
F8				
F9	600			

~~Add 2'-0~~ Add 1'-0 for Top of Waste and cut 2'-0 for top of select waste

Top of Stake at S.W. Corner Elev. 601.035'

1'-0 7/16

Shot at Top of Same Stake = 3'-10

1'-0 7/16

4'-10 3/8 ~~4'-10 3/8~~

3'-0 ~~-4'-0~~

1'-10 3/8 ~~0'-10 3/8~~

Grade = 600 = 4'-10 3/8

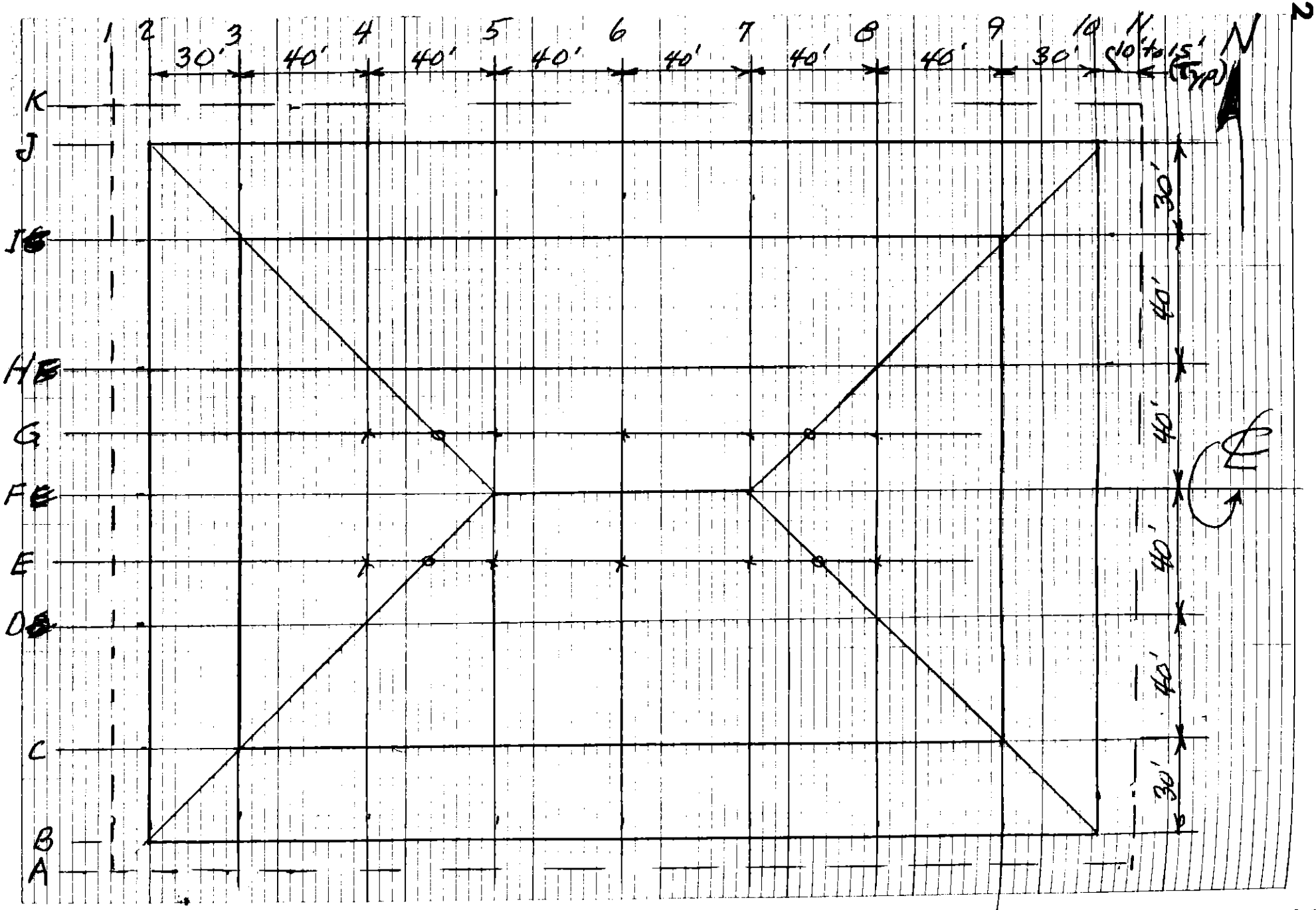
4'-10 3/8 - 2'-6

1'-6 2'-4 3/8

3'-4 3/8

SIGNATURE DATE

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS DATE


1
2
3
4
5
6
7
8
9
10
30'
40'
40'
40'
40'
40'
40'
30'
10'
40'
15'
(Typ)
N
K
J
I
H
G
F
E
D
C
B
A
30'
40'
40'
40'
40'
30'

Asbuilt Elevations

TITLE

PROJECT NO

BOOK NO

173

	(W) Waste	(C) clay	(TS) Top Soil		(W)	(C)	(TS)		(W)	(C)	(TS)	(W)	(C)	TS	D
A1	~~599.69~~			B1				C1							1
2	~~599.65~~			2	599.69	601.8	603.9	2	599.84	602.4	604.4	600.14	602.2	604.1	2
3	~~599.88~~			3	599.88	602.0	604.3	3	600.82	603.1	605.0	601.91	603.9	605.8	3
4	~~600.00~~			4	600.00	602.1	604.3	4	600.86	603.6	605.9	602.81	605.4	607.2	4
5	~~600.39~~			5	600.39	602.6	604.6	5	602.22	604.3	606.0	603.19	605.7	607.8	5
6	~~599.98~~			6	599.98	602.2	604.1	6	602.26	604.1	606.4	603.78	605.7	607.5	6
7	~~599.90~~			7	599.90	602.2	604.0	7	601.85	604.1	606.2	603.14	605.3	607.5	7
8	~~600.00~~			8	~~600.00~~	601.8	604.1	8	601.61	603.7	605.9	602.84	605.1	607.2	8
9	~~599.80~~			9	599.80	601.4	603.65	9	601.16	603.4	603.3	601.24	603.6	605.8	9
10	~~599.41~~			10	599.41	601.6	604.0	10	599.44	601.6	604.3	599.94	601.9	603.9	10
11	—			11				11							11
E1	—			F1	—			G1	—			—			H1
2	—			2	600.19	602.2	604.1	2	—			600.74	602.7	604.7	2
3	—			3	601.94	604.1	606.5	3	—			601.71	604.3	604.6	3
4	603.41			4	603.60	605.6	607.5	4	—			603.04	605.2	607.1	4
5	604.21			5	604.80	607.0	608.9	5	604.26			603.69	606.1	607.7	5
6	604.34			6	604.78	607.1	609.2	6	604.71			603.74	606.0	607.8	6
7	604.32			7	604.64	607.1	609.1	7	604.52			603.59	606.1	608.2	7
8	603.74			8	604.04	606.0	607.9	8	604.14			604.18	606.1	608.1	8
9	—			9	601.74	604.3	606.4	9	—			601.39	604.7	608.9	9
10	—			10	600.29	602.5	604.4	10	—			599.69	602.1	604.4	10
11	—			11	—			11	—			—			11
I1	—			J1	—			K1	*						
2	600.19	602.3	604.4	2	599.60	601.8	604.5	2	—						
3	600.86	603.8	605.8	3	599.94	601.9	604.5	3	—						
4	601.50	603.7	605.8	4	600.04	602.1	604.7	4	—						
5	601.99	604.4	606.5	5	599.93	602.8	604.7	5	—						
6	602.04	604.2	606.0	6	599.77	602.2	605.8	6	—						
7	602.04	604.1	606.5	7	600.08	602.2	604.4	7	—						
8	601.64	604.3	606.3	8	599.32	601.8	604.2	8	—						
9	600.98	604.0	605.9	9	599.40	601.9	604.6	9	—						
10	599.32	601.5	604.1	10	598.58	601.2	603.3	10	—						
11	—			11	—			11	—						

SIGNATURE Sidney A. Rasnick

DATE W on 7/14/88
Clay on 7/21/88
Top Soil on 7/27/88

DISCLOSED TO AND UNDERSTOOD BY DATE WITNESS

* Mat'l was added to this area.

Illinois Environmental Protection Agency 2200 Churchill Road, Springfield, IL 62794
217/782-6762

Refer to: 1978030005 -- Will County
Lemont/Ceco Corporation
ILD #990785453
Closure Log No. C-68-M-1

September 11, 1986

Ceco Corporation
Attention: Mr. Richard L. Kline
1400 Kensington Road
Oak Brook, Illinois 60521

Gentlemen:

The modified partial closure and post-closure care plan for the subject waste pile (S03) unit that was prepared by NUS Corporation and submitted by Rooks, Pitts and Poust by way of March 19, 1986 and July 15, 1986 cover letters, which this Agency received on March 20, 1986, and July 16, 1986, respectively, is hereby approved subject to the following modifications and conditions:

1. It has still not yet been demonstrated to this Agency that all of the waste residues and contaminated subsoils have been removed from the portion of the hazardous waste management unit which Ceco Corporation wishes not to include in the area that will receive RCRA closure and post-closure care. This being the case, RCRA closure and post-closure care in accordance with 35 Ill. Adm. Code Section 725.358(b) must be provided for the entire twenty-five (25) acre waste pile (S03) unit.

2. Within 90 days of the date of this letter, Ceco Corporation must submit a 35 Ill. Adm. Code Part 725 Subpart F groundwater monitoring plan for the entire 25 acre unit which includes and addresses the following at a minimum:

   a. The horizontal and vertical locations of the upgradient and downgradient monitoring wells are to be provided. The upgradient monitoring wells are to be installed hydraulically upgradient (i.e., in the direction of increasing static head) from the limit of the waste management area. Their number, locations and depths must be sufficient to yield groundwater samples that are representative of background groundwater quality in the uppermost aquifer near the facility and not affected by the facility. The downgradient monitoring wells are to be installed hydraulically downgradient (i.e. in the direction of decreasing static head) at the limit of the waste management area. Their number, locations and depths must ensure that they immediately detect any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer.

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MAR - 4 1994
IEPA - BOL
PERMIT SECTION

ATTACHMENT 6

b. Monitoring wells are to be constructed of either Teflon or PVC. If PVC is to be used, the facility must prove through testing that there are no organics present on site which could cause the PVC to adsorb or leach constituents which may affect the groundwater sample quality.

c. All monitoring wells must be cased in a manner that maintains the integrity of the borehole. This casing must be screened or perforated and packed with gravel or sand where necessary to enable sample collection at depths where appropriate aquifer flow zones exist. The annular space (i.e., the space between the borehole and the well casing) above the sampling depths must be sealed with a suitable material (e.g., cement grout or bentonite slurry) to prevent contamination of samples and the groundwater. A 50/50 bentonite/sand mixture as proposed by NUS is acceptable provided NUS submits documentation to prove the effectiveness of the bentonite/sand mixture as an annular sealant.

d. The following parameters as listed under 35 Ill. Adm. Code, Section 725.192(b) are to be analyzed for:

Arsenic	Iron
Barium	Manganese
Cadmium	Phenols
Chromium	Sodium
Hexavalent Chromium	Sulfate
Lead	pH
Mercury	Specific Conductance
Selenium	TOC
Silver	TOX
Chloride	

e. Groundwater samples on which metal analyses will be conducted are to be analyzed for total metals (unfiltered).

f. Sampling, evaluation, and reporting shall be done in accordance with 35 Ill. Adm. Code, Sections 725.192, 725.193, and 725.194.

g. A map of the bedrock surface is to be prepared and submitted to the Agency.

h. Prior to well installation, documentation describing well development procedures is to be submitted to the Agency for review.

i. Within 30 days after well installation, boring logs and completion details are to be submitted to the Agency.

j. However, if Ceco can successfully demonstrate that K061 deposits have been removed from portions of the 25 acre unit Ceco wishes to close, Ceco must amend their current monitoring plan to address monitoring upgradient and downgradient of that area where K061 remains. Wells will be screened in dolomite only. This plan must also address items a-i above. The Agency has decided it would not be feasible at this time to monitor the slag materials since the downgradient wells would not have a representative upgradient well to statistically compare results to.

3. The Agency could not find the basis or justification for the proposed removal of the top 3 inches of surface material from a circular area with a radius of 100 feet to be satisfactory for decontamination of the separation process area. In addition, the Agency could not find the basis or justification for the removal of the top 6 inches of material under the K061 admixture stockpiles to be a satisfactory decontamination criteria. In addition, the Agency is also concerned with windblown and waterborne migration of K061 dust resulting from the storage of the K061 in the admixture stockpiles. This decontamination criteria is not as critical if all of the 25 acre unit is to receive RCRA closure and post-closure care. However, to verify the extent and degree of contamination resulting from the separation process and surface stockpiles, surface soil/fill samples must be taken around the perimeter of the entire 25 acre site and analyzed for the presence of lead, cadmium and hexavalent chrome (total and EP Toxic values). Sampling intervals around the perimeter shall be 300 feet. Results from such a sampling program must be submitted to this Agency within 90 days from the date of this letter.

4. Spent washing fluid resulting from the decontamination of equipment used to handle K061 contaminated material must be managed as a hazardous waste. The washwater treatment system proposed will require a permit from this Agency's Division of Water Pollution Control Permit Section (phone 217-782-0610).

5. Within 90 days of the date of this letter, numerical/standardized compaction requirements must be provided for the base and sideslope material. In addition, detailed compaction requirements must also be provided for the K061 admixed material. The requirements must be adequate to demonstrate that sufficient compaction has been achieved to ensure performance of the fill as predicted by the slope stability analysis. The term "sand-sized" as it pertains to the granular material to be used as base and sideslopes should also be defined.

6. Within 30 days of the date of this letter, a legible copy of Exhibit B (slope stability analysis) must be submitted along with the basis for the numerical values for the engineering parameters used in the analysis. In addition, any test results identifying the engineering properties of the materials to be used at the site shall also be provided.

7. Within 30 days of the date of this letter, the basis for the input data (ie, evaporative zone depth, land slope, drainage length, SCS curve number, layer type data with corresponding soil/waste properties, etc.) used in the "Hydrologic Evaluation of Landfill Performance" (HELP) model must be submitted to the Agency along with a copy of the User's Guide for the HELP model version that was utilized for the analysis.

8. Within 30 days of the date of this letter, calculations must be provided to demonstrate that the final cover slopes when vegetated will not contribute to significant cover erosion. The worst case situation must be analyzed. The erosion potential may be evaluated using the USDA universal soil loss equation found in the USEPA publication titled "Evaluating Cover Systems for Solid and Hazardous Waste" SW-867 dated September, 1982.

9. Within 30 days of the date of this letter, a map showing a distance of 1,000 feet around the facility indicating the location of the 100 year floodplain and the location of water withdrawal wells must be submitted to this Agency.

10. In addition to the post-closure inspection related corrective actions identified in the post-closure care plan, corrective action shall be taken if ponding is observed, if cracks greater than one inch wide have formed, if gas, odor, vegetative or vector problems arise, or if leachate popouts or seeps are present. The post closure inspection report shall include a statement regarding the items in this condition.

11. Revised design drawings must be submitted to this Agency within 90 days of the date of this letter depicting the entire 25 acre unit as receiving RCRA closure and post-closure care as for a landfill per the applicable requirements of 35 Ill. Adm. Code Part 725. Since this will require a greater volume of cover material and a larger cover area, the cover source testing requirements as well as the in-place cover compaction and permeability testing requirements will have to be revised accordingly. In addition, the final cover design should incorporate a 4 foot minimum thickness to ensure a one (1) foot thickness of cover material not being effected by the maximum predicted frost penetration for the area.

12. Given the length of the north and south boundaries of the facility (approximately 2,300 feet and 1,800 feet, respectively) more than four (4) warning signs on the site security fence will be required. A description of the revised number and locations of warning signs, along with the basis for their number and location must be submitted to this Agency within 90 days of the date of this letter.

13. If the Ceco Corporation no longer wishes to be RCRA regulated except for the waste pile closure/post-closure activity, a closure plan for the K061 dust pelletizer (T04) unit must be submitted to this Agency for approval and the unit closed per the applicable requirements of 35 Ill. Adm. Code Part 725 unless it can be demonstrated that it is not RCRA regulated.

14. A revised schedule of closure as well as revised closure and post-closure cost estimates incorporating the comments above must be submitted to the Agency within 90 days of the date of this letter.

15. The closure plan as described and modified above shall apply for the subject waste pile (S03) unit unless Ceco Corporation can demonstrate and document to this Agency's satisfaction within 90 days from the date of this letter that all deposits of K061 electric arc furnace dust and contaminated material have been removed from the areas of the hazardous waste management unit which Ceco Corporation wishes not to include in the area of the unit that will receive RCRA closure and post-closure care. Please be advised, however, that the Agency may at a later date require any areas excluded from RCRA requirements to receive closure and post-closure care per 35 Ill. Adm. Code Part 807. The demonstration and documentation submitted should include the following at a minimum:

    a. A written summary of all excavation logs, photographs, field reports, company records, and any other written documentation associated with the closure field activities to date, along with copies of the material. This summary should describe how what is being submitted supports the contention that all deposits of K061 and K061 contaminated material have already been removed from the entire hazardous waste unit and stockpiled.

    b. Test results, along with a written summary of the test results from the sampling program described below:

        i. Lay out a sampling grid for the entire 25 acre unit with the sampling points spaced approximately 300 feet apart on the southwest to northeast axis of the site with three (3) sampling points on a southeast to northwest axis line at each 300 foot station along the southwest to northeast axis line with the three (3) sampling points located so that the two outside sampling points are as near to the north and south boundary lines as possible and the third point located equidistant between the north and south boundary lines. This should equate to approximately 24 sampling points across the entire waste management unit.

        ii. Bore and continuously sample the fill material to bedrock at each of the 24 sampling points. If groundwater is encountered in the fill material, sample and analyze (filtered and unfiltered) the groundwater for total lead, cadmium and hexavalent chromium. Next, carefully examine the continuous fill samples for the presence of black, brown or gray fine grained material resembling K061 dust. If material resembling K061 dust is present, sample and analyze the material for total and EP toxic lead, cadmium and hexavalent chromium. If no

material is found in the boring that resembles K061 dust, sample and analyze the ~~finest-grained material~~ found in the boring for total and EP toxic lead, cadmium and hexavalent chromium. In addition, a sample taken from the surface at each of the 24 sampling points shall be analyzed for total and EP toxic lead, cadmium and hexavalent chromium. The elevation of groundwater where encountered and/or the elevation(s) of the fill material sampled must be recorded and included in the summary report along with sampling point surface elevations and coordinates.

iii. The results from ii) above will be evaluated by this Agency to determine if any portions of the 25 acre unit can be omitted from RCRA closure and post-closure care requirements. To aid in that evaluation, Ceco Corporation should provide the Agency with any available information regarding "background" groundwater quality and soil levels for lead, cadmium and hexavalent chromium. Background samples should be taken in areas minimally effected by waste disposal activities. Background samples may be taken from off-site locations, but should be as close as possible to the facility. The location and depth of background samples must be indicated. Generally, a minimum of four (4) background samples per determination are required.

iv. Sampling, sample preservation and analytical methods utilized should follow the guidance in USEPA SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". Methods not included in SW-846 must be approved by this Agency.

16. Even if the demonstration option identified in 15 above is selected by Ceco Corporation, the requirements identified in paragraphs 2j, 4, 5, 6, 7, 8, 9 and 14 above are still applicable.

17. When closure is complete the owner or operator must submit to the Director certification both by the owner or operator and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan. This certification must be received at this Agency within 30 days after closure.

The attached closure certification form must be used. Signatures must meet the requirements of 35 Ill. Adm. Code Section 702.126.

Also along with closure certification, to document the closure activities at your facility, please submit a Closure Documentation Report which includes:

a. The volume of waste and waste residue removed.

b. A description of the method of waste handling and transport.

c. The waste manifest numbers.

d. A description of the sampling and analysis methods used.

e. A chronological summary of closure activities and the cost involved.

f. Photo documentation of closure.

g. Tests performed, methods and results.

All certifications, logs, or reports which are required to be submitted to the Agency by the facility should be mailed to the following address:

Illinois Environmental Protection Agency
Division of Land Pollution Control -- #24
Permit Section
2200 Churchill Road
Springfield, Illinois 62706

18. This facility must continue to meet the applicable requirements of 35 Ill. Adm. Code - Subtitle G for those units identified on the Part A application i.e. T04 not approved for closure herein.

19. The approval of this partial closure plan does not relieve Ceco Corporation of the responsibility of providing financial assurance for the remainder of the facility which is subject to closure, in accordance with 35 Ill. Admin. Code Part 725.243.

20. The June 13, 1986 letter submitted by Mr. Clifton Lake of Rooks, Pitts and Poust addressing the "Certification Regarding Potential Releases from Solid Waste Management Units" is being forwarded to the USEPA for possible future action. The approval of this closure plan neither approves nor disapproves of the aforementioned "Certification" or lack thereof.

Should you have any questions regarding this matter, please contact Charlie zeal at 217/782-6762.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:CAZ:ds:0001A/31-38

Attachment

ILD 990 785 453

July 15, 1986

FEDERAL EXPRESS

Mr. L. W. Eastep, P.E.
Manager, Permit Section
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

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RE: 1978030005-Will County
Lemont/The Ceco Corporation
ILD No. 990785453
Closure Log No. C-68-M-1

Dear Mr. Eastep:

This letter and enclosed document prepared by NUS Corporation is the response of The Ceco Corporation ("Ceco") to your letter of June 12, 1986 (received by Ceco on June 16), which disapproves the Amendment to Closure Plan for the above referenced facility submitted to the Illinois Environmental Protection Agency on March 19, 1986. This response, together with the original Closure Plan submitted on January 31, 1985, Ceco's April 30, 1985, response to the Agency's March 29, 1985, letter requesting further information, and the Amendment to Closure Plan submitted on March 19, 1986, which are incorporated herein by reference, constitute Ceco's "Modified Closure Plan" which is submitted pursuant to 35 Ill.Adm.Code §725.212(d).

Certain prefatory comments are in order. First, the Amendment to Closure Plan does not contemplate a "partial closure" as paragraph 18 of the Agency's letter seems to suggest. The entire site will be closed pursuant to 35 Ill.Adm.Code §725.358(b). Upon completion of closure activities, the only RCRA regulated activities which will continue at the site will be those post-closure activities

ATTACHMENT 5

mandated by 35 Ill.Adm.Code §§725.410 and 725.217-.220. No other hazardous waste generation, treatment, storage or disposal activities regulated by RCRA will occur on this site following completion of closure.

Second, as respects the Agency's conclusion in paragraph 1 of the June 12 letter, that Ceco has not yet demonstrated that all of the waste and residues and contaminated subsoils have been removed from the portion of the site which will be outside of the closed unit, Ceco wishes to remind the Agency of the discussion of this point at the November 20, 1985, meeting in Springfield between representatives of the Agency, Ceco, and NUS Corporation, Ceco's environmental consultant. At that time it was agreed that the principle proposed in the Closure Plan for locating and removing the KO61 deposits present at the site was sound, and that following Ceco's explanation of the manner in which it intended to proceed, the Agency had no reservations concerning the methodology. Short of excavating the entire site, which Ceco believes to be manifestly unreasonable, Ceco has done everything possible to demonstrate to the Agency that all of the former KO61 material deposits have been located, removed, and now reside in a temporary holding area on the surface awaiting permanent disposition in the closed regulated unit described in the Amendment to Closure Plan. Ceco has excavation logs and photographs which describe and evidence the excavation activities. Should the Agency wish, these will be produced and discussed in detail to provide further support for Ceco's contention that all KO61 material deposits have been located and removed to the stockpile area. In this regard, Ceco also reminds the Agency that the geochemical conditions at the site are such that there is no possibility that any KO61 material which remained outside of the closed unit could leach lead, cadmium or hexavalent chromium into groundwater. The presence of alkaline materials in the body of the fill (primarily slag from steel mill operations), and the presence of a huge natural deposit of dolomitic limestone under the site, preclude the existence of the acidic conditions necessary for heavy metals to be dissolved and moved in solution in groundwater. These conditions were described in detail in the Closure Plan submitted on January 31, 1985.

Finally, Ceco wishes to emphasize that its attempt to close this site has been on-going for more than 18 months. Following the Agency's approval of the initial Closure Plan on June 13, 1985, Ceco proceeded to implement that Plan in good faith. Upon being advised of Agency concerns concerning certain aspects of the implementation of the Closure Plan, Ceco met with Agency officials in Springfield last November to thoroughly discuss those concerns. From that meeting came certain agreements and the development of the Amendment to Closure Plan submitted on March 19, 1986. While Ceco appreciates the complex task which the Agency faces in carrying out its responsibilities under the Environmental Protection Act, the resolution of a proper closure plan for this site is a relatively simple matter at this point, and should proceed expeditiously. Accordingly, Ceco requests a meeting with Agency representatives to discuss the issues raised in the Agency's June 12 letter as soon as the Agency has the opportunity to review this response. Ceco believes that the meeting should take place no later than early August.

Prior to the meeting, Ceco representatives are available by telephone to supply any additional information the Agency may desire. Inquiries of this type should be directed to me.

Very truly yours,

Clifton A. Lake

CAL/pg

cc: Charles A. Zeal

bcc: Nancy J. Wise, Esq.
Richard L. Cline, Esq.
Ed Baer
George Gardner

JLD

TECHNICAL RESPONSE OF NUS CORPORATION TO ILLINOIS EPA DISAPPROVAL NOTICE DATED JUNE 12, 1986

Submitted on July 15, 1986

TECHNICAL RESPONSE OF NUS CORPORATION
TO ILLINOIS EPA DISAPPROVAL NOTICE DATED JUNE 12, 1986

Response No. 1: Response to paragraph 1 of the Agency's letter is addressed in the preceding letter of Ceco's counsel.

2. Drawing sheet U495-A-03 shows the property line around the entire 25 acre site. The outline of the quarry itself, along with the extent of deposition of solid waste must also be identified.

Response No. 2: The quarried area is not believed to have been mapped when quarry operations were being performed. The quarry does not appear to have extended up to the existing property line on the north, west and south but did continue beyond the existing property line to the east as evidenced by the bedrock which is still exposed. Deposition of the fill materials by Ceco took place only within the area encompassed by the property line.

3. The exact locations along with duration of KO61 admixture stockpiling activities must be identified. How will the stockpiling areas be decontaminated and what will be the criteria used to determine when decontamination is complete?

Response No. 3: During the excavation operations which occurred from September to December, 1985, the NUS field representative kept detailed records of closure activities. This effort took the form of daily and weekly field logs which documented areas of excavation, stockpiling, personnel, equipment, quantities of material, etc. The areas of stockpiled admixed KO61 material are extant and will be "exactly" defined by field survey for future reference as necessary. Stockpiling activities commenced from the first day of excavation activity and continued through December, 1985.

To insure that all KO61 material is removed the top six inches of material of the former surface which has come into direct contact with the stockpiled admixed KO61 material will be removed and placed within the closed unit.

Drawing No. U495-A-03 (attached as Exhibit A) shows the areas of stockpiling.

4. A method to identify areas contaminated by drifting/wind blown KO61 dust originating from the separation process must be described in detail. This

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proposal should include at a minimum the testing of surface soils in suspect areas for the presence of hexavalent chromium, lead and cadmium.

Response No. 4: The separation process operated for only 64 hours during September and October and accordingly it is not expected that any significant amount of KO61 material became wind-borne. In order to insure that any wind-blown KO61 material is removed, the top 3 inches of the existing surface will be removed from a circular area with a radius of 100 feet and its cetner at the point where the fine material was collected during the separation process.

5. The method to be used to determine how the waste generated by decontamination activities will be managed must be described in detail.

Response No. 5: Decontamination by the application of high pressure steam is one of the most common and well-developed method of removing contaminated materials (soils, dusts, etc.) from equipment. It has been successfully used on literally hundreds of hazardous waste remediation projects throughout the country.

The area designated for decontamination will be relatively flat. A temporary 4-inch concrete pad of sufficient size to accommodate the largest piece of equipment is poured in-place. The pad will be sloped to drain either:

1. To a centrally placed drain which is piped to a holding tank; or
2. To a discharge point at the edge of the pad where spent wash water may be collected and piped to a holding tank.

The equipment is placed on the pad and then thoroughly steamed and washed with detergent water, followed by a plain water rinse. The spent washing fluid is collected in a holding tank and sampled and analyzed for contamination. The fluid is either discharged (if free of contamination), or held for subsequent treatment. The recommended treatment method for the water is neutralization, precipitation and sedimentation, which are well-developed processes currently being applied to the full-scale treatment of many industrial wastewaters containing soluble heavy metals. Extensive research and development are

usually unnecessary in determining whether a particular waste stream is amenable to this treatment.

With regard to wastewater that is determined hazardous, the most common existing application is the removal of toxic heavy metals by lime treatment. Practically every industry that discharges a process wastewater contaminated with suspended and/or precipitable pollutants employs some form of precipitation and/or sedimentation. Sedimentation is currently in widespread use for the removal of suspended solids; the precipitation (usually with lime) is used to remove heavy metals. The process produces a waste sludge.

The on-site treatment of the washwater is the most economic and complete method. Each tankfull of collected water will be analyzed to determine the need for treatment. It is difficult to predict how often the tank will be filled as this depends on the amount of water needed. A schematic for the treatment process to be used at the site is attached. Lime addition and holding times are dependent on the metals analysis results. Calcium hydroxide (hydrated lime) will be added from bags and mixed to attain a pH of 10. The mixer will then be turned off and the sludge will be allowed to settle. After the sludge is settled, the supernatant will be drawn off carefully, so as to not disturb the sludge, and discharged The resulting sludge will be pumped from the holding tank into a tank truck and shipped for disposal at Chemical Waste Management, Inc. Any water that cannot be treated to effluent discharge limits by lime precipitation will be hauled to Chemical Waste Management, Inc. Any discharge of treated wastewater to surface waters will be pursuant to an NPDES Permit.

The holding tank utilized will be an above ground, vertical, cylindrical, flat bottom tank constructed of fiberglass reinforced plastic. The tank will have a nominal capacity of 5,875 gallons at maximum water depth. The tank will have a diameter of 10 feet at a 10 feet (minimum) side shell length, and be furnished with a steel mixer support, baffles,

lifting lugs, be furnished with a steel mixer support, baffles, lifting lugs, and incidental hardware. A working platform with stairs will be utilized so that hydrated lime can be added by hand. The tank, which may have to be moved, will be placed on a level gravel pad.

One mixer will be supplied to mix hydrated lime with water in the holding tank. The fixed-amount, turbine-type mixer will be complete with a one-horsepower motor, speed reducer to provide 68 rpm, stainless steel shaft, and axial turbine blades pitched 45 degrees. Shaft diameter and turbine blade sizes will be as recommended by the manufacturer. The mixer will be mounted at the center of the tank.

A portable pH meter, portable gasoline-powered pumps, and sufficient flexible hose to reach from the holding tank to the discharge point shall be provided.

Equipment used on-site (tools, containers, etc) will be placed on a plastic drop cloth and subsequently scrubbed. Personnel protective clothing (boots, gloves, etc.) will be double-bagged onsite and removed for disposal. The pad will be broken and removed for disposal at the completion of the project. A schematic of the process is attached.

6. A description of the physical (grain-size distribution, etc.) and chemical characteristics of the material proposed to be used as the base and sides of the consolidated unit must be provided. What will be the minimum compaction requirements for the base and sides, and how will the compaction be verified? How will a six (6) inch thick liner of this type of material prevent the migration of the fine KO61 dust to the underlying bedrock and groundwater? What type of sampling and testing will be done to demonstrate that the material to be used as the base and sides does not contain KO61 dust?

Response No. 6: The base and sides of the unit will be covered with a six inch layer of granular fill material available from the site. The grain size requirements are that the material may not contain particles larger than 6 inches diameter, and a minimum of 50% (by dry weight) of the material must be sand-sized or smaller. The 6 inch layer of rolled fill will be granular and non-cohesive. Compaction will be achieved by rolling with a rubber-tired compactor for a minimum of 4 passes. This should be sufficient to achieve the desired trackability for construction purposes. The fill material for the base

and sides of the excavation will be obtained from portions of the site where no KO61 dust was detected, and accordingly, no testing for the presence of KO61 dust is necessary.

The purpose of a 6 inch layer of rolled fill is to provide a relatively smooth, uniform surface to act as a base for construction purposes. The layer is not designed for encapsulation of the waste, nor to prevent the migration of KO61 material downward, although the 6 inch layer may act as a filter bed if downward migration were to occur within the admixed waste. Downward migration of the KO61 dust and other very fine particulates is not anticipated because the mechanism for such movement is downward infiltration of water, and the clay cap of the unit will reduce infiltration to a level that precludes downward migration. As described in the response to paragraph 8(c), infra, the estimated annual amount of infiltration through the cover is approximately 1.5 inches of infiltration per year. This is a very small amount of infiltration and in our judgment is not significant enough to cause downward migration of fine-grained materials through the body of the fill and rolled base.

7. What will be the minimum compaction requirements for the admixed material, and how will the compaction be verified? Calculations demonstrating slope stability for the admixed material at a slope of three horizontal to one vertical must be provided.

Response No. 7: The admixed KO61 material and non-hazardous material consists entirely of granular, non-cohesive materials. The admixed waste will be deposited and compacted in lifts no greater than 1 foot thick and each lift will be compacted by a minimum of four passes with a rubber-tired compactor. This will be a sufficient level of compaction to achieve or exceed the strength criteria used for the slope stability analysis, and to achieve densities that minimize further densification and resultant settlement. Compaction will be achieved to the satisfaction of the registered engineer who will be present during all earthwork construction.

8. The following comments address the final cover system:

a. Slope stability calculations should be provided for the final cover system.

b. Calculations must be provided to demonstrate that the final cover slopes will not contribute to significant cover erosion. The worst case situation should be analyzed. The erosion potential may be evaluated using the United States Department of Agriculture (USDA) universal soil loss equation (USLE) found in the USEPA publication titled "Evaluating Cover Systems for Solid and Hazardous Waste" SW-867 dated September, 1982.

c. A clear, well documented water balance analysis should be provided that estimates infiltration through the final cover system. This analysis may be performed using a water balance technique as presented in USEPA publications SW-867 dated September, 1982.

d. The plan should describe how the design of the final cover system addresses the control of surface water infiltration, including prevention of pooling, caused by future settlement and/or subsidence of the final cover material.

e. Page 2-3 of the proposed modified partial closure plan states that a two (2) foot thick layer of compacted clay that will exhibit a minimum in-place hydraulic conductivity of 1x10-7 cm/sec will be placed over the regulated unit. What is the source of the clay cover material? What type of testing at what frequency will be performed to verify the in-place hydraulic conductivity of the final cover/

f. What is the depth of frost penetration in the area and what is its estimated effect on the overall performance of the final cover system?

g. Identify the grasses and legumes which might be used on the vegetative layer.

Response No. 8:

a. A slope stability analysis was performed on the cross-section shown on the attached sketch (Exhibit B) using the REAME computer program developed by Y. H. Huang at the University of Kentucky. The method of analysis is the Simplified Bishop Approach.

Results of the analysis indicate that the minimum factor of safety against rotational slope failure at this site is 2.1. This is based upon the engineering parameters that will be achieved using materials and methods for compaction planned for the closure. This is

greater than 1.5 which is commonly accepted as the minimum design factor of safety for permanent or sustained loading conditions (Reference: Soil Mechanics Design Manual 7.1, Department of Navy, Naval Facilities Engineering Command, May 1982.)

b. Attached as Exhibit C is the USLE analysis regarding cover erosion. The USLE was developed primarily for agricultural applications, however, and its applicability to landfills is not well-demonstrated. A conservatively safe approach was desired to estimate surface erosion and consequently a worst case assumption was utilized. On that basis, the recommendation was made for the use of a temporary netting to stabilize the soil during seedling establishment.

c. The water balance performed utilized the Hydrologic Evaluation of Landfill Performance (HELP) program, developed by Paul R. Schroeder of the Water Resources Engineering Group, Environmental Laboratory, USAE Waterways Experiment Station, Vicksburg, Mississippi.

A copy of the results is attached as Exhibit D. Input data for the program were as follows:

Vegetative cover: Good grass cover

Evaporative depth zone: 10 inches

Surface area: 78,408 sq. ft. (1.8 acres)

Number of soil layers: 5 (Topsoil = 12"; clay barrier layer = 24"; upper admixed waste layer = 120"; lower admixed waste layer = 120"; rolled fill layer = 10")

Land slope: 2%

Drainage length: 30 feet

SCS curve number: 58

The values for drainage length and SCS Curve Number were determined based on NUS' experience in other landfill construction work. These two parameters may compensate each other on the amount of runoff generated and were selected to emphasize both the effects of runoff and subsurface drainage caused by the topsoil.

Other Specific Data:

Topsoil: Layer type: 2 (Percolation and lateral drainage)
Soil type: 9 (USCS type SM soil with hydraulic conductivity (k)=0.55 in.

Clay Barrier: Layer type: 3 (Barrier soil, no synthetic membrane)
Soil type: 20 (k = 10-7 cm/sec)

Upper waste layer: Layer type: 4 (Porosity = 20%; field capacity = 16%; wilting point = 10%; k = 9 in./hr)

Lower waste layer: Layer type: 4 (Porosity = 20%; field capacity = 16%; wilting point = 10%; k = 9 in.

Rolled fill layer: Layer type: 1 (Lower permeability, vertical percolation)
Soil type: 12 (k = 0.11 in./hr)

Average annual precipitation for the period 1974-1978 = 34.10 inches

Average annual percolation = 1.45 inches = 4.3% of average annual precipitation

Average annual volume of infiltration through final cover system = 9482 cubic feet = 71,000 gallons

d. it is anticipated that future settlement of the fill will be minimal, and not sufficient to cause pooling or ponding of water on the surface of the final cover. The admixed waste is a granular, non-cohesive material which will be placed and compacted by a minimum of 4 passes with a rubber-tired roller, in lifts not greater than 12 inches in thickness. This process will create a dense, granular earth structure with very few, if any, large voids. These geo-technical conditions preclude significant settling of the mass. In addition, the time-rate settlement factor for granular materials such as the admixed waste material and the selected material which will form the foundation of the fill, is almost instantaneous, such that any settlement which occurs will be completed by the time the last lift of waste is compacted in the fill. With settlement through voids eliminated, the only other mechanisms which could produce settlement would be mechanical or chemical breakdown of the granular materials in the fill. Neither of these mechanisms will occur in these materials under the stresses anticipated within and beneath the fill.

e. The two foot thick layer of compacted clay (a CL soil as defined by the Unified Soil Classification System) will be placed so that it will have a minimum hydraulic conductivity of $1x10^{-7}$ cm/sec. The source is presently undefined and will be selected by Ceco with guidance from NUS. Once the source is selected, a minimum of five representative samples will be selected and tested for moisture-density relationship using the Standard Proctor Method (Reference: ASTM-D-698). These tests will be used to determine the maximum dry density and optimum moisture content. A separate sample will be obtained from each of the five samples and compacted using the Standard proctor Method at optimum moisture content (+/-2%). These samples will then be tested using an appropriate permeability test. These tests will determine the acceptability of the clay as a source. The field engineer will test the compacted clay soil using a nuclear densiometer and determine its in-place dry density in relation to the laboratory-determined maximum dry density. A minimum of five tests will be performed for each lift. At the completion of the compacted clay layer and prior to placement of the topsoil, a minimum of five percolation tests will be performed on the compacted clay layer to determine that the cover meets the 1×10^{-7} cm/sec. requirement.

f. The depth of frost penetration for this area is 35 inches. (Exhibit E) The phase change from water to ice depends on the relative volumes of water and soil particles but will be considerably less than a nine percent increase in volume. Since the compacted clay will be installed at a density and moisture content that will preclude migration of pore water normally associated with severe frost heave, it is not anticipated that cold weather conditions will adversely affect the integrity of the final cover system. In addition, regular inspection and maintenance will remedy any long term effects of frost heave upon the cover or its ability to function.

g. Final cover, disturbed areas, and the perimeter channels of the unit will be

seeded with a combination of grasses and legumes. Preliminary lime, fertilizer, and seed mix are as follows:

Seed Type	Application Rate (lbs/ac)	Ag. Lime, lb/acre
Ladino Clover or Lespedeza	1	4000
Tall Fescue	8	
Annual Rye	2	
Perennial Rye	2	

Fertilizer application will be 50-50-60 pounds of NPK per acre plowed down.

9. The closure and post-closure care plan must address the site location, topography and surrounding land use with respect to the potential effects of pollutant migration (e.g., proximity to groundwater, surface water, and drinking water sources). Additional information in the form of maps, drawings or other sources of information that address this requirement should be submitted with the plan. What design storm was used to design and size the culvert and run-off ditch: Calculations demonstrating the drainage system capacity should be presented.

Response No. 9: The immobility of heavy metals in groundwater due to the natural geochemical conditions which exist at the site was thoroughly discussed in the Closure Plan submitted on January 31, 1985. No potential for contaminant migration is present because geo-chemical conditions at the site prevent heavy metals from become soluble.

Nevertheless, all drinking water sources are located upgradient of the site. Most of the water that infiltrates the fill enters the groundwater system and discharges to the Illinois and Michigan Canal as base flow discharge. Flow through the fill and fractures in the carbonate bedrock would immobilize any heavy metal in solution due to the raising of the pH.

Exhibit F shows the calculations utilized for design of the ditch and culvert.

10. A NPDES permit will be required for the discharges from the waste pile and run-off collection system into the Illinois & Michigan Canal. The Division of Water Pollution Control Permit Section should be contacted at 217/782-0610 for details regarding a permit application.

Response No. 10: An NPDES permit will be secured for the discharge from the run-off collection system.

11. Who will perform, and at what frequencies will inspections be performed for the final cover, perimeter drainage channel, fence, and groundwater monitoring equipment during post-closure care? The specific criteria to be sued during post-closure care inspections to determine if remedial action is warranted must be identified.

Response No. 11: Post-closure inspections will be performed by Ceco personnel according to the following schedule. Reports will be filed and maintenance will be performed as required.

(1) Final Cover and Perimeter Channel - Weekly for the first two months or until vegetation is firmly established, whichever is later. Inspections will be monthly thereafter.

Slopes will be checked for cracks, seeps, and sliding or bulges at the toe. Any erosion or subsidence in the toe or slopes of the dike or embankment will be corrected.

The cover will be inspected for cracks and fissures, and for sink holes or depressions. Any ponding condition will be filled and reseeded.

All other seeded areas will have a well-developed vegetative cover. Any irregularities in color, density, and the rate or absence of growth will be noted. Erosion rills will be filled immediately, graded, and replanted to prevent any erosion damage. Bare areas will be reseeded.

The perimeter channel and culvert will have a uniform cross section and their condition will be maintained in accordance with the design. They will be checked and cleaned of debris periodically. Any eroded sections will be refilled and replanted immediately. Any accumulated silt will be removed. Any deterioration noted in the channel linings and outlets will be repaired immediately.

Permanently surveyed benchmarks and other points of reference for this site shall be protected and maintained.

The following conditions will be monitored and remedial treatment and maintenance applied as necessary:

- Embankment settlement and lateral deformation
- Erosion and cracking of embankment slopes or excessive seepage
- Function and discharge from perimeter channel and culvert

Site monitoring and maintenance may be modified periodically based on accumulated data and experience.

2. Fence - monthly inspections. Inspection criteria will include broken mesh or barbed wire, missing, altered or illegible warning signs, maintaining locks in working condition, vertical stability of support posts and other similar damage which may hinder the ability of the fence to function as expected. Immediate repair or replacement of any damaged or inoperable components will be made.

3. Groundwater Monitoring Equipment - Inspection will be performed monthly.

Monitoring wells and devices will be kept clean and operable. Damaged wells will be repaired as necessary to maintain their proper function and reliability. All monitoring wells will be properly cased in a manner that maintains the integrity of the borehole. All packing, screening, perforations, sealing, and grouting will be removed, replaced or repaired when necessary.

All locks and caps will be kept operable. Wells will be clearly indicated and guarded by solidly placing four (4), 3-inch diameter or larger steel posts about each well. Each post will extend a minimum of four feet above ground level and be painted a bright, clearly visible color such as red or orange.

12. The following comments address the proposed groundwater monitoring system:

a. How were the locations and number of wells determined with respect to the geological and soil profiles and surface and subsurface hydrology of the site?

b. Upgradient wells must be placed as far from the waste management area as possible to prevent contamination for

the waste management unit. The Proposed upgradient well location appears to be in a waste fill area. It must be demonstrated that the proposed upgradient well location is adequate. Additional upgradient groundwater contour elevations would be useful.

c. The elevations of the slotted well screen lengths must be identified for each well.

d. A minimum of one upgradient and three downgradient groundwater monitoring wells are required for each groundwater zone to be monitored.

e. The groundwater monitoring wells must be constructed of either stainless steel 316 or teflon with a screen length of five (5) to ten (10) feet. PVC may be used as the casing material above the saturated zone. The annular space above the three (3) foot thick bentonite seal must be filled with a cement and sodium bentonite mixture, not with cuttings. Attached please find an Agency recommended monitoring well construction diagram.

f. The following parameters must be analyzed for during the first year:

Arsenic	Toxaphene
Barium	2,4-D
Cadmium	2,4,5-T
Chromium	Chloride
Hexavalent Chromium	Iron
Lead	Manganese
Mercury	Phenols
Selenium	Sodium
Silver	Sulfate
Endrin	pH
Lindane	Specific Conductance
Methoxychlor	TOC
	TOX

g. Sampling, evaluation and reporting shall be done in accordance with 35 Ill. Adm. Code Sections 725.192, 725.193 and 725.194.

Response No. 12:

a. 35 Ill. Adm. Code Part 725, Subpart F requires a minimum of three downgradient and one upgradient monitoring well in each groundwater zone. NUS has determined that two water bearing zones may occur upgradient from the proposed unit and both zones will be monitored with separate wells if two zones actually exist. The monitoring well to be

placed in the upper zone will be in natural alluvium that overlies the dolomitic rock if the alluvium is water bearing. The elevation of the ground surface south of the property line is about five feet lower than the present surface of the site.

A thin layer of alluvium may occur above the bedrock and a well will be placed in the alluvium if the zone is water bearing. If the alluvium is shallow and not water bearing, no well will be set. The upgradient monitoring well to be located in the lower zone will be set in the dolomitic rock approximately ten feet below the top of the rock. The top of the rock will be sealed with bentonite.

The location of the upgradient wells are shown on Drawing U495-A-01 as wells MW-U-1A and -1B. The specific locations of the upgradient wells will be selected in the field so that the wells will not be placed through the fill materials on site; and so the wells are directly upgradient from the proposed waste area.

The locations of the downgradient wells were determined based on the flow directions predicted from the groundwater contours shown on Drawing U495-01. The well locations are shown on U495-A-01 as wells MW-D-2, MW-D-3 and MW-D-4. WEll MW-D-3 will be set in the in-situ fill that lies above the dolomitic rock. This well will monitor the shallow groundwater in the fill. An additional well will be added at this location to monitor the water bearing zone in the dolomitic rock.

Wells MW-D-2 and MW-D-4 will be set in the dolomitic rock so that the top of the well screen is about five feet below the top of rock. An additional well will be added at each of these locations to monitor the shallow groundwater in the fill above the top of the rock. The bentonite seal will be placed to seal off the top of the rock and water zone within the existing fill.

b. Upgradient wells will not be placed into the existing fill material. This can be verified conclusively during well installation.

c. The slotted wells screens will be five feet in length. The estimated elevation of the top of the slots for the wells are as follows:

Well No.	Estimated elev. Top of Screen	Zone Monitored
U-1A	588	Alluvium, if present & water bearing
U-1B	566	Dolomitic Rock
D-2A	588	Existing Fill
D-2B	573	Dolomitic Rock
D-3A	589	Existing Fill
D-3B	574	Dolomitic Rock
D-4A	589	Existing Fill
D-4B	574	Dolomitic Rock

d. The Final Closure Plan, submitted on January 31, 1985, and the Amendment to Closure Plan, submitted on March 19, 1986, described two interconnected water bearing zones and proposed two upgradient wells (one for each zone) and a total of three downgradient wells (one in the shallow fill zone; the other two in the dolomitic rock zone). If the alluvium is shallow and not water bearing, a shallow well will not be set. in that event, two additional wells will be set in the shallow fill zone and one additional well in the dolomitic rock zone. Therefore, each location shown on drawing U495-A-01 as MW-D-2, MW-D-3 and MW-D-4 will contain two wells consisting of a shallow fill well and a dolomitic rock well for a total of six downgradient wells.

e. NUS does not recommend the use of stainless steel screening or casing in monitoring well construction at this site because water analyses from several of the temporary wells indicate the potential for corrosion because total dissolved solids exceeds 1000 mg/l and Ryznar Stability indices exceed 7.0. The laboratory data for these wells was previously supplied to IEPA. Electrolytic corrosion may alter the water chemistry within and around the well resulting in misleading analytical results. NUS believes that PVC screen and casing are appropriate for this application. Further, use of PVC screens and well casing is the general standard operating practice of USEPA when metals are to be analyzed. The screen length for the wells will be five (5) feet.

IEPA requires that the annular space above the three foot thick bentonite seal must be filled with a cement and sodium bentonite mixture and not with drill cuttings. NUS agrees that drill cuttings should not be used for the backfill; however, we recommend that a mixture of 50% sand/50% bentonite be used rather than the cement/bentonite backfill. Our experience indicates that use of cement/bentonite in granular materials such as those at this set can lead to contamination of the water around the well, presumably by degassing of carbon dioxide and cation reactions as the cement sets.

f. With respect to the monitoring parameters which the Agency has proposed in paragraph 12(f) during the post-closure period, NUS wishes to emphasize that the closed unit is essentially a monofill for KO61. No other hazardous waste is present in the waste material. No reason exists for monitoring of pesticides, herbicides or other metals from the EP Toxicity characteristic list or organic materials in general because there is no indication that such materials ever were present at the site. Moreover, the Agency's suggestion that iron be one of the parameters for which groundwater monitoring be conducted, neglects to consider that most of the fill consists of steel mill waste materials and contains significant quantities of iron. Thus, the detection of iron in groundwater would be both expected and meaningless with respect to the question of migration of hazardous constituents from KO61 into the groundwater from the closed unit. NUS proposes to monitor cadmium, hexavalent chromium, lead, pH, and specific conductivity during the post-closure period, and believes that any monitoring requirements for additional parameters would simply impose additional costs where no reasonable connection between the KO61 material and the monitoring parameter suggested, could possibly exist.

g. Sampling, evaluation and reporting will be done in accordance with 35 Ill. Adm. Code §§725.192 - .194.

13. Drawing sheet U495-A-02 should be revised to indicate the elevation of the existing surface grade, the elevation of the bottom and top of the proposed fill, and the elevation of the bottom and top of the proposed fill, and the elevation of the seasonal high water table elevation?

Response No. 13: Drawing U495-A-02 is not a design drawing. It is a conceptual drawing showing general design configurations. The actual design drawings will be prepared to depict the detailed elevations after approval of the closure plan concept.

The seasonally high water table beneath the area proposed for the unit, which is shown on the groundwater contours on Drawing U495-01, was submitted with the Final Closure Plan on January 31, 1985. The highest elevation of the water table beneath the proposed waste area is 588.5 feet MSL. On this basis, the minimum elevation of the base would be approximately 593 feet MSL and the top elevation between 610 and 620 feet MSL. The present ground surface varies slightly but can be assumed to be about 599 feet MSL.

The seasonally high water table was obtained from observing the water level elevations taken in the temporary wells installed for the 1983 - 1985 investigation on 10/7/83, 10/24/83, 11/3/83 (after a heavy rainstorm) and 8/11/84. In addition, four wells installed in rock around the perimeter of the site in 1980 were measured during 4/80 and on 10/7/83, 10/24/83 and 11/3/83.

14. What is the status of the KO61 dust pelletizer (TO4 unit) that was identified on the Part A dated November 18, 1980? If the TO4 unit has been deleted from the facility's Part A, please provide copies of correspondence to that effect.

Response No. 14: The KO61 dust pelletizer was never operated by Ceco on a commercial scale by Ceco prior to the time the steel plant was sold to Thomas Steel in early 1983. The only RCRA regulated activity for which Ceco has interim status for the site in question is the storage of KO61 material in waste piles.

15. If necessary, based on the comments contained herein, submit a revised schedule of closure.

Response No. 15: NUS believes that the original estimate of four months for completing the closure is still reasonable and attainable.

16. The name, address and phone number of the person or office to contact about the disposal facility during the post-closure care period must be provided.

Response No. 16: Nancy J. Wise, Esq., Assistant Secretary, Ceco Industries, Inc. 1400 Kensington Road, Oak Brook, Illinois 60521, (312) 242-2000.

17. Security for the site must be provided in accordance with 35 Ill. Adm. Code §725.114(b) and (c).

Response No. 17: The facility is guarded by a natural barrier to the north in the form of the Illinois and Michigan Canal. While this canal is not impassable, it provides a deterrent to entry onto the property. A security fence, maintained in good repair, will surround the closed unit as indicated in the Amendment to Closure Plan.

In compliance with 35 Ill. Adm. Code Section 725.114, four (4) signs will be placed on the outside of the fence so as to be visible from any direction of entry. In addition, a fifth sign will be placed at the vehicular entrance to the property wherein the closed unit is located.

18. STATEMENT OF FACILITY STATUS AFTER CLOSURE - The closure plan should clearly state the status of the hazardous waste facility after closure is completed. For example, it should state if a storage facility is to be operated as a generator (less-than-90-day storage), and it should describe whether closure is partial or complete. If partial, it should name both the units covered by the closure plan as well as those remaining in operation. It should indicate whether the facility will continue to be a generator and transporter (if applicable).

Response No. 18: Response to paragraph 18 is addressed in the preceding letter of Ceco's counsel.

LIST OF EXHIBITS

EXHIBIT A:	DRAWING NO. U495-A-03
EXHIBIT B:	SLOPE STABILITY ANALYSIS, DRAWING & DATE
EXHIBIT C:	UNIVERSAL SOIL LOSS EQUATION
EXHIBIT D:	HELP MODEL
EXHIBIT E:	FROST PENETRATION CHART
EXHIBIT F:	DESIGN CALCULATIONS FOR DITCH AND CULVERT

EXHIBIT A

DRAWING NO. U495-A-03

EXHIBIT B

SLOPE STABILITY SKETCH & DATA

EXHIBIT C: UNIVERSAL SOIL LOSS EQUATION

NUS CORPORATION

DATE 6/25/86

CLIENT Ceco Steel FILE NO. U495 BY ELB

SUBJECT Item 8(b): Universal Soil Loss Eq. Checked By

CALCULATE SOIL LOSS TO BE EXPECTED FROM COVER.

A = RKLSCP

REFERENCES: EPA-600/2-79-165 AUGUST 1979

A = AVG. SOIL LOSS, TONS/ACRE
R = EROSIVITY INDEX (ANNUAL VALUE)
K = SOIL ERODIBILITY FACTOR
L = SLOPE-LENGTH FACTOR
S = SLOPE - STEEPNESS FACTOR
C = COVER/MANAGEMENT FACTOR
P = PRACTICE FACTOR

R (SEE EXHIBIT 1)

R = 150

K

ASSUME SOIL UNDER CONSIDERATION TO HAVE FOLLOWING PROPERTIES:

SILT + VF SAND = 55%
SAND = 5%
ORGANIC MATERIAL = 4%
STRUCTURE = 2 (FINE GRANULAR)
PERMEABILITY = 3 (MODERATE)

REFER TO EXHIBIT 2 → K = 0.16

LS

THE USLE INCORPORATES EFFECTS OF GROUND LENGTH & STEEPNESS IN COMBINED FACTOR.

THE LANDFILL COVER SURFACE CONSISTS OF TWO DISTINCT SEGMENTS, EACH REQUIRING SEPARATE CONSIDERATION FOR THIS FACTOR. THEREFORE, FOR THE 2% SLOPE AN LS FACTOR = 0.20 @ 100' LENGTH IS USED. FOR THE +30% SLOPE (3:1) AN LS FACTOR = 5.6 IS USED. REFER TO EXHIBIT 3. THE 2 CALCULATIONS FOR EACH CONTRIBUTING AREA WILL BE SUMMED.

EXHIBIT C

NUS CORPORATION

DATE 6/25/86

CLIENT Cecco Steel FILE NO. U495 BY ELB

SUBJECT Item 8(b): Univ. Soil Loss Equation Checked By

C

As the USLE is oriented to agricultural practices vs. engineering, this factor probably represents the greatest value judgement to be made based on experience.

On landfills, freshly covered and without vegetation, C will approach 1.00. This assumes that the surface remains fallow & tilled up & down slope. Since neither situation will occur for more than a negligible period of time, a C factor of 0.90 is used.

Refer to Exhibit 4 for an idea of values for factor C for agricultural purposes.

P

Factor P is similar to C and accounts for additional effects of practices beyond the cultural practices. As maintenance & inspection of this site is anticipated to preclude worsening erosional problems until vegetation can be established, a value of less than 1.0 appears appropriate. Exhibit 5 indicates values of P. A P factor of 0.90 seems appropriate for the same reasons stated in C above for the flat slope area & 0.75* for the steeper sides.

For flat (2%) slope area: (Area = 0.92 Acs)

$$A = (150)(.16)(0.20)(0.90)(0.90) = 3.89 \text{ tons/ac/yr.}$$

$$\times \; .92$$

$$3.58 \text{ tons/site/yr.}$$

For steep (+30%) slope areas: (Area = 0.88 Acs.)

$$A = (150)(.16)(5.6)(.90)(0.75) = 90.72 \text{ tons/ac/yr}$$

$$\times \; .88$$

$$79.83 \text{ tons/site/yr.}$$

$\therefore$ 3.89 + 79.83 = 83.72 tons/site/yr

NUS CORPORATION

DATE 6/25/86

CLIENT CECO STEEL FILE NO. U495 BY ELB

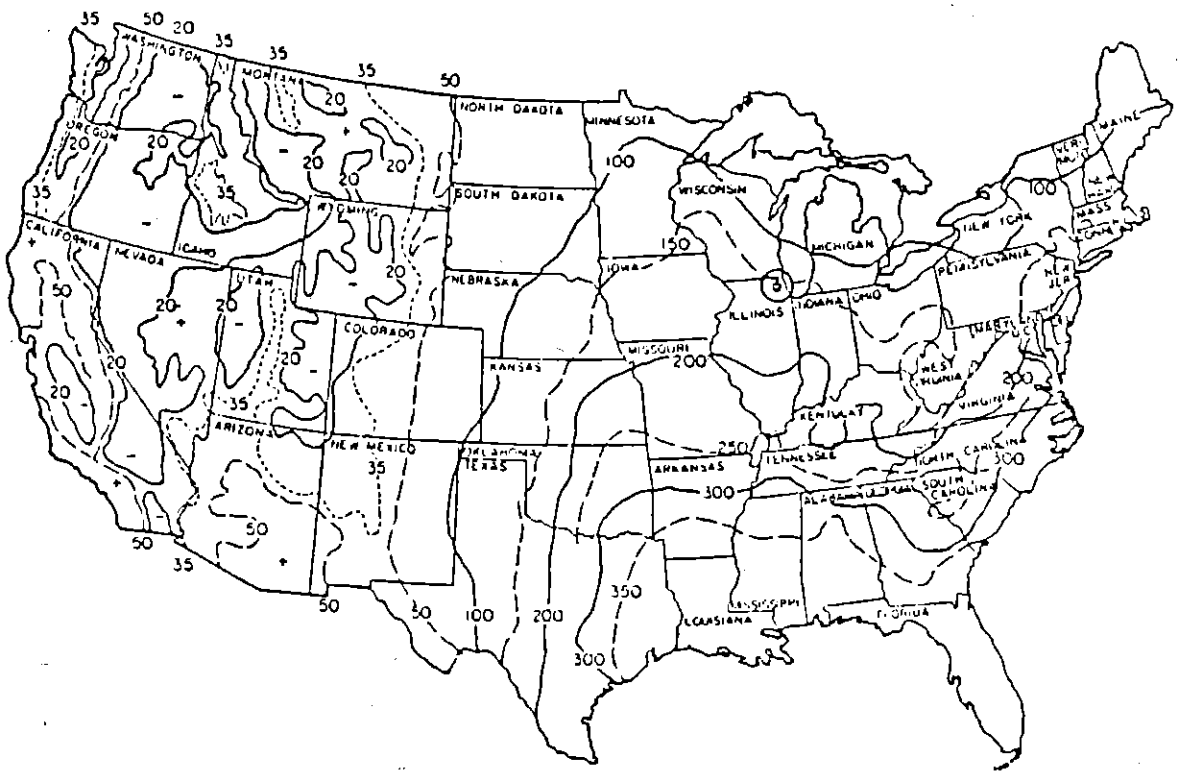
SUBJECT ITEM 8(b): USLE Checked By

ASSUME A 2 MONTH PERIOD OF VEGETATION TO ESTABLISH itself. (12/2 = 6)

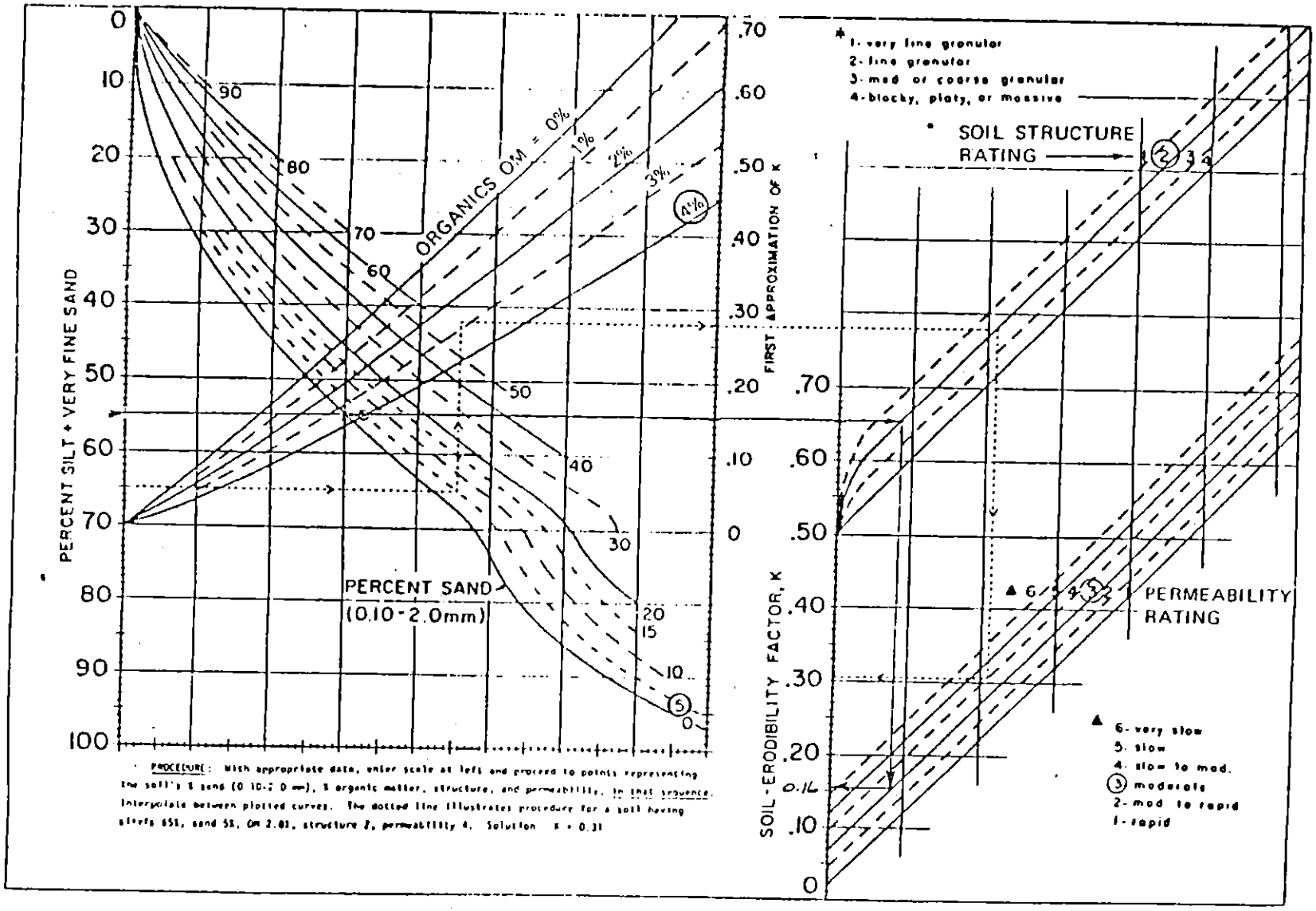
83.7 / 6 = 13.95 TONS

* IT IS RECOMMENDED THAT "CURLEX" OR EQUIVALENT BE USED ON ALL SIDE SLOPES TO FURTHER REDUCE EROSION POTENTIAL.

IT IS ANTICIPATED THAT RELOCATION PROCEDURES MAY NOW OCCUR IN LATE FALL. THIS WILL MEAN THAT THE DORMANT WINTER VEGETATION WILL BECOME ACTIVE IN SPRING AND PROVIDE VERY QUICK EROSION CONTROL WITH WARMER SPRING WEATHER. THE MAXIMUM TOTAL TIME THAT THE COVER WILL BE SUBJECT TO EROSION IS 2 MONTHS.



Average annual values of rainfall-erosivity factor R .79



Nomograph for determining soil-erodibility factor K for U. S. Mainland.

VALUES OF THE FACTOR LS FOR SPECIFIC COMBINATIONS OF SLOPE LENGTH AND STEEPNESS[79]

% Slope	Slope length (feet)											
	25	50	75	100	150	200	300	400	500	600	800	1000
0.5	0.07	0.08	0.09	0.10	0.11	0.12	0.14	0.15	0.16	0.17	0.19	0.20
1	0.09	0.10	0.12	0.13	0.15	0.16	0.18	0.20	0.21	0.22	0.24	0.26
▶ 2	0.13	0.16	0.19	0.20	0.23	0.25	0.28	0.31	0.33	0.34	0.38	0.40
3	0.19	0.23	0.26	0.29	0.33	0.35	0.40	0.44	0.47	0.49	0.54	0.57
4	0.23	0.30	0.36	0.40	0.47	0.53	0.62	0.70	0.76	0.82	0.92	1.0
5	0.27	0.38	0.46	0.54	0.66	0.76	0.93	1.1	1.2	1.3	1.5	1.7
6	0.34	0.48	0.58	0.67	0.82	0.95	1.2	1.4	1.5	1.7	1.9	2.1
8	0.50	0.70	0.86	0.99	1.2	1.4	1.7	2.0	2.2	2.4	2.8	3.1
10	0.69	0.97	1.2	1.4	1.7	1.9	2.4	2.7	3.1	3.4	3.9	4.3
12	0.90	1.3	1.6	1.8	2.2	2.6	3.1	3.6	4.0	4.4	5.1	5.7
14	1.2	1.6	2.0	2.3	2.8	3.3	4.0	4.6	5.1	5.6	6.5	7.3
16	1.4	2.0	2.5	2.8	3.5	4.0	4.9	5.7	6.4	7.0	8.0	9.0
18	1.7	2.4	3.0	3.4	4.2	4.9	6.0	6.9	7.7	8.4	9.7	11.0
20	2.0	2.9	3.5	4.1	5.0	5.8	7.1	8.2	9.1	10.0	12.0	13.0
25	3.0	4.2	5.1	5.9	7.2	8.3	10.0	12.0	13.0	14.0	17.0	19.0
▶ 30	4.0	5.6	6.9	8.0	9.7	11.0	14.0	16.0	18.0	20.0	23.0	25.0
40	6.3	9.0	11.0	13.0	16.0	18.0	22.0	25.0	28.0	31.0	--	--
50	8.9	13.0	15.0	18.0	22.0	25.0	31.0	--	--	--	--	--
60	12.0	16.0	20.0	23.0	28.0	--	--	--	--	--	--	--

Values given for slopes longer than 300 feet or steeper than 18% are extrapolations beyond the range of the research data and, therefore, less certain than the others.

GENERALIZED VALUES OF FACTOR C FOR STATES EAST OF THE ROCKY MOUNTAINS[79]

Crop, rotation, and management	Productivity level	
	High	Mod.
	C value	
Base value: continuous fallow, tilled up and down slope	1.00	1.00
CORN		
C, RdR, fall TP, conv	0.54	0.62
C, RdR, spring TP, conv	.50	.59
C, RdL, fall TP, conv	.42	.52
C, RdR, wc seeding, spring TP, conv	.40	.49
C, RdL, standing, spring TP, conv	.38	.48
C-W-M-M, RdL, TP for C, disk for W	.039	.074
C-W-M-M-M, RdL, TP for C, disk for W	.032	.061
C, no-till pl in c-k sod, 95-80% rc	.017	.053
COTTON		
Cot, conv (Western Plains)	0.42	0.49
Cot, conv (South)	.34	.40
MEADOW		
Grass & Legume mix	0.004	0.01
Alfalfa, lespedeza or Sericea	.020	
Sweet clover	.025	
SORGHUM, GRAIN (Western Plains)		
RdL, spring TP, conv	0.43	0.53
No-till pl in shredded 70-50% rc	.11	.18
SOYBEANS		
B, RdL, spring TP, conv	0.48	0.54
C-B, TP annually, conv	.43	.51
B, no-till pl	.22	.28
C-B, no-till pl, fall shred C stalks	.18	.22
WHEAT		
W-F, fall TP after W	0.38	
W-F, stubble mulch, 500 lbs rc	.32	
W-F, stubble mulch, 1000 lbs rc	.21	

Abbreviations defined:

B - soybeans
C - corn
c-k - chemically killed
conv - conventional
cot - cotton
F - fallow
M - grass & legume hay
pl - plant
W - wheat
wc - winter cover

lbs rc - pounds of crop residue per acre remaining on surface after new crop seeding
% rc - percentage of soil surface covered by residue mulch after new crop seeding
70-50% rc - 70% cover for C values in first column; 50% for second column
RdR - residues (corn stover, straw, etc.) removed or burned
RdL - all residues left on field (on surface or incorporated)
TP - turn plowed (upper 5 or more inches of soil inverted, covering residues)

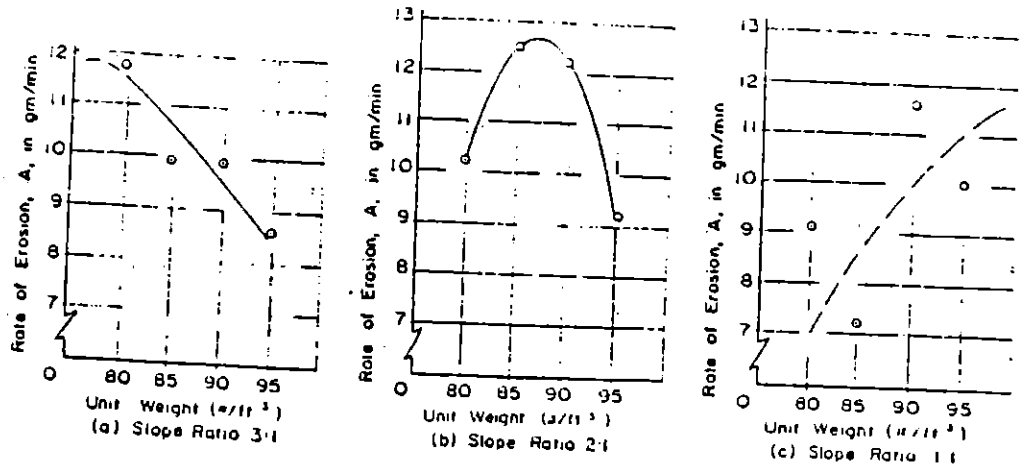
VALUES OF FACTOR P 79

Practice	Land slope (percent)				
	1.1-2	2.1-7	7.1-12	12.1-18	18.1-24
	(Factor P)				
Contouring (P_c)	0.60	0.50	0.60	0.80	0.90
Contour strip cropping (P_{sc})					
R-R-M-M[1]	0.30	0.25	0.30	0.40	0.45
R-W-M-M	0.30	0.25	0.30	0.40	0.45
R-R-W-M	0.45	0.38	0.45	0.60	0.68
R-W	0.52	0.44	0.52	0.70	0.90
R-O	0.60	0.50	0.60	0.80	0.90
Contour listing or ridge planting (P_{cl})	0.30	0.25	0.30	0.40	0.45
Contour terracing (P_t)[2]	[3] $0.6/\sqrt{n}$	$0.5/\sqrt{n}$	$0.6/\sqrt{n}$	$0.8/\sqrt{n}$	$0.9/\sqrt{n}$
No support practice	1.0	1.0	1.0	1.0	1.0

[1] R = rowcrop. W = fall-seeded grain. O = spring-seeded grain. M = meadow. The crops are grown in rotation and so arranged on the field that rowcrop strips are always separated by a meadow or winter-grain strip.

[2] These P_t values estimate the amount of soil eroded to the terrace channels and are used for conservation planning. For prediction of off-field sediment, the P_t values are multiplied by 0.2.

[3] n = number of approximately equal-length intervals into which the field slope is divided by the terraces. Tillage operations must be parallel to the terraces.



Effect of unit weight on erosion rate at three different slopes.[83] Soil is classified ML. (Reproduced by permission of American Society of Civil Engineers.)

EXHIBIT D: HELP MODEL

```
*****************************************************************
*****************************************************************
*                                                               *
*          HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE        *
*                          HELP VERSION 1                       *
*                                                               *
*                            WRITTEN BY                         *
*                                                               *
*                        PAUL R. SCHROEDER                      *
*                          AUGUST, 1983                         *
*                                                               *
*                              OF THE                           *
*                 WATER RESOURCES ENGINEERING GROUP             *
*                     ENVIRONMENTAL LABORATORY                  *
*                 USAE WATERWAYS EXPERIMENT STATION             *
*                          P.O. BOX 631                         *
*                       VICKSBURG, MS 39180                     *
*****************************************************************
*                                                               *
*****************************************************************
*                USER'S GUIDE AVAILABLE UPON REQUEST            *
*                FOR CONSULTATION CONTACT AUTHORS AT            *
*                 (601) 634-3709 OR (601) 634-3710              *
*****************************************************************
*****************************************************************
```

1.1 DO YOU WANT TO ENTER OR CHECK DATA OR TO OBTAIN OUTPUT?

ENTER 1 FOR CLIMATOLOGIC INPUT,
2 FOR SOIL OR DESIGN DATA INPUT,
3 TO RUN THE SIMULATION AND OBTAIN DETAILED OUTPUT,
4 TO STOP THE PROGRAM, AND
5 TO RUN THE SIMULATION AND OBTAIN ONLY SUMMARY OUTPUT.

EXHIBIT D

1.2 DO YOU WANT TO USE DEFAULT CLIMATOLOGIC DATA?
ENTER YES OR NO

GENERAL SIMULATION DATA

SCS RUNOFF CURVE NUMBER	=	58.00
TOTAL AREA OF COVER	=	78408. SQ. FT
EVAPORATIVE ZONE DEPTH	=	10.00 INCHES
EFFECTIVE EVAPORATION COEFFICIENT	=	4.500 MM/DAY**0.5
UPPER LIMIT VEG. STORAGE	=	4.5800 INCHES
INITIAL VEG. STORAGE	=	1.5750 INCHES

CLIMATOLOGIC DATA FOR CHICAGO ILLINOIS

MONTHLY MEAN TEMPERATURES, DEGREES FAHRENHEIT

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.38	26.44	34.53	46.46	59.05	68.93
73.44	71.37	63.29	51.35	38.76	28.89

MONTHLY MEANS SOLAR RADIATION, LANGLEYS PER DAY

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
85.50	141.92	233.45	335.55	420.87	466.54
460.34	403.91	312.39	210.28	124.96	79.29

LEAF AREA INDEX TABLE

DATE	LAI
1	0.0
110	0.0
129	1.23
148	2.01
168	2.01
187	2.01
206	2.01
225	2.01
244	1.81
264	1.31
283	0.64
302	0.33
366	0.0

GOOD GRASS

WINTER COVER FACTOR = 1.20

AVERAGE MONTHLY TOTALS FOR 74 THROUGH 78

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION (INCHES)	1.98 3.05	1.52 3.67	3.03 3.18	4.08 1.74	3.25 1.95	4.36 2.27
RUNOFF (INCHES)	0.0 0.0	0.0 0.145	1.108 0.314	1.504 0.0	0.334 0.0	0.0 0.0
EVAPOTRANSPIRATION (INCHES)	0.581 3.139	0.881 2.529	1.929 2.391	2.612 1.577	4.407 0.947	4.647 0.615
PERCOLATION FROM BASE OF COVER (INCHES)	0.0957 0.1290	0.0722 0.1261	0.1103 0.1230	0.1410 0.1286	0.1375 0.1280	0.1292 0.1311
PERCOLATION FROM BASE OF LANDFILL (INCHES)	0.96 0.0958 0.1287 0.129	0.073 0.0725 0.1265 0.127	0.109 0.1092 0.1230 0.123	0.141 0.1411 0.1284 0.128	0.138 0.1376 0.1276 0.128	0.129 0.1293 0.1315 0.132
DRAINAGE FROM BASE OF COVER (INCHES)	0.082 0.092	0.050 0.064	0.173 0.163	0.502 0.155	0.355 0.139	0.120 0.228
DRAINAGE FROM BASE OF LANDFILL (INCHES)	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0

****

AVERAGE ANNUAL TOTALS FOR 74 THROUGH 78

	(INCHES)	(CU. FT.)	PERCENT
PRECIPITATION	34.08	222688.	100.00
RUNOFF	3.405	22248.	9.99
EVAPOTRANSPIRATION	26.255	171552.	77.04
PERCOLATION FROM BASE OF COVER	1.4516	9485.	4.26
PERCOLATION FROM BASE OF LANDFILL	1.45 1.4511	9482.	4.3 4.26
DRAINAGE FROM BASE OF COVER	2.121	13858.	6.22
DRAINAGE FROM BASE OF LANDFILL	0.0	0.	0.0

****

****

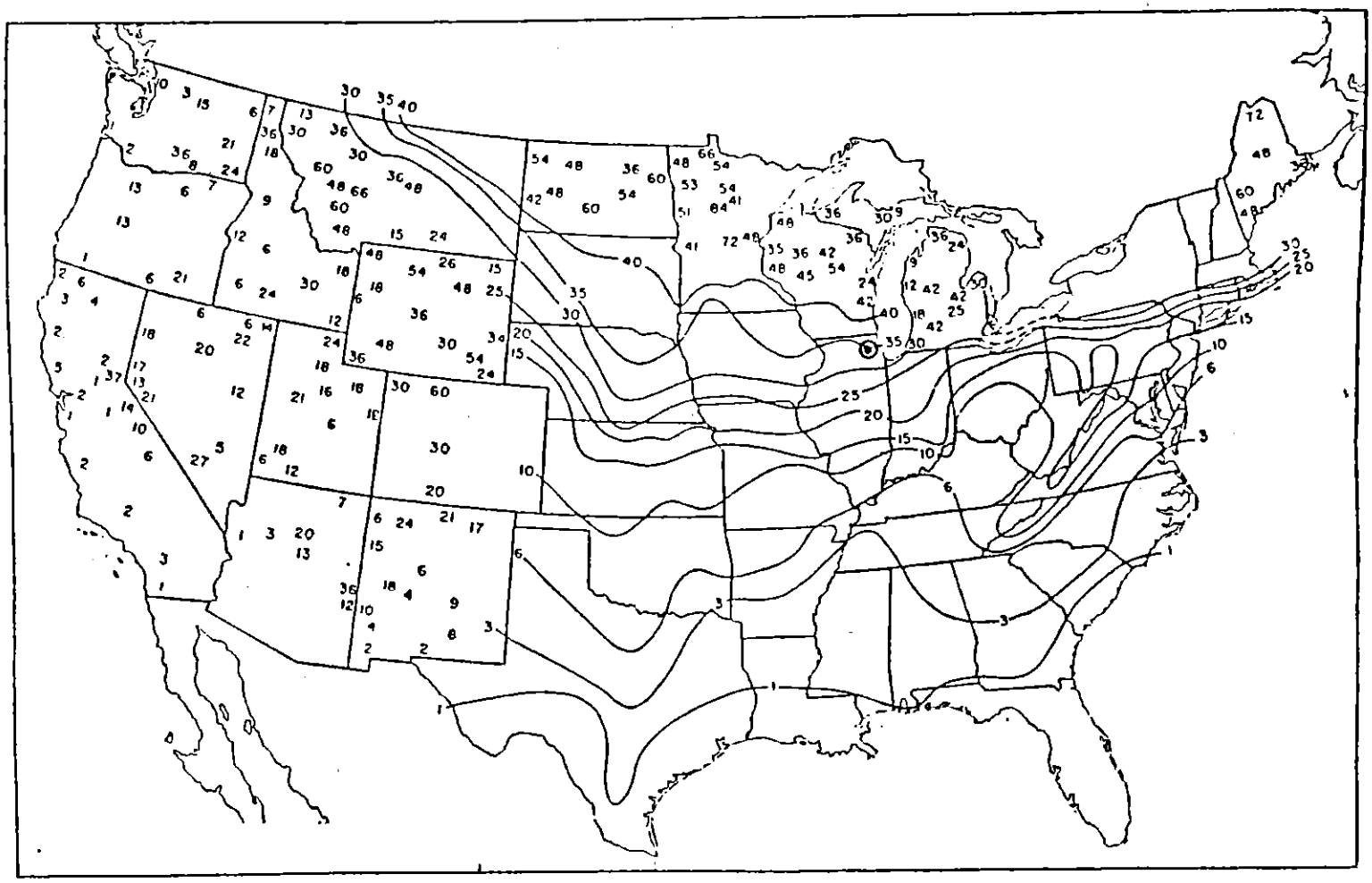
PEAK DAILY VALUES FOR 74 THROUGH 78

	(INCHES)	(CU. FT.)
PRECIPITATION	3.48	22738.3
RUNOFF	1.497	9781.4
PERCOLATION FROM BASE OF COVER	0.0193	126.3
PERCOLATION FROM BASE OF LANDFILL	0.0153	100.1
DRAINAGE FROM BASE OF COVER	0.038	248.5
DRAINAGE FROM BASE OF LANDFILL	0.0	0.0
HEAD ON BASE OF COVER	12.2	
HEAD ON BASE OF LANDFILL	0.0	
SNOW WATER	7.03	45918.4

MAXIMUM VEG. SOIL WATER (VOL/VOL) 0.4590

MINIMUM VEG. SOIL WATER (VOL/VOL) [illegible]

EXHIBIT E: FROST PENETRATION CHART



Regional depth of frost penetration (in inches).[79]

FROM: EPA-600/2-79-165
AUGUST 1979

EXHIBIT E

EXHIBIT F: DESIGN CALCULATIONS FOR DITCH & CULVERT

NUS CORPORATION

DATE 6/24/86

CLIENT CECO STEEL FILE NO. U495 BY ELB

SUBJECT ITEM 9: SIZE DITCH & CULVERT Checked By

REFERENCES: 1) SCS, ENGINEERING DIVISION, USDA, TR-55, JAN. 1975
2) SCS HANDBOOK OF CHANNEL DESIGN FOR SOIL & WATER, SCS-TP-61, 1954
3) HYDROLOGY FOR ENGINEERS & PLANNERS, ART. HJELMFELT, JR, ET AL., IOWA STATE UNIV. PRESS, 1975

I. DESIGN STORM

WATERSHED < 1/2 SQ. MI USE RATIONAL METHOD = Q = CIA

Q = MAX DISCHARGE IN CFS
C = RUNOFF COEFFICIENT (EXHIBIT 2)
I = RAINFALL (25 YR.-24 HR. STORM, SEE EXHIBIT 1)
A = AREA, IN ACRES

Q = (0.55)(4.70)(2.3) = 5.95 CFS @ CULVERT ENTRANCE

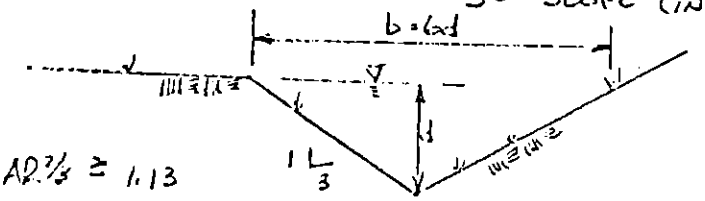
a) CHANNEL DESIGN

ASSUME TRIANGULAR SECTION w/ 3:1 SIDE SLOPES
V_{MAX} < 4.0 FPS

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

WHERE: Q = VOLUME OF FLOW
A = CROSS-SECTIONAL AREA, IN SQ. FT
R = HYDRAULIC RADIUS, IN FEET
S = SLOPE (IN FT/FT)

A = 3d²
WP = 6.32 d
R = A/WP



GIVEN: Q = 5.95 CFS
S = .02 ft/ft
n = .04
V = Q/A

$AR^{2/3} \geq 1.13$

	d	A	WP	R	$R^{2/3}$	$AR^{2/3}$	V
@ UNIFORM FLOW =	.84	2.17	5.308	.409	.549	1.19	2.74
+ .16' FB =	1.0	3.0	6.32	.475	.607	1.821	1.98 < 4.0 OK

d = 0.84' + .16' FREEBOARD = 1.0' DEPTH
b = 6.0'

EXHIBIT 7

NUS CORPORATION

DATE 6/24/86

CLIENT Ceco Steel FILE NO. U495 BY ELHS

SUBJECT Item 9: Size "Ditch & Culvert" Checked By

b) Culvert Design (2)

Reference: 1) Handbook of Hydraulics, King & Brater, 1963
2) Hydraulic Charts for the Selection of Highway Culverts, US Dept. of Commerce, Bureau of Public Roads

Assume Inlet Control = HW/D ≤ 1.0

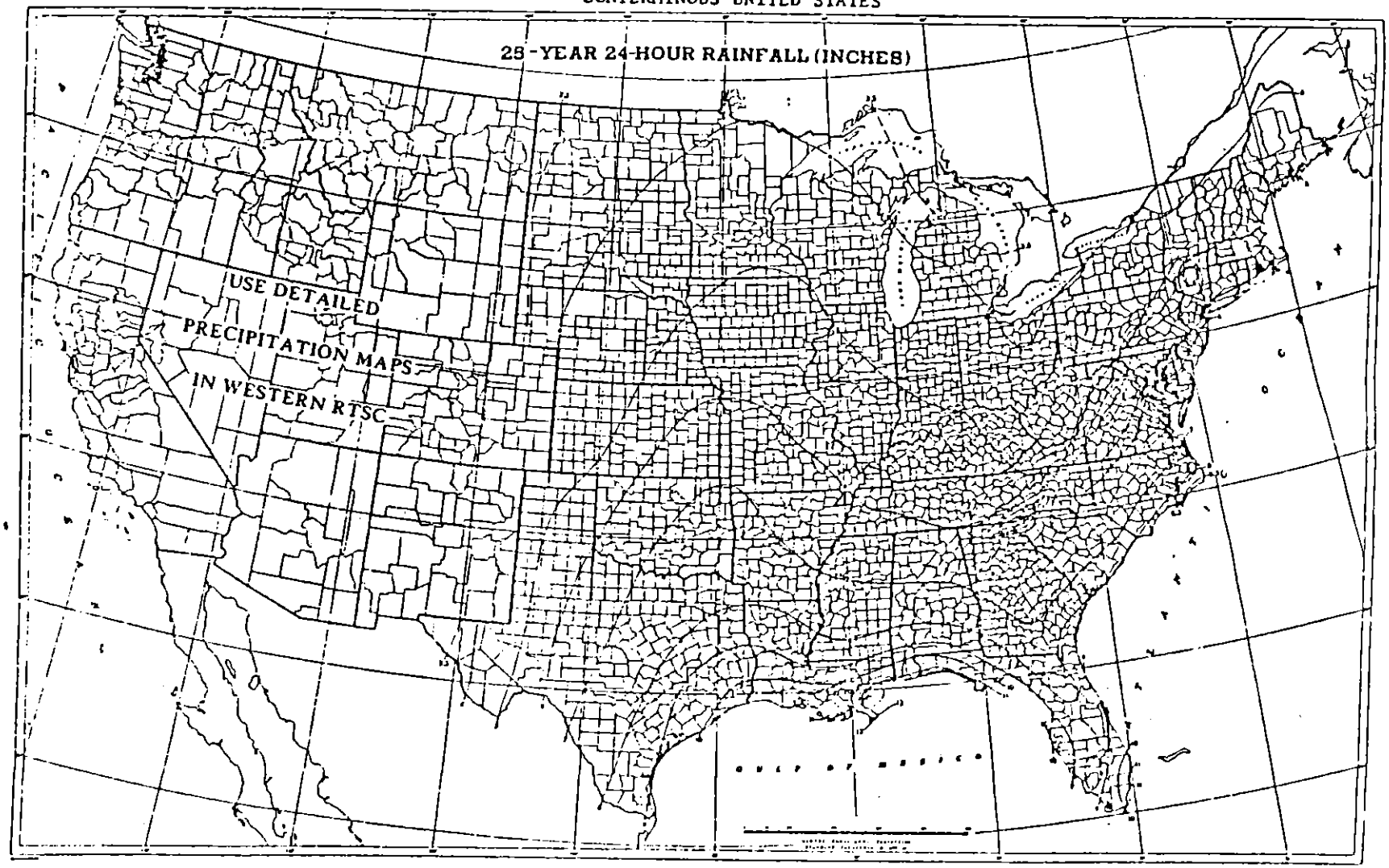
Q = 5.95 cfs required

Try 24" ϕ CMP - Projecting End

Refer to Exhibit 3

18" ϕ CMP is a little too small ∴ USE 24" ϕ

CONTERMINOUS UNITED STATES



Prepared by U. S. Weather Bureau

RUNOFF FACTORS FOR THE RATIONAL EQUATION

Type of Drainage Area or Surface	Runoff Factor "C" Minimum	Maximum
Pavements, concrete or bituminous concrete	0.75	0.95
Pavements, bituminous macadam or surface-treated gravel	0.65	0.80
Pavements, gravel, macadam, etc.	0.25	0.60
Sandy soil, cultivated or light growth	0.15	0.30
Sandy soil, woods, or heavy brush	0.15	0.30
Gravel, bare or light growth	0.20	0.40
Gravel, woods or heavy brush	0.15	0.35
Clay soil, bare or light growth	0.35	0.75
Clay soil, woods or heavy growth	0.25	0.60
City business sections	0.60	0.80
Dense residential sections	0.50	0.70
Suburban, normal residential areas	0.35	0.60
Rural areas, parks, golf courses	0.15	0.30

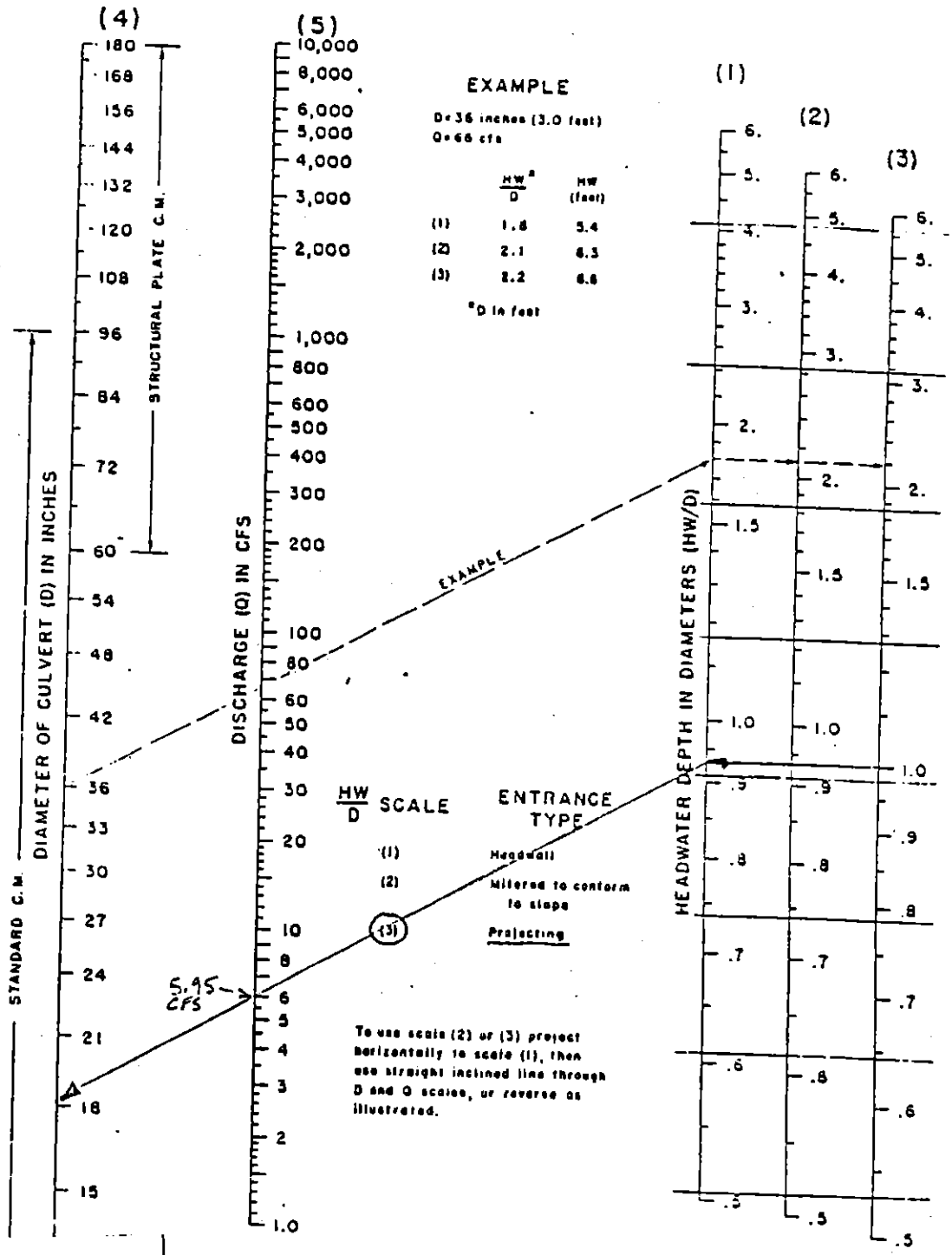
55

NOTE: Higher values are applicable to denser soils and steep slopes.

Consideration should be given to future land use changes in the drainage area in selecting the "C" factor.

For drainage area containing several different types of ground cover, a weighted value of "C" must be used.

In special situations where sinkholes, stripped abandoned mines, etc. exist, careful evaluation shall be given to the selection of a suitable runoff factor with consideration given to possible reclamation of the land in the future.



Headwater depth for CM pipe culverts with inlet control (Ref. Hyd. Eng. Cir. No. 5, USBPR, 1965)

NUS CORPORATION

Park West Two
Cliff Mine Road
Pittsburgh, PA 15275
412-788-1080

R-33-2-6-4

AMENDMENT TO CLOSURE PLAN

FOR

WASTE STORAGE AREA
EPA ID NO. ILD990785453
WILL COUNTY, ILLINOIS

THE CECO CORPORATION
OAKBROOK, ILLINOIS

NUS PROJECT NUMBER U495

MARCH 1986

SUBMITTED FOR NUS BY:

EDWARD L. BAER
PROJECT MANAGER

APPROVED:

E. DENNIS ESCHER, P.E.
VICE PRESIDENT
AND GENERAL MANAGER
PEC DIVISION

A Halliburton Company

CONTENTS

SECTION		PAGE
1.0	INTRODUCTION	1-1
2.0	DESIGN CONCEPT OF CLOSURE	2-1
2.1	SCOPE OF WORK	2-1
2.2	EARTHWORK AND GRADING	2-2
2.3	FINAL COVER AND VEGETATION	2-3
2.4	CONSTRUCTION SEQUENCE AND SCHEDULE	2-5
2.5	DECONTAMINATION	2-6
2.6	CERTIFICATION OF CLOSURE	2-6
2.7	CLOSURE COST ESTIMATE	2-6
3.0	POST-CLOSURE PLAN	3-1
3.1	INSPECTION AND MAINTENANCE	3-1
3.2	POST-CLOSURE SURVEY AND RECORDS	3-2
3.3	POST-CLOSURE COST ESTIMATE	3-2
4.0	GROUNDWATER MONITORING PLAN	4-1
4.1	PROPOSED GROUNDWATER MONITORING WELL LOCATIONS	4-1
4.2	ANALYTICAL PARAMETERS FOR GROUNDWATER MONITORING	4-2
4.3	MONITORING FREQUENCY	4-2

APPENDICES

A CLOSURE COST ESTIMATE

B ANNUAL POST-CLOSURE COST ESTIMATE

CONTENTS (CONTINUED)

FIGURES

NUMBER		PAGE
1	TYPICAL MONITORING WELL DESIGN	4-3

DRAWINGS

NUMBER		LOCATION
U495-A-01	PROPOSED CLOSURE SITE PLAN	Rear Pocket
U495-A-02	DETAILS	Rear Pocket
U495-A-03	AREAS OF PREVIOUS EXCAVATION	Rear Pocket

1.0 INTRODUCTION

This document is an amendment to the Closure Plan submitted by The Ceco Corporation (Ceco) on January 31, 1985, pursuant to 35 Ill. Adm. Code Section 725.212 for an interim status storage facility for hazardous waste KO61. That Closure Plan was reviewed by the Illinois Environmental Protection Agency (IEPA) and approved by letter dated June 13, 1985. Closure activities commenced on September 3, 1985, in accordance with the approved Closure Plan.

On September 18, 1985, at the request of IEPA, a site inspection was conducted with representatives of Ceco, IEPA and NUS Corporation, Ceco's environmental consulting firm, in attendance. Following that inspection, a Compliance Inquiry Letter was issued by IEPA on September 27, 1985, which set forth several concerns of IEPA with respect to the implementation of the approved Closure Plan. On November 20, 1985, representatives of IEPA, USEPA, Ceco and NUS met in Springfield, Illinois, to discuss IEPA's concerns. At that meeting IEPA advised Ceco that the "mixture rule," promulgated by USEPA under RCRA to govern circumstances where hazardous waste and non-hazardous solid waste are admixed, would require that the mechanical waste separation process (described at Section 4.2 of the Closure Plan) operate to insure that <u>all</u> traces of KO61 material be removed from the non-hazardous components of the mixture before the non-hazardous material could be returned as fill to the excavated portions of the site. Because this interpretation of the mixture rule called into question an essential element of the Closure Plan, Ceco advised IEPA that it would consider its impact on further closure activities and advise IEPA of its position. On January 20, 1986, Ceco advised IEPA by letter that Ceco had concluded that it was physically impossible for the mechanical separation process to remove all traces of KO61 material from the non-hazardous portions of the admixed excavated material, and that consequently Ceco would submit by March 20, 1986, an amendment to the Closure Plan which contemplated closure of the site with the admixed KO61 material and non-hazardous solid waste remaining in place.

This amendment incorporates by reference the previously approved Closure Plan. The amendment addresses only the change in concept of the Closure Plan to closure with hazardous waste remaining on site, from the original Plan's contemplated removal of all hazardous waste to a licensed commercial disposal facility.

2.0 DESIGN CONCEPT OF CLOSURE

2.1 Scope of Work

During the period from September through December, 1985, portions of the site which were known to contain deposits of KO61 material were excavated to remove such material. Areas selected for excavation were those which, based upon previous surface and subsurface investigation, were suspected to contain deposits of KO61 material. The excavation technique followed is described in Section 4.1 of the Closure Plan. Constant and careful onsite monitoring of all field activities was documented and records were kept. In addition, areas of the site in the vicinity of Boring No. 14 and Wells Nos. 3, 4, and 9 were excavated to demonstrate that no KO61 material was present in the western portion of the site. All excavation was done under the direction of a registered professional engineer whose instructions were to locate KO61 material deposits and to trace those deposits by additional excavation until they were no longer present. In this fashion, all deposits of KO61 material at the site were located and excavated, together with a significant volume of non-hazardous solid waste, including slag, mill scale and other debris. Drawing No. U495-A-03 depicts the site and the excavated areas.

The total volume of material excavated from the site was 102,800 cubic yards. Of this amount, approximately 32,000 cubic yards consisted of admixed KO61 and non-hazardous solid material. Admixture of KO61 material and other solid waste was the unavoidable result of the excavation process. This admixed material is temporarily stockpiled on the surface. The remaining volume of the excavated material consisted of non-hazardous "overburden" located above deposits of KO61 material. This material was stockpiled separately from the portion containing KO61 material, and backfilled into excavated areas from which all KO61 material had been removed.

This amendment to the Closure Plan addresses the future management of the 32,000 cubic yards of admixed KO61 material and non-hazardous solid waste. It describes the work necessary to close the interim status storage pile by creating a permanent repository for the admixed material in accordance with the

requirements of 35 Ill. Adm. Code Sections 725.358(b) and 725.410, and the post-closure requirements applicable pursuant to 35 Ill. Adm. Code Sections 725.217 through .220.

2.2 Earthwork and Grading

Site preparation will begin by excavation of a suitable area within the former regulated unit. (The location and details of the closed interim status waste pile unit appear in Drawings Nos. U495-A-01 and -02.) Excavation will include the removal of all fill material and any debris or organic matter, for example, wood, paper, which is present. All material less than 6-inch maximum dimension, other than debris and organic matter, will be stockpiled for subsequent use in construction of the base and sides of the unit when excavation is complete.

Initial excavation will be to the maximum dimensions and depth of the unit. Embankment side slopes of the excavated area will be maintained at a slope of three horizontal to one vertical. A minimum 6-inch layer of previously excavated non-hazardous material will be placed over the bottom and sides of the unit and compacted to produce a firm, uniform, and smooth interior surface using a rubber-wheeled compactor.

The finished interior of the excavation will be inspected during and after construction. Each completed and compacted portion of the unit will be inspected for gross imperfections, cracks, channels or other structural non-conformities. Final depth of the completed excavation will be at least 10 feet as measured from the existing ground surface to the bottom of the unit.

When construction of the unit is complete, transport and placement of the admixed K061 material and non-hazardous solid waste into the unit will commence. A temporary access ramp will be provided into the unit to accommodate vehicular traffic access during placement of the admixed material. The admixed material will be placed and spread in 2-foot layers in the working area, and compacted with 4 to 6 passes of a track-mounted bulldozer, until the top of the compacted waste reaches an elevation approximately equal to the surrounding ground surface. Waste

placement and compaction will continue from that elevation by means of a temporary earthen ramp until all 32,000 cubic yards of admixed material have been deposited and compacted. The portion of the unit above the existing ground surface elevation will be constructed with sides maintained at a slope of three horizontal to one vertical. Exposed side slopes may require periodic compaction in addition to the horizontal compaction applied during deposit of the admixed material. In such event, the side slopes will be compacted with the track-mounted bulldozer to insure their structural integrity.

2.3 Final Cover and Vegetation

Application of final cover to the above-grade portion of the regulated unit will involve the placement of a minimum 2-foot thick layer of compacted clay with 12 inches of topsoil and vegetation covering the clay layer. Because of irregularities which may be present on the surface of the compacted admixed waste material, the compacted clay layer thickness may vary. In no event, however, will the thickness of the compacted clay be less than 2 feet. The clay material used will exhibit a minimum in-place hydraulic conductivity of 1×10^{-7} cm per second. The clay layer will be placed in 6 to 8-inch lifts and compacted using suitable equipment. A steel tamping foot, sheep's foot or similar type of compaction equipment will be used.

During construction of the final cover, all activities will be supervised by a qualified licensed professional engineer or other representative of NUS. As each lift is placed, it will be inspected for imperfections including granular lenses, cracks, channels, root holes or other structural non-conformities which may affect the permeability of the final cover. Compaction and moisture content of the clay material will be continuously monitored during placement of the final cover. Moisture will be distributed uniformly through the clay material to insure optimum compaction. Laboratory analyses shall be performed to determine optimum moisture ranges and density characteristics. Guidance for moisture content of the clay cover material will require that not more than 20 percent of the samples taken will fall outside the range for optimum moisture content as determined. The supervisor present will inform the contractor when the moisture content of the

clay material exceeds the range set out above. Upon being so notified, the contractor will make appropriate adjustments in procedures as necessary to maintain the moisture content within the specified limits. A Troxler 3411B nuclear density meter, or equivalent, will be employed following compaction of each lift at specified locations in order to monitor the density of the compacted clay layer.

A keyway trench will be constructed at the toe of the exposed waste mound. (Details of the keyway trench are shown on Drawing No. U495-A-02.) The configuration of the keyway will be trapezoidal, with a depth of two feet, bottom width of two feet and side slopes of one to one. Clay cover material will be placed and compacted into the keyway to provide a stability for the compacted clay layer on the side slopes of the unit.

Following completion of construction of the clay layer portion of the final cover, the clay will be inspected for line and grade, uniformity of slope, and any imperfections which might hinder its ability to perform as intended. Thereafter, a 12-inch cover of topsoil capable of supporting indigenous vegetation will be placed on the top and side slopes of the unit and hand-rolled smooth. The topsoil layer will be sufficient to protect the clay layer such that the engineering properties of the clay layer will not vary significantly. Any material protruding from the surface will be removed to insure a uniform sloping surface. The top soil layer will be placed to provide positive drainage from the surface of the unit at no less than 2 percent nor greater than 4 percent in all directions. Grasses and legumes indigenous to the area will be used to provide soil particle stabilization for the top layer of the final cover. The vegetative cover will shield the topsoil layer from the direct impact of rain and wind, while the roots of the grasses and legumes will bind and secure the soil particles against erosion from runoff. During seeding, all areas of the topsoil area will be mulched to reduce erosion and aid in germination and establishment of the seedlings. Cereal straw will be used as the mulch material and will be applied at a rate sufficient to produce a layer of 1 to 1.5 inches deep. Temporary stabilization measures such as CURLEX, or its equivalent, may be used if necessary to minimize seed wash-out immediately following planting.

A perimeter diversion channel will be constructed to collect surface water runoff from the unit and to intercept and divert run-on. The perimeter channel will discharge to the Illinois-Michigan Canal. Construction detail of the perimeter channel is shown on Drawing No. U495-A-02, which depicts a channel of triangular cross-section having a minimum depth of one foot with side slopes of three horizontal to one vertical. The channel will be constructed to slope toward the receiving water such that positive flow will always be maintained. During seeding of the perimeter diversion channel, straw bales will be placed at strategic points to prevent sediment accumulation from migrating offsite. The channel will be provided with a 6-inch layer of topsoil and seeded with appropriate vegetation adaptable to erosive flows and increased moisture. Where the proposed access road crosses the perimeter diversion channel, a 24-inch corrugated metal pipe will be placed to allow surface flows to pass under the access road.

2.4 Construction Sequence and Schedule

The following construction sequence will be followed:

1. Place erosion control measures about work area.
2. Clear and grade work area.
3. Commence bulk excavation of material to approximate dimensions of unit.
4. Backfill with selected non-hazardous material from excavation and compact to achieve final design configuration.
5. Construct temporary access ramp into excavation.
6. Transport and compact admixed K061 material and non-hazardous solid waste in 2-foot layers (including any contaminated subsoils from the temporary stockpile area).
7. Excavate keyway trench around unit.
8. Place and compact clay layer portion of final cover.
9. Place and compact topsoil layer of final cover.
10. Construct perimeter diversion channel.
11. Complete topsoil placement and apply vegetation to final cover and perimeter diversion channel.

12. Construct chain-link fence to control access to closed unit.
13. Drill and develop groundwater monitoring wells.

Current estimates are that the closure operations will be completed in approximately 4 months from the time of commencement. Ideally, closure should begin during the spring in order to permit the vegetative cover to germinate and grow to the point at which it will survive the following winter.

2.5 Decontamination

Upon completion of closure activities, all equipment which has come in contact with the admixed K061 material and non-hazardous solid waste will be thoroughly decontaminated with high-pressure steam. A decontamination area will be designated onsite. Water used during decontamination will be collected in 55 gallon drums, which when full, will be labeled and removed for treatment or disposal. Equipment or clothing which cannot be decontaminated will be double-bagged and transported for decontamination or disposal.

2.6 Certification of Closure

Following completion of all closure activities, Ceco will submit to IEPA a certification by Ceco and an independent registered professional engineer that the facility has been closed in accordance with the specifications of the Closure Plan, as amended.

2.7 Closure Cost Estimate

The closure cost estimate is set out in Appendix A. It includes only the cost of the closure activities described above. Amounts already expended by Ceco for closure activities to date (approximately $350,000) are not included.

3.0 POST-CLOSURE PLAN

Because some hazardous waste will remain permanently onsite, under the closure scheme selected, post-closure care requirements are imposed by 35 Ill. Adm. Code Sections 725.358(b), 725.410, and Sections 725.217 through .220.

3.1 Inspection and Maintenance

The final cover and perimeter channel will be inspected periodically. Any disturbed areas of the final cover or perimeter channel will be repaired and revegetated as necessary to minimize wind and water erosion and preserve the structural integrity of the clay portion of the final cover and the perimeter channel, respectively. The fence surrounding the site will be inspected periodically and any necessary repairs undertaken. The final cover will be maintained at its design grade and slope, and will be inspected to insure that it is performing as specified in the Closure Plan, as amended. Any observed surface depressions, bare spots, erosion or other conditions adverse to the function and integrity of the final cover will be corrected immediately. Permanently surveyed bench marks and other points of reference for the site will be protected and maintained.

Access to the site will be restricted by a 3 strand barbed wire, 10-foot high chain-link fence and locked gate. Security will be provided and maintained against unauthorized entry. Use of the site will be restricted to personnel involved in carrying out post-closure activities as described above. Upon completion of closure operations, the closed unit will remain vacant and land use will consist of only those activities necessary to maintain post-closure integrity and monitoring of groundwater.

Groundwater monitoring wells and equipment installed for compliance with 35 Ill. Adm. Code Part 725, Subpart F, will be kept clean and operable. Any well which is damaged will be immediately repaired as necessary to maintain its function and reliability.

3.2 Post-Closure Survey and Records

Within 90 days following completion of closure activities, a field survey will be completed showing the location and dimensions of the closed unit with respect to permanently surveyed benchmarks. In addition, the plat of survey will include a certification by Ceco that any activities at the site which might adversely affect the integrity of the closed unit will be restricted. The survey will be prepared and certified by a professional land surveyor licensed to practice in the State of Illinois. The survey plat indicating the location and dimension of the closed unit with respect to the permanently surveyed bench marks will be submitted to the Will County Recorder of Deeds and to the Director of IEPA. With the survey plat will be submitted a record of the type, location, and quantity of K061 material within the closed unit. Ceco will also cause to be recorded by the Will County Recorder of Deeds, a notation on the deed to the property, which will in perpetuity notify any potential purchaser that it has been used to manage hazardous waste, and that its use is restricted under 35 Ill. Adm. Code Section 725.217(c). Ceco will notify any purchaser of the property in writing of the requirements of the Closure Plan, as amended, prior to any transfer of ownership.

3.3 Post-Closure Cost Estimate

The post-closure cost estimate for this site is set forth in Appendix B. It will be revised each year to account for the effects of inflation as required by 35 Ill. Adm. Code Section 725.245, and will be amended if events occurring following completion of closure necessitate such amendment. The post-closure cost estimate for the site includes the cost of maintaining the function and integrity of the final cover and of groundwater monitoring activities.

4.0 GROUNDWATER MONITORING PLAN

A groundwater monitoring program in compliance with the requirements of 35 Ill. Adm. Code Part 725, Subpart F (Sections 725.190 through .194), will be implemented during the post-closure period. Records of groundwater analysis throughout the post-closure period will be maintained. Quarterly, semi-annual, and annual reports will be submitted to IEPA when required under the regulations.

4.1 Proposed Groundwater Monitoring Well Locations

In accordance with the requirements of the regulations, four groundwater monitoring well locations have been selected. They are depicted on Drawing No. U495-A-01, and include one upgradient well cluster, U-1A and U-1B, and three downgradient wells, D-2 through D-4.

The upgradient well cluster will consist of two wells. One will be screened at the top of the dolomite bedrock and the other at a point from 5 to 10 feet into the dolomite rock. Two of the three downgradient wells will be screened in the rock and the third screened at the base of the fill material immediately above the surface of the rock.

Drilling of monitoring wells will be by 6-inch diameter air rotary or continuous flight hollow stem augers. When the desired drilling depth is reached, a standpipe will be installed in the bore hole. The standpipe will consist of 2-inch diameter, flush joint-threaded PVC pipe fitted with a minimum 2-foot long, slotted well screen at the base. A slot size of 0.010 inches will be utilized. The PVC standpipe will be installed with the casing in the bore hole. The well screen will be gravel-packed with clean, washed fine gravel to a level of at least 1 foot above the top of the screen. A 3-foot thick bentonite pellet seal will be placed on top of the gravel. The remaining portions of the bore hole will be backfilled with drill cuttings from bore holes. Each standpipe will extend 2 feet above the ground surface. A 1/4 inch to 3/8 inch diameter hole will be drilled into the pipe about approximately 6 inches

from the top to allow for venting. A plastic top will be fitted to the standpipe so that it can be easily removed for sampling. A 5-foot long, 6-inch diameter steel casing with locking cap will be cemented into place. Figure 1 depicts a typical monitoring well design.

4.2 Analytical Parameters for Groundwater Monitoring

Based upon extensive sampling and analysis of the groundwater done by NUS from this site, parameters selected for the groundwater monitoring program will be as follows:

- Drinking water standards
  - Cadmium
  - Chromium
  - Lead
  - Turbidity
- Groundwater quality
  - Chloride
  - Iron
  - Sulfate
- Groundwater contamination indicators
  - pH
  - Specific conductance
  - Total dissolved solids

4.3 Monitoring Frequency

Monitoring for the first year will be directed toward establishing background concentrations. Following the first year groundwater monitoring will be for the purpose of analysis of the routine parameters set out above. For all monitoring wells, the values of all parameters specified in Section 4.2 will be established quarterly for a period of one year for each upgradient monitoring well. The groundwater contamination indicators specified in Section 4.2 will have at least

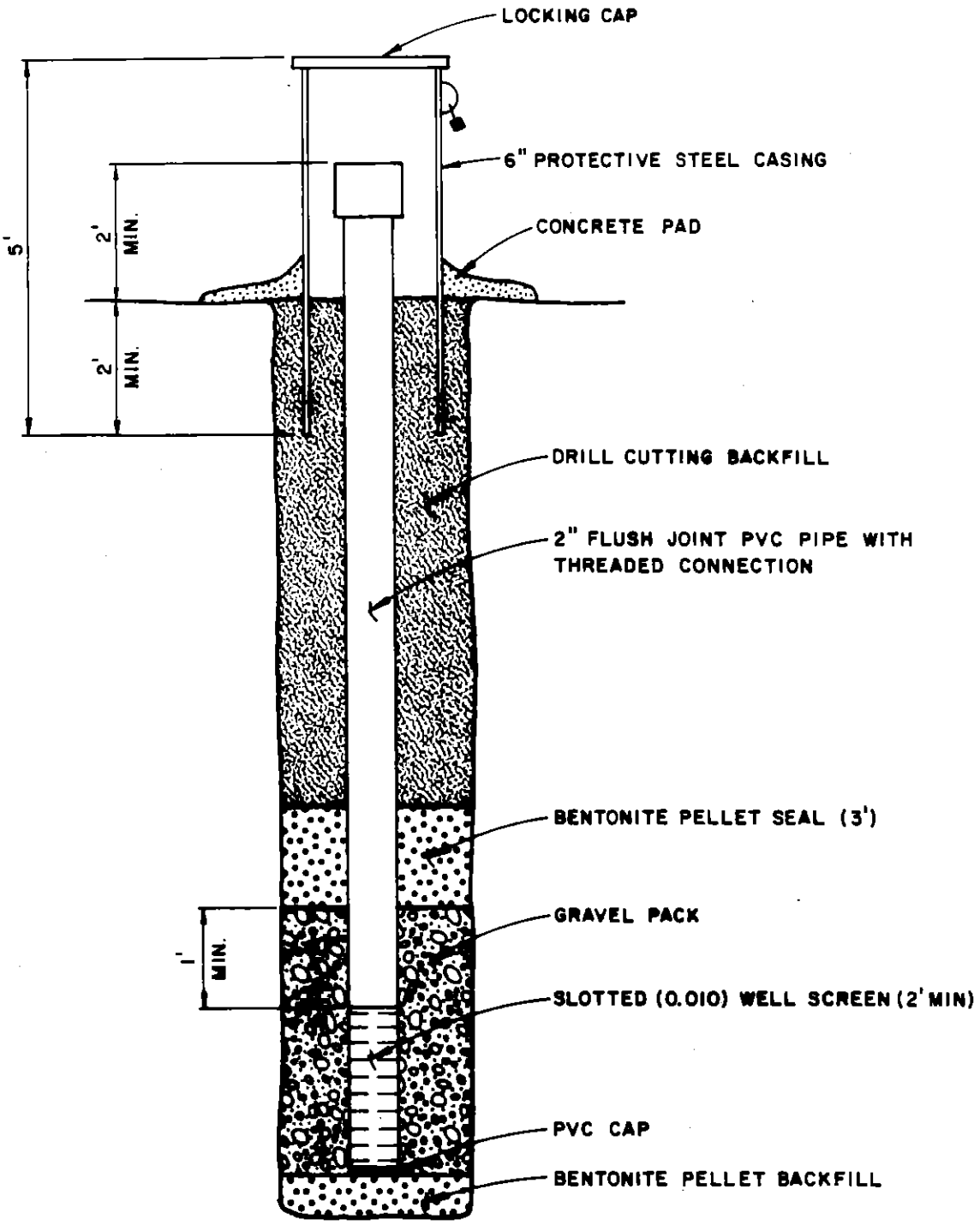


FIGURE 1

TYPICAL MONITORING WELL DESIGN
AMENDMENT TO CLOSURE PLAN
THE CECO CORPORATION

NOT TO SCALE

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four replicate measurements obtained for each sample. The initial background arithmetic mean and variance will be determined by pooling these replicate measurements during the first year.

The following procedures will be followed in reporting background water quality data. Drinking water parameters for each monitoring point will be submitted within 15 days after completion of each quarterly analysis. Any parameter whose concentration exceeds the maximum concentration levels will be separately identified. After the first year, all monitoring points will be sampled and the samples analyzed for the following parameters with the designated frequencies:

- Groundwater quality parameters, at least semi-annually
- Groundwater contamination indicator parameters at least quarterly

Reporting for routine analysis will be on a quarterly basis. The groundwater monitoring report will separately identify any significant differences between the initial background for individual wells using the Students t-test at the 0.01 level of significance. Reports will be submitted no later than the last day of the month following each calendar quarter.

APPENDIX A

CLOSURE COST ESTIMATE
MARCH 1986

Item	Estimate	Cost ($)
Mobilization/Demobilization	Lump sum	$ 2,000
Bulk Excavation	25,500 cy @ $2.00/cy	51,000
Place/Compact Fill Material	3,000 cy @ $5.00/cy	15,000
Transport/Place Admixed Waste	32,000 cy @ $1.50/cy	48,000
Place/Compact Clay Cap	4,500 cy @ $15.00/cy	67,500
Place Topsoil	3,000 cy @ $8.25/cy	24,750
Seeding/Mulching/Fertilizer	3 acres @ $750/acre	2,250
10-Foot High Chain Link Fence	1,380 LF @ $11.00/LF	15,180
Construct Perimeter Channel	1,500 LF @ $2.00/LF	3,000
24" Corrugated Metal Pipe	40 LF @ $25.00/LF	1,000
Subtotal		229,680
Certification by Professional Engineer:		
- Labor	24 mh @ $60/mh	1,440
- Expenses	3 days @ $100/day	300
NUS Inspector During Construction	500 manhours @ $45/mh	22,500
- Long-Term Per Diem	120 days @ $35/day	4,200
- Car Rental (Long-Term Lease)	120 days @ $20/day	2,400
- Airfare	4 round trip @ $160/trip	640
Laboratory Soil Analyses		
- Moisture Density-Modified	5 samples @ $130/sample	650
Subtotal		$ 32,130
Survey	Lump Sum	1,500
Monitoring Well Installation (5 wells)	120 VF @ $100/VF	$ 12,000
Subtotal		$ 13,500
Decontamination:		
- Equipment	2 days @ $200/day	$ 400
- Disposal/Treatment	20 drums @ $80/drum	1,600
Subtotal		$ 2,000
Contingency	@ 10%	$ 27,731
TOTAL CLOSURE COST ESTIMATE		**$305,041**

APPENDIX B

ANNUAL POST-CLOSURE COST ESTIMATE
(YEAR ONE)
MARCH 1986

Item	Estimate	Cost ($)
Obtain Monitoring Well Samples	64 manhours @ $30/mh	$ 1,920
Laboratory Analytical (4 Samples/Well/ Quarter/First Year)	80 samples @ $275/sample	22,000
Post-Closure Care (Labor/Materials/ Equipment)	Lump sum	2,000
Subtotal		$25,920
Contingency	@ 10%	$ 2,592
TOTAL POST-CLOSURE COST ESTIMATE		**$28,512**

NUS CORPORATION

Park West Two
Cliff Mine Road
Pittsburgh, PA 15275
412-788-1080

R-31-11-4-2

FINAL CLOSURE PLAN

FOR

WASTE STORAGE AREA
EPA ID NO. ILD990785453
WILL COUNTY, ILLINOIS

THE CECO CORPORATION
OAK BROOK, ILLINOIS

NUS PROJECT NUMBER U495

JANUARY 1985

SUBMITTED FOR NUS BY:

EDWARD L. BAER
PROJECT MANAGER

APPROVED:

E. DENNIS ESCHER, P.E.
VICE PRESIDENT
GENERAL MANAGER

A Halliburton Company

CONTENTS

SECTION		PAGE
1.0	INTRODUCTION	1-1
2.0	SITE INVESTIGATION	2-1
2.1	GENERAL SITE CONDITIONS	2-1
2.2	WASTE CHARACTERISTICS	2-2
2.3	SUBSURFACE INVESTIGATION	2-2
2.3.1	SAMPLING AND ANALYSIS	2-3
2.3.2	GEOLOGY AND HYDROGEOLOGY	2-4
2.3.3	GEOCHEMISTRY	2-5
3.0	SUMMARY AND CONCLUSIONS	3-1
4.0	CLOSURE DESIGN AND DEVELOPMENT	4-1
4.1	EXCAVATION	4-1
4.2	SEPARATION	4-5
4.3	OFFSITE DISPOSAL	4-6
4.4	EROSION AND SEDIMENTATION CONTROL	4-6
4.5	SCHEDULE OF CLOSURE	4-8
5.0	DECONTAMINATION	5-1
6.0	CERTIFICATION OF CLOSURE	6-1
APPENDICES		
A	SUMMARY OF GROUNDWATER AND FILL MATERIAL ANALYSIS	A-1
B	PRIMARY DRINKING WATER/EP TOXICITY LIMITS	B-1
C	CLOSURE COST ESTIMATE	C-1

FIGURES

NUMBER		PAGE
1-1	SITE LOCATION MAP	1-2
2-1	GENERALIZED SITE CROSS-SECTION, NORTH-SOUTH	2-6
2-2	GEOLOGIC CROSS-SECTION A-A	2-7
2-3	GEOLOGIC CROSS-SECTION B-B	2-8
2-4a	TRILINEAR DIAGRAM - FILL WELLS & SURFACE WATER	2-10
2-4b	TRILINEAR DIAGRAM - BEDROCK WELLS	2-11
2-4c	TRILINEAR DIAGRAM - DEEP BEDROCK WELLS	2-12
2-5	STABILITY FIELD FOR LEAD-CARBONATE SYSTEM	2-13
2-6	STABILITY FIELD FOR LEAD-SULFATE-CARBONATE SYSTEM	2-15
4-1	CLOSURE DESIGN FLOW CHART	4-2

DRAWINGS

NUMBER		LOCATION
U495-01	GENERAL SITE PLAN	Rear Pocket
U495-02	IDENTIFIED FURNACE DUST AREAS	Rear Pocket

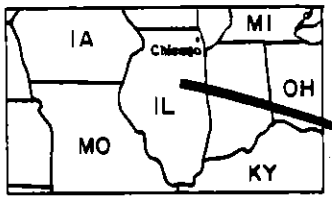
1.0 INTRODUCTION

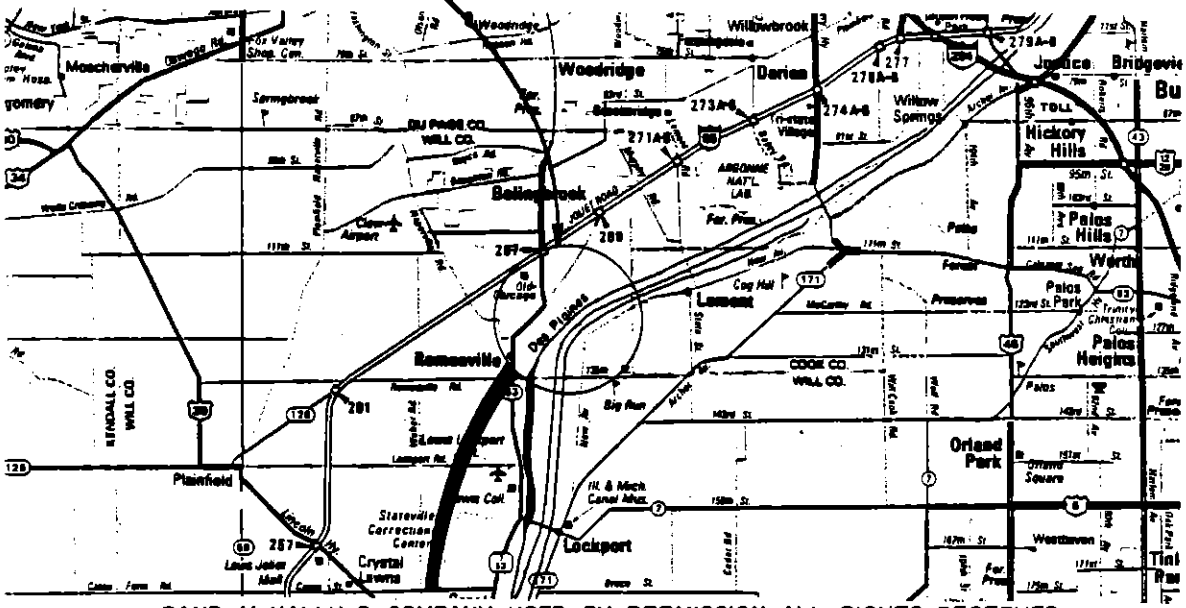
The facility, sometimes referred to as the Dudek Site, is owned by The Ceco Corporation and is located in Will County in the Town of Lemont, Illinois. The site was used for storage of steel-making by-products, including emission control dust from electric arc furnace steel making, which is currently classified as hazardous waste K061 by both the USEPA and the IEPA. The source of the dust was The Ceco Corporation-owned steel plant located about 500 feet northwest of the site. The plant is now owned by the Thomas Steel Company.

The site covers approximately 25 acres and is located immediately adjacent to the Illinois and Michigan Canal (See Site Location Map, Figure 1-1). The canal lies between the site and the steel plant. About 800 feet northwest of the site is another canal, the Chicago Sanitary and Ship Canal. The Des Plaines River is located about 2,000 feet northwest of the site. The site was formerly a quarry where dolomitic limestone was removed, producing an enclosed, relatively flat surface.

The Ceco Corporation has interim status to store hazardous waste KO6I in waste piles at a former plant site in Lemont, Illinois. This report presents the proposed methods and procedures that will be utilized to complete the final closure of this site in accordance with applicable Illinois Environmental Protection Agency (IEPA) and United States Environmental Protection Agency (USEPA) regulations. The information presented herein will identify and describe the procedures which will close the facility in a manner that meets the requirements of the applicable regulations.

The initial portion of this report discusses the results of surface and subsurface investigations undertaken to assist in the design of a closure plan. Pursuant to 35 Ill. Adm. Code Section 725.213(a), The Ceco Corporation has elected to remove the wastes presently in storage from the site in accordance with 35 Ill. Adm. Code Section 725.358.





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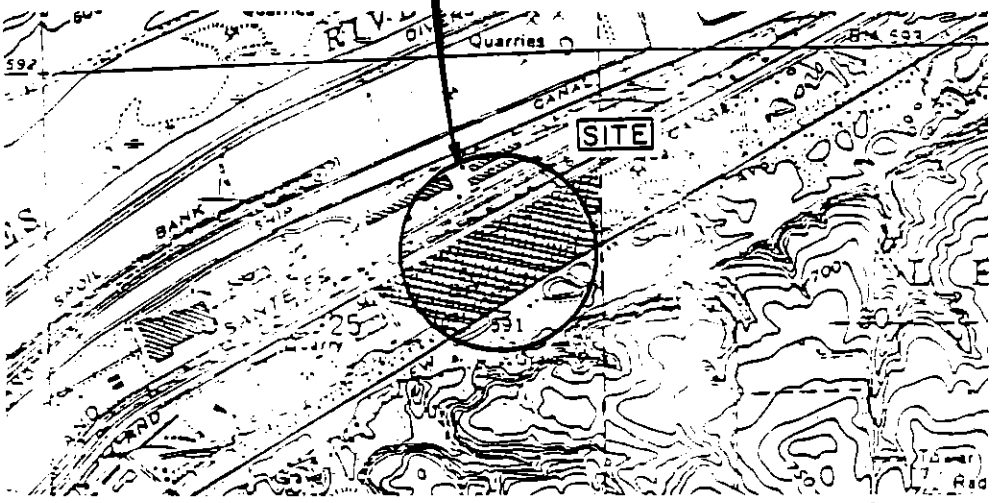
SCALE : 1" = 4.7 MILES



REPRODUCE FROM ROMEOVILLE QUADRANGLE, USGS, 1962. SCALE 1"= 2000'

FIGURE 1-1

SITE LOCATION MAP

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Closure operations will commence within 90 days after approval of this closure plan. Due to the chosen closure alternative, post-closure care and monitoring of this facility is not required and is not addressed herein.

Most of the furnace dust was removed and disposed of at a licensed hazardous waste disposal facility during 1981 and 1982. However, investigation revealed some furnace dust still remains in the fill. Furnace dust is no longer being deposited for storage at this site.

2.0 SITE INVESTIGATION

Onsite investigations have been performed. These have included general field reconnaissance and observation, discussions with plant personnel on past and present facility operations, evaluation of existing data, detailed waste analyses, surface and groundwater sampling and analyses, and subsurface sampling and analyses.

The objectives of the investigations were to

- Estimate the extent and distribution of the remaining furnace dust at the site
- Estimate to what extent, if any, the groundwater might be contaminated
- Estimate chemical interaction between groundwater and natural dolomitic limestone
- Identify and evaluate a method of closure

2.1 General Site Conditions

The site was originally a limestone quarry, which resulted in a large open pit and exposed dolomite bedrock with highwalls adjacent to the Illinois and Michigan Canal on the north, and the Illinois Central Gulf Railroad to the south. The large open area was then used as a fill area for steel mini-mill wastes such as slag, and other various demolition wastes and debris. The fill presently exists to an average depth of 15 feet on the surface of the exposed dolomite. The site was used from 1970 to 1980 for the storage of electric arc furnace emission control dust. The waste was deposited as a water slurry.

The other material in the fill consists primarily of slag, which ranges in grain size from very fine (less than number 100 sieve) up to sizes of 6 to 8 feet in diameter. Most of the slag in the fill appears to range between material that passes less than

the number 100 sieve to material 1 to 2 inches in diameter with occasional pieces that are about 6 inches in diameter. Piles of large slag exist across the surface of the site. The site is presently leased by The Ceco Corporation to a slag separation processor, who performs a symbiotic iron recovery function for the plant.

2.2 Waste Characteristics

The waste of concern is emission control dust resulting from electric arc furnace steel making. The USEPA has listed electric arc furnace emission control dust as a hazardous waste (K061) because such material can release hexavalent chromium, lead, and cadmium when subjected to the EP Toxicity extraction procedure as described in 40 CFR Part 261, Appendix VII. Physically, the dust exists as a fine particulate, 70 percent of which, by weight, is less than 5 microns in diameter. Appendix B of this report indicates the maximum limits for drinking water and EP Toxicity.

2.3 Subsurface Investigation

An investigation was undertaken to characterize the subsurface conditions that exist at this site. Refer to Drawing No. U495-01 for locations.

A series of 17 borings were placed in the fill, to the top of bedrock, in October of 1983. Of these borings, ten were developed as monitoring wells to sample groundwater. The borings were drilled using 6" dia. continuous flight, hollow-stem augers and split-barrel sampling. Wells were constructed of 2" dia. flush joint, threaded, PVC pipe, cased and fitted with 2" dia., 2-foot-long, slotted (0.010) PVC well screen at the base. The well screen was packed with clean, washed, fine gravel so that each screen would have at least 2 feet of gravel pack above the top of the screen. In August of 1984, 11 additional wells were placed from 5 to 10 feet into the bedrock so that this component of the groundwater regime might be analyzed and evaluated. These monitoring wells were placed using a 6" dia. air rotary bit. The standpipes consisted of 2"ϕ, flush joint, threaded PVC pipe fitted with a minimum of 5 feet of slotted well screen. The screen was also gravel-packed and a 3-foot-thick bentonite pellet seal was placed above the

gravel. These wells were fitted with a 6" dia. steel casing and locking cap cemented into place. In addition, 4 existing, deep (80 to 100 feet) wells had previously been placed between the canal and the site. All borings and wells were surveyed to obtain horizontal and vertical control.

CECO excavated an exploratory trench located immediately west of the former dust storage area in 1982. This trench extended approximately 150 feet to the west. In August of 1984, nine test pits surrounding the trench were excavated to bedrock in order to provide additional information about the composition of the fill material.

Several surface water samples were obtained and analyzed for the purpose of geochemical characterization of the surface and groundwater system.

2.3.1 Sampling and Analysis

Groundwater samples were obtained from the wells in 1983 and again in 1984. Water levels were measured at the time of sampling. Most wells were sampled on three different occasions. The two initial sampling rounds in 1983 were unfiltered. The last round, in 1984, obtained samples that were filtered in the field through a 45-micron filter prior to placement in prepared sample bottles. In addition, field pH, specific conductivity, and major cations and anions were obtained. This procedure allowed some comparison of analytical results between the total and dissolved constituents.

Chemical preservatives, minimum holding-time requirements, and analytical procedures used were in accordance with USEPA "Methods for Chemical Analyses of Water and Wastes." A minimum of 1 casing volume of water was purged by hand bailing prior to sampling. The water level was allowed to reach equilibrium before a sample was taken. All samples were obtained manually with a bailer.

A number of samples of fill material were obtained from various sources at various times. Samples were retained in clean, new sample jars with screw-top lids. Samples of fill material were collected from the borings and test excavations. All

samples were logged and labeled according to boring location and depth, prior to delivery to the laboratory.

Thirty-six groundwater and thirty-three samples of fill material from the investigations were chemically analyzed. Analyses of fill material were performed in order to characterize electric arc furnace dust. Therefore, lead, cadmium, and chromium were analyzed in each case. The samples were subjected to the EP Toxicity Test procedure as defined in the regulations. Appendix A summarizes the primary metals analyses for the groundwater and fill material samples obtained from the investigations.

2.3.2 Geology and Hydrogeology

The Dudek Site is located in the Central Lowlands physiographic province and lies within the valley proper of the Des Plaines River. Although the site lies within the valley of the Des Plaines River, the surface of the site lies above the 100-year flood plain elevation of the river.

The geology of the area in the vicinity of the site is characterized by relatively flat-lying, dolomitic bedrock overlain by river alluvium within the river valley and glacial deposits that form the surficial materials beyond the valley. The Des Plaines River, Chicago Sanitary and Ship Canal, and Illinois and Michigan Canal flow within the dolomitic bedrock in the vicinity of the site.

The Des Plaines River lies in the drainage basin of the Illinois River, and ultimately the Mississippi drainage area. The Des Plaines River flows generally to the south, and enters the Illinois River approximately 20 miles downstream from the site.

The dolomitic bedrock lying beneath and around the site belongs to the Silurian age, Joliet formation. The site is located within a former quarry where the dolomite was removed for use as building stone. Approximately 10 feet of limestone was removed from the estimated original ground surface down to approximately elevation 580. The fill at the site is located within the trench of the quarry, and a bedrock sill occurs between the fill and the Illinois and Michigan

Canal, as shown in Figure 2-1. The dolomite is exposed in a quarried area immediately northeast of the site. The dolomite is characterized by a yellow-brown (buff) color, moderate fracture densities with vertical fractures ranging from one-half foot to several feet apart, and horizontal bedding fractures which produce a general flaggy nature to the near surface bedrock. Bedrock is also exposed along the Illinois and Michigan Canal, which forms the northern boundary of the site. It is assumed that bedrock beneath the fill has a similar character.

Groundwater beneath and around the site flows to the northwest, toward the Illinois and Michigan Canal. Drawing U495-01 depicts the water table contours as defined from the water levels obtained in October, 1983. Subsequent water levels obtained in the monitoring wells in August 1984 indicate the same general configuration of the contours, with levels being approximately 1/2 to 1 foot lower than those shown on Drawing U495-01. Figures 2-2 and 2-3 are geological cross sections through the fill that indicate the relationship of the water table to the fill and bedrock.

Infiltration of precipitation through the surface of the fill is estimated to be moderate to high. The permeability of the fill and the near-surface bedrock is also estimated to be moderate to high. Groundwater flow through the bedrock is primarily through the fracture system developed in the rock. It is estimated that most of the water that infiltrates through the fill and enters the groundwater system discharges to the Illinois and Michigan Canal as base flow discharge. There are no drinking water sources downstream of the site that take water from the Canal.

2.3.3 Geochemistry

The purpose of the geochemical program was to estimate the possible migration of any heavy metals which might be migrating from dust storage areas identified in the first two well and soil sampling events and the interconnection between the groundwater in the fill and the bedrock. Placement of wells into both the fill and bedrock aided in assessing the interactions of the dolomite rock and infiltrating water.

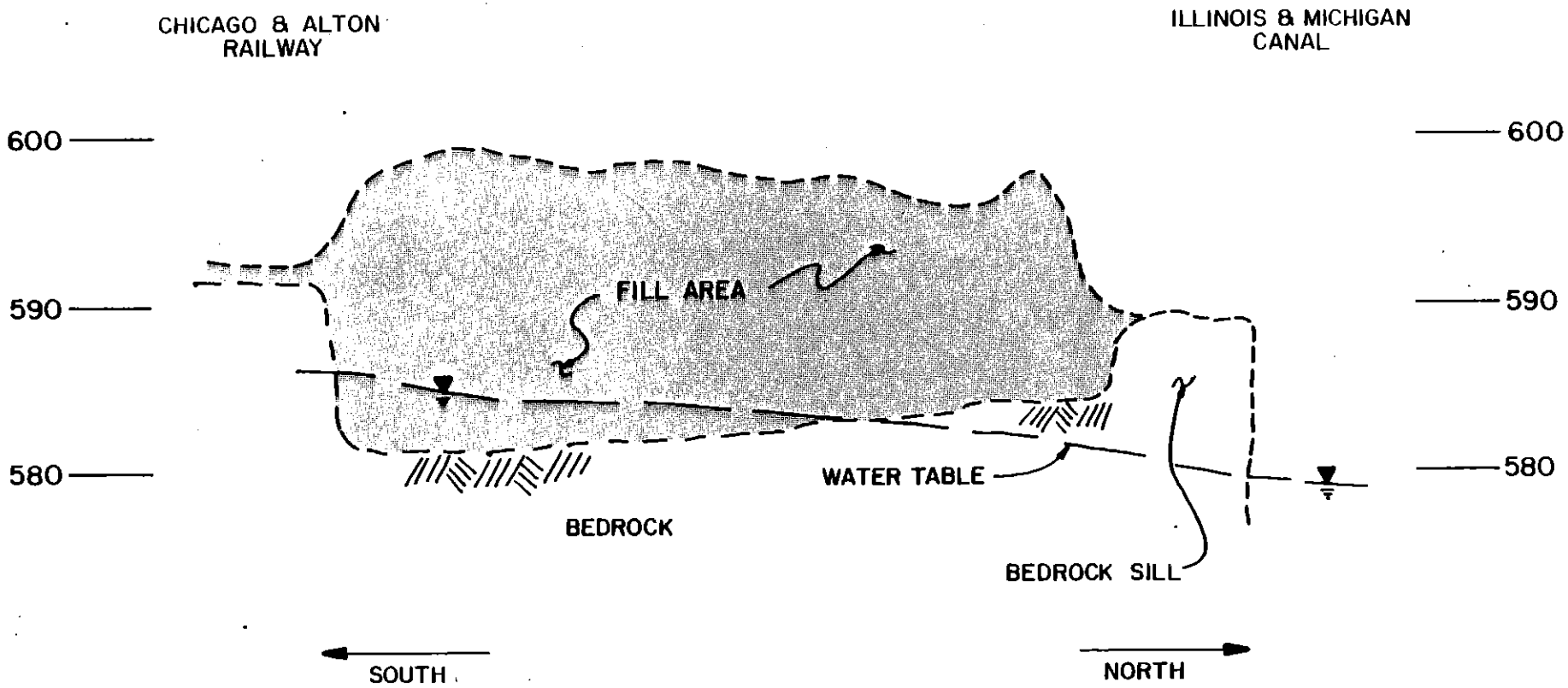

FIGURE 2-1

GENERALIZED SITE CROSS SECTION
NORTH-SOUTH
NOT TO SCALE

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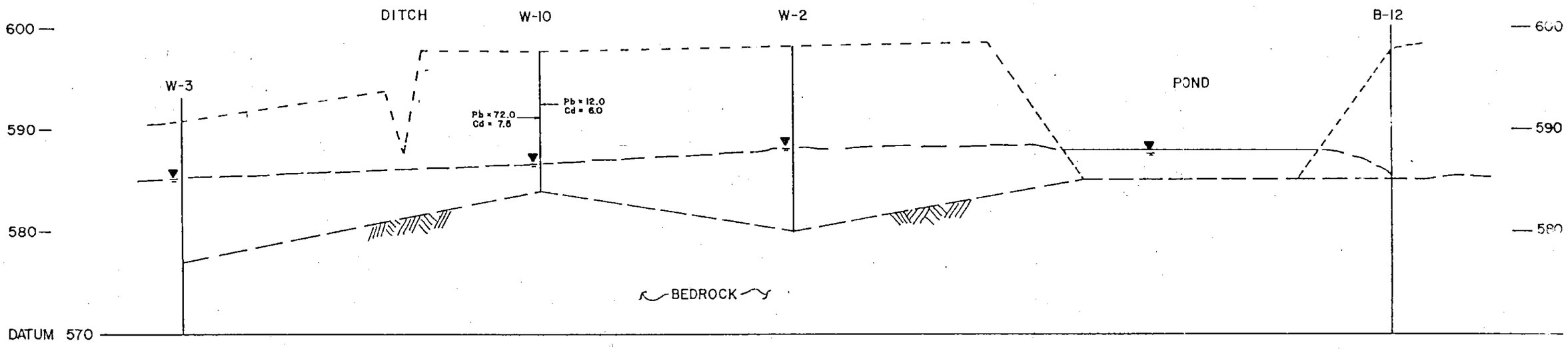
A Halliburton Company



LEGEND

▼ WATER LEVEL RECORDED ON 10/6/83

LOCATION OF FILL SAMPLE TAKEN FROM BORING WITH EP TOX ANALYSIS (MG/L)

FIGURE 2-2

SECTION A-A'

SCALE: HORIZONTAL 1" = 120', VERTICAL 1" = 10'

0 120 240

SCALE IN FEET

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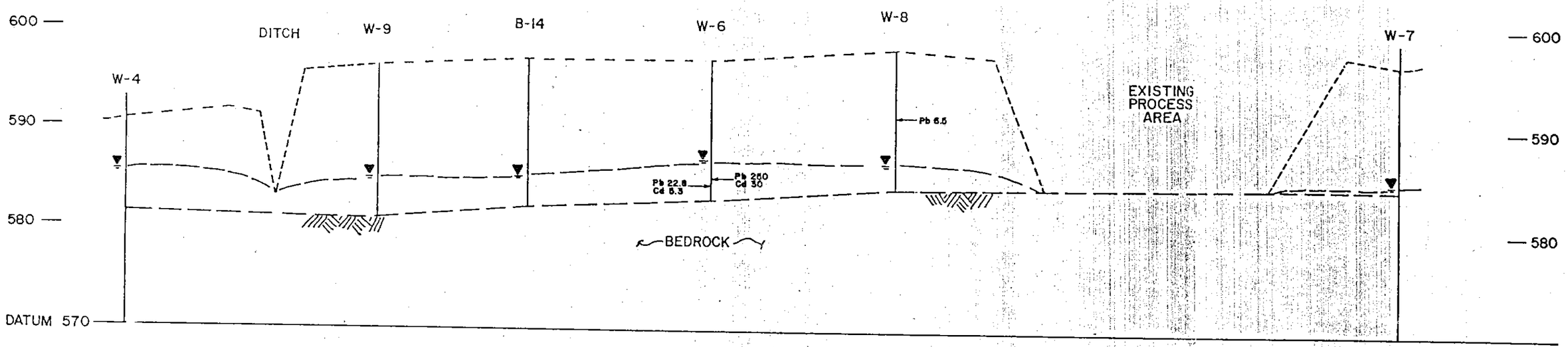

LEGEND

▼ WATER LEVEL RECORDED ON 10/6/83

LOCATION OF FILL SAMPLE TAKEN FROM BORING WITH EP TOX ANALYSIS (MG/L)

SECTION B-B'

SCALE: HORIZONTAL 1" = 120', VERTICAL 1" = 10'

0 120 240

SCALE IN FEET

2:8

FIGURE 2-3

NUS CORPORATION

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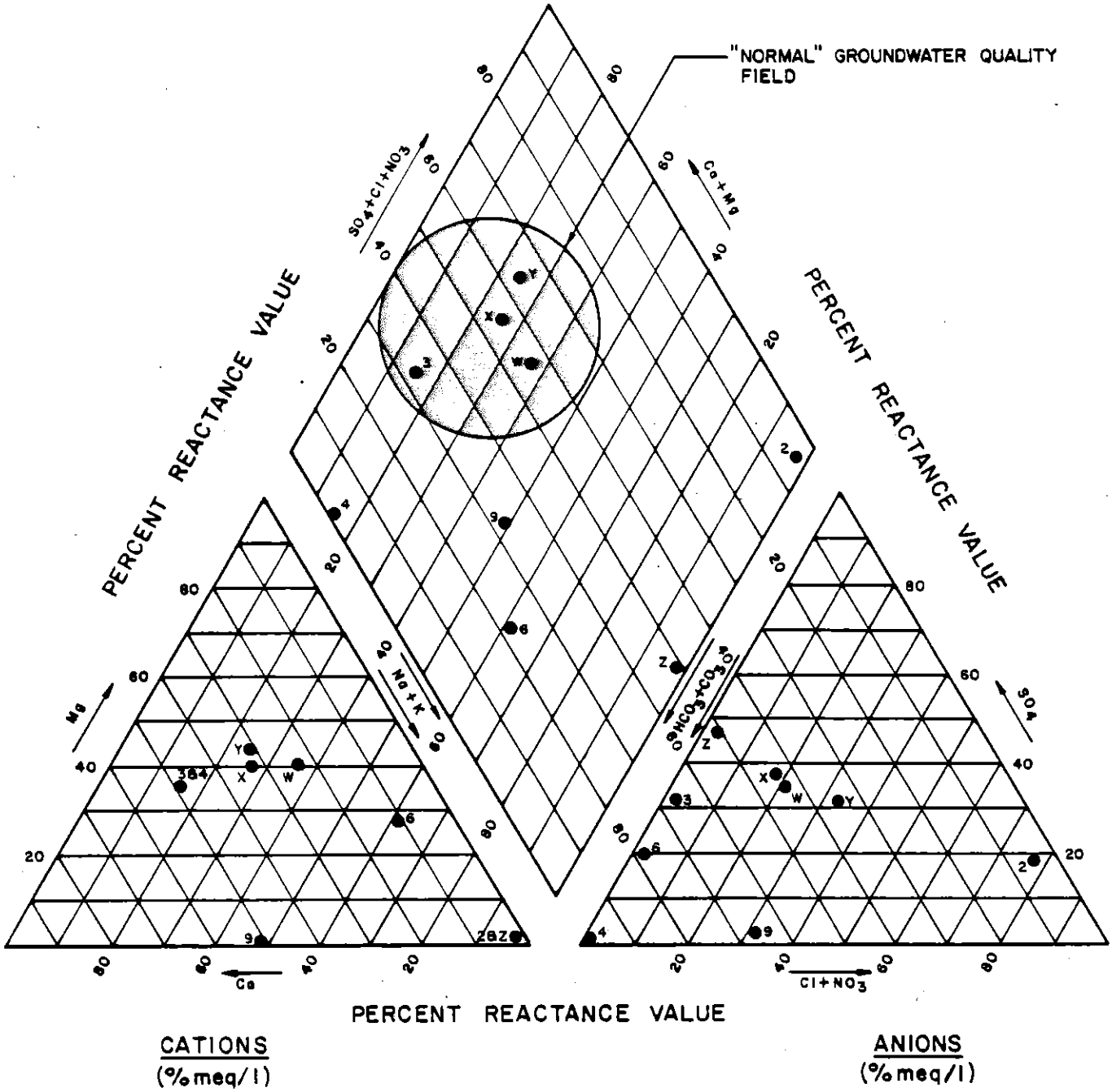
In order to chemically characterize the aquifer system, major anion and cation analyses were performed on filtered groundwater samples during the third sampling event (August 1984) at the site. These analyses are useful for determining groundwater types and for obtaining the concentration of major anions, such as bicarbonate and carbonate, which affect the solubility of the various heavy metal species.

Data from the anion-cation analyses were plotted on trilinear or Piper diagrams (Figures 2-4 a, b, and c). The graphical method of plotting allows for quick discrimination of water types in the diamond field of the plot. Comparing the wells completed in the fill, in the rock beneath the fill, and in the deep bedrock north of the site, most of the plots fall within a similar shaded area. This suggests that the waters are of similar quality and, therefore, are probably interconnected. This supports the hydrogeology results that indicate a flat gradient and predominantly horizontal flow.

Lead was chosen for analysis to estimate the potential for mobility of heavy metals at the site because it appears in more groundwater samples and at a higher concentration than either hexavalent chromium or cadmium. In addition, lead is likely to be more mobile than the other metals of concern.

The solubility of lead is primarily governed by the pH, oxidation-reduction potential, and the presence of other major chemical species. The extent that lead will migrate is affected by changes in the above factors which may cause precipitation or by sorption to clays or other mineral surfaces.

In a pure water system with few other constituents, the solubility of lead is not significantly affected by pH ranges. However, the introduction of other components such as carbonate will affect lead solubility. Figure 2-5 is an eH-pH stability diagram for a lead-carbonate system. As seen in this diagram, lead is soluble below a pH of 8.0, however, above pH 8.0, lead precipitates as the mineral cerussite ($PbCO_3$). Faust and Aly indicate that above pH 8.0, lead solubility will not be above 10 mg/l.



SAMPLES

WELL 2 CANAL (GATE END); (W)
WELL 3 CANAL (MID SITE); (X)
WELL 4 CANAL (FAR END); (Y)
WELL 6 LAGOON ; (Z)
WELL 9

FIGURE 2-4a

TRILINEAR DIAGRAM
FILL WELLS AND SURFACE WATER

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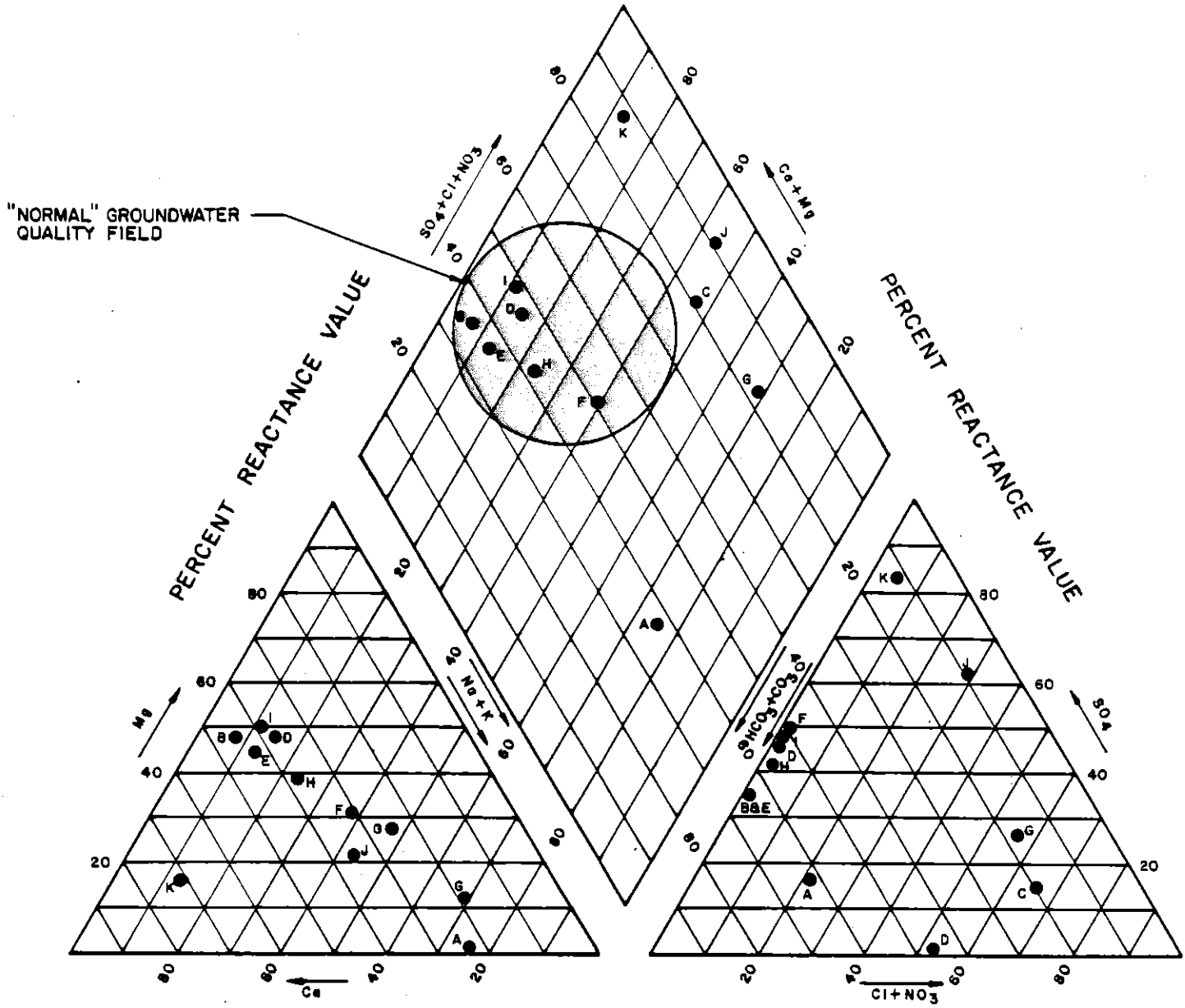

PERCENT REACTANCE VALUE

CATIONS
(% meq/l)

ANIONS
(% meq/l)

WELL SAMPLES

A	F
B	G
C	H
D	I
E	J
	K

FIGURE 2-4b

TRILINEAR DIAGRAM
BEDROCK WELLS

NUS CORPORATION
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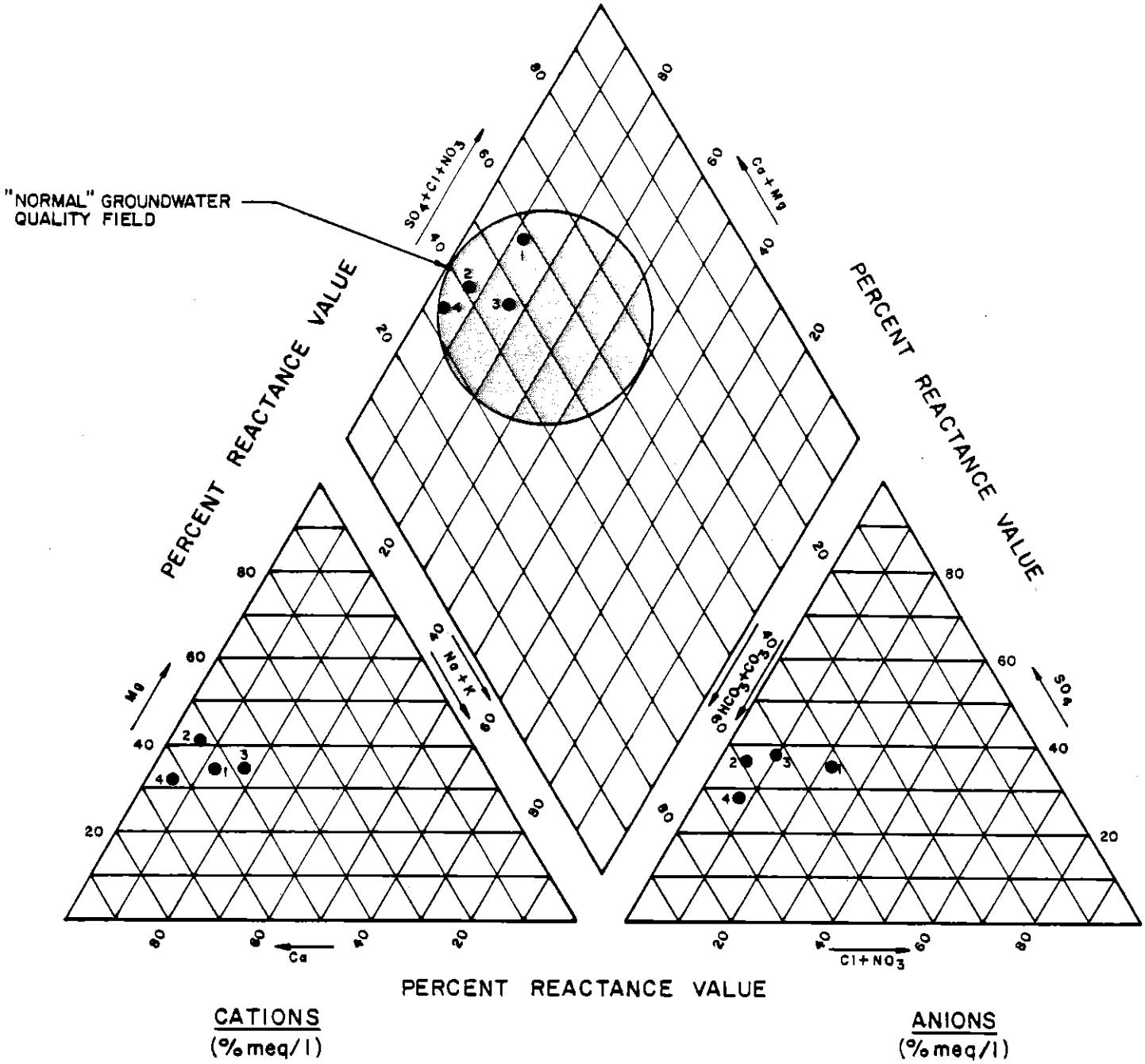

CATIONS
(% meq/l)

ANIONS
(% meq/l)

SAMPLES

OW-1
OW-2
OW-3
OW-4

FIGURE 2-4c

TRILINEAR DIAGRAM
DEEP BEDROCK WELLS

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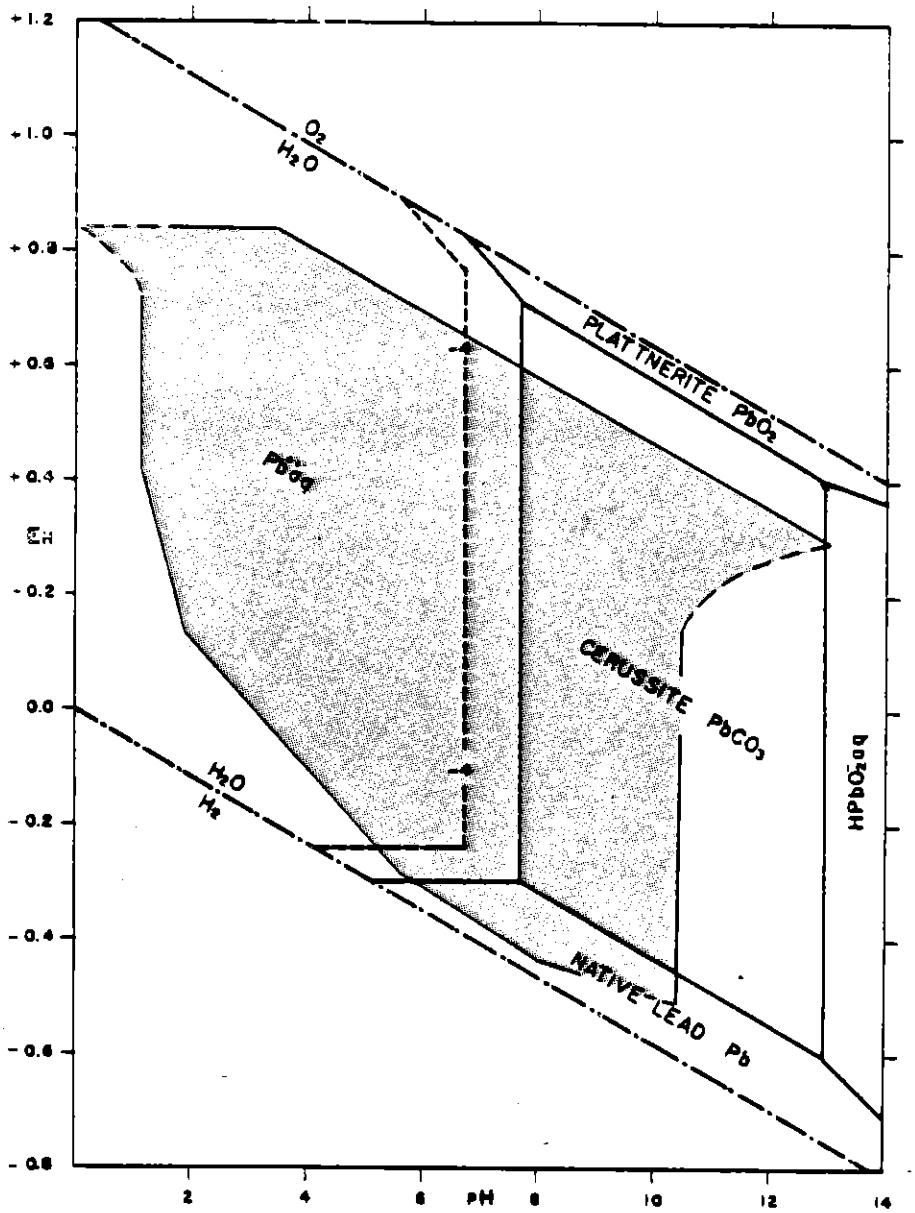


FROM GARRELS AND CHRIST, 1965

DISTRIBUTION OF Eh-pH MEASUREMENT OF NATURAL AQUEOUS ENVIRONMENTS

FIGURE 2-5

STABILITY FIELD FOR Pb-CO_2-H_2O SYSTEM

NUS CORPORATION
A Halliburton Company

Further chemical complexing can occur by introducing sulfate into the system. This anion occurs at the site and will have an effect on solubility. Figure 2-6 depicts the stability or solubility relationships of the sulfate, carbonate, and lead systems. In the diagram, the soluble species of lead is limited to the pH range below 2.0.

At this site, acidic pH conditions do not exist because of the presence of dolomite ($MgCO_3$) and because the groundwater naturally has high concentrations of bicarbonates. Lead in solution would therefore tend to precipitate very rapidly. The naturally alkaline pH conditions and the presence of relatively high carbonates and bicarbonates also support the conclusion that the filtered groundwater samples more accurately depict heavy metal concentrations of lead than do the unfiltered results. Once groundwater enters into the rock, complexing ions, such as carbonates from the dolomite, combine to immobilize the metals.

Hem (1976) indicated that the following equation could be used for waters with low ionic activity (low dissolved solids), like those that exist at this site as determined by geochemical analyses:

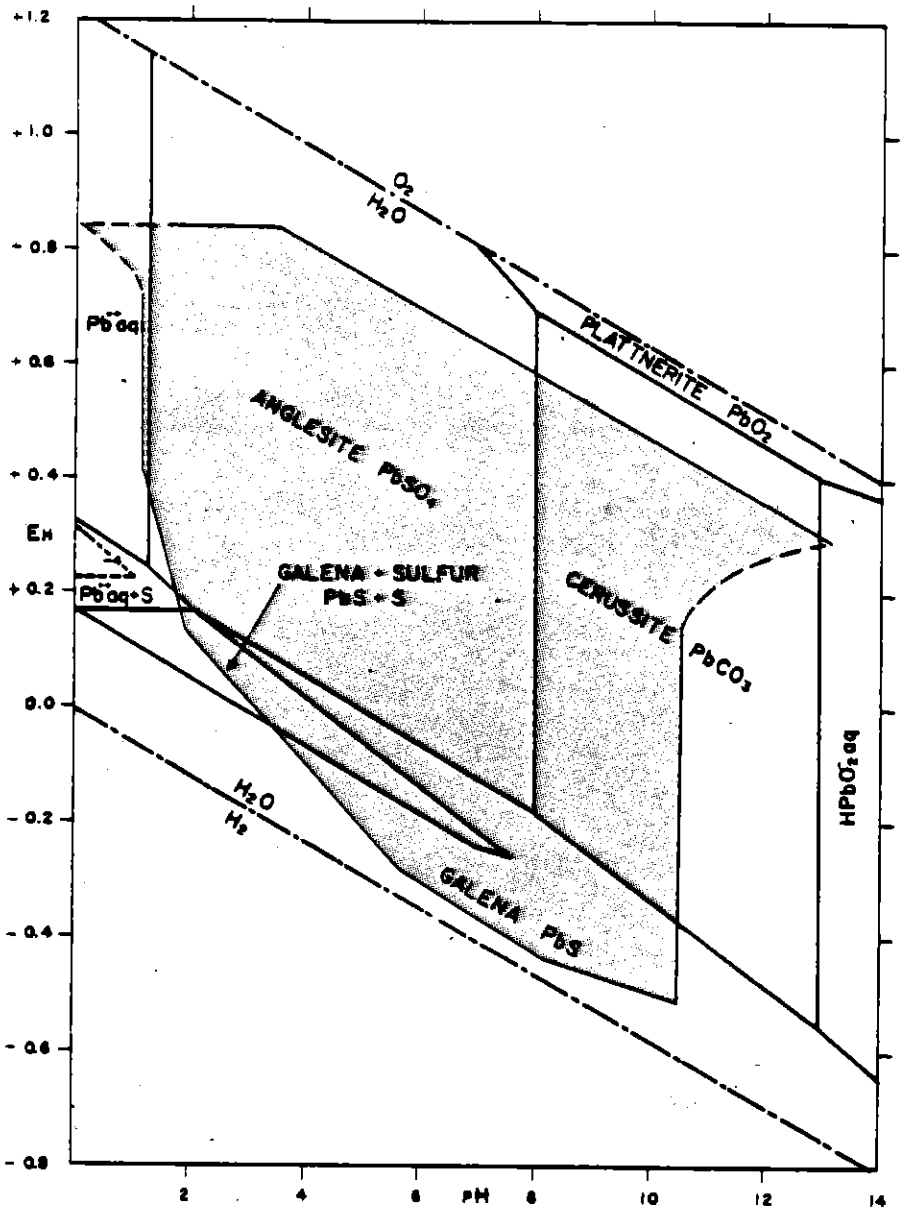
$$\frac{[Pb^{+2}]\,[HCO_3^-]}{[H^+]} = 10^{-3.09}$$

$HCO_3 + H^+ \rightleftharpoons Pb^{+}$

Substituting lead concentrations from the third (filtered) s
following predicted and observed values exist:

Well	Lab pH	HCO_3 (mg/l)	Pb Predicted (mg/l)	Pb Observed (Filtered) (mg/l)	Pb Observed (Unfiltered) (mg/l)
2	9.00	390*	3×10^{-5}	3.5×10^{-1}	2.9
3	7.20	360	2×10^{-3}	3.0×10^{-2}	3.0×10^{-2}
6	7.80	850	2×10^{-4}	4.4×10^{-1}	4.5

* Sum of $HCO_3 + CO_3$



FROM GARRELS AND CHRIST, 1965

DISTRIBUTION OF Eh-pH MEASUREMENT OF NATURAL AQUEOUS ENVIRONMENTS

FIGURE 2-6

STABILITY FIELD FOR $Pb\text{-}S\text{-}CO_2\text{-}H_2O$ SYSTEM

NUS CORPORATION
A Halliburton Company

This data indicates that the observed, filtered concentrations are a few orders of magnitude higher than the predicted values. The reasons may be the effect of colloidal size particles passing through the 45-micron filter, or the eutectic effect of other components (higher ionic activity) in the system. The observed, unfiltered results are generally higher than the predicted, filtered results. Regardless, the concentrations observed from the filtered samples more closely parallel the predicted values than the unfiltered samples, therefore, the filtered samples more accurately represent actual groundwater quality. Filtering of samples with a smaller-sized filter would most likely result in even lower observed values.

The above discussion considers only the precipitation mechanisms that affect heavy metal migration in groundwater. Many researchers indicate that lead migration is reduced even more by the effect of sorption. A study on sorptive effects is not warranted, however, because the precipitation process substantially precludes migration in the present circumstances.

3.0 SUMMARY AND CONCLUSIONS

The geology/hydrogeology investigation reveals that groundwater flow is to the northwest. Groundwater flow is fed primarily by quickly infiltrating precipitation through the permeable, overlying fill material. This flow occurs in the fractured bedrock beneath the fill. The water table intersects the base of the fill and lies within the fill along the southern boundary of the site. This aquifer occurs in both the dolomite rock and the fill.

The geochemical study confirms that only one aquifer exists at the site. Heavy metal migration is inhibited substantially by the physio-chemical processes of precipitation and sorption. No heavy metal groundwater plume was identified to be emanating from the furnace dust storage areas, nor is migration of heavy metals anticipated providing physio-chemical conditions remain unchanged.

The subsurface investigation results in two primary conclusions regarding this site:

- Because of natural geochemical processes, any heavy metals present are not being placed into solution, and hence, are not migrating.

- The fill portions still containing furnace dust, despite earlier excavation of the primary dust storage areas, can be identified for further removal activities.

Areas targeted as potential furnace dust repositories are indicated on Drawing U495-02. These target areas represent those portions of the site where the investigation has shown the presence of material which exhibits EP Toxicity for lead, cadmium, or hexavalent chromium.

The areas indicated define the apparent boundaries of the remaining furnace dust deposits at the site. They also include substantial amounts of inert fill material.

It is these areas, therefore, that become the focus of the closure operation.

4.0 CLOSURE DESIGN AND DEVELOPMENT

This section describes the proposed, final closure plan for the furnace dust storage areas identified by the foregoing investigations.

This closure plan involves excavation of the areas determined from scientific exploration and analyses to contain any furnace dust which remains at the site. Also, included herein are the actions necessary and required to complete the closure in an environmentally responsible manner. These actions include a plan for separation of furnace dust from inert fill components and offsite transportation and disposal of furnace dust at a licensed, hazardous waste disposal facility. Excavation, separation, and disposal will occur concurrently. Figure 4-1 indicates the concept employed in this closure design.

During closure operations, relevant health and safety procedures will be maintained by the personnel to prevent inhalation or ingestion of air-borne particulates that may be generated during activities. These procedures are not addressed here, however upon closure plan approval, a Site Health and Safety Plan will be prepared and submitted.

Appendix C provides an itemized cost estimate to complete the closure as outlined in this plan.

4.1 Excavation

Drawing U495-02 indicates the areas to be excavated to existing bedrock (approximately 15 feet below the surface of the fill). Excavation can be performed by backhoe, front-end loader, and elevating scraper. This equipment will enable personnel to be selective in excavation and allow greater flexibility of fill material separation. A total of 58,300 cubic yards of bulk fill material is estimated for excavation.

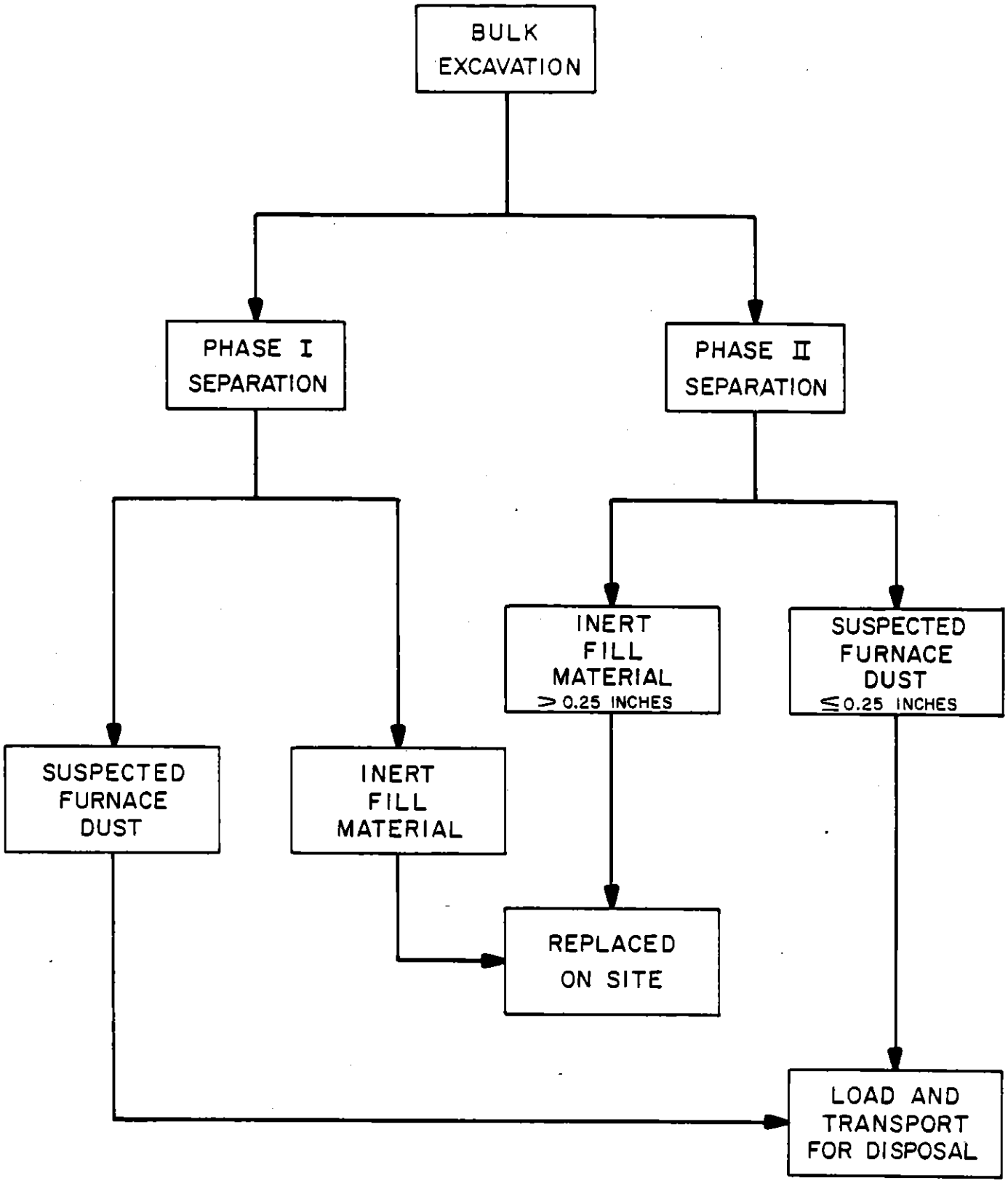


FIGURE 4-1

CLOSURE DESIGN FLOW CHART

NUS CORPORATION
A Halliburton Company

Excavation must progress in a methodical manner within each area. As excavation progresses, lenses or pockets of furnace dust will be identified. When encountered, this material will be carefully removed and carefully segregated for subsequent disposal as a hazardous waste. Fill material that is obviously not furnace dust will be removed from the immediate area and stored for eventual replacement after excavation operations are completed. Fill material which is believed to be other than furnace dust, but nonetheless closely exhibits the physical characteristics of furnace dust, will be taken to the separation process area for further mechanical separation (see Section 4.2).

The moisture content of the fill material prior to processing must be such that separation can occur unhindered by clumping or agglomeration of the finer particles. Reduction in moisture may be obtained by the consecutive removal of shallow (6-inch) layers of the uppermost fill material. As each layer of material is exposed, evaporation and solar drying of the next layer can occur. Additional drying of the material, when necessary, may include spreading and discing to allow the moisture content of the fill to decrease to a point where more effective separation may be obtained. An onsite staging area will be designated for performing the spreading and discing.

As excavation/separation progresses, the exposed slopes of the excavated area will be maintained at a 2:1 horizontal to vertical ratio or greater to preclude any sliding or intermixing of inert fill and potential furnace dust deposits, and to accommodate the use of equipment.

Dewatering of the open excavations may become necessary because of either precipitation or drainage of in-situ water. Provisions for dewatering will consist of gasoline-powered pumps in sufficient number and of sufficient capacity, which will draw off the accumulated water, and discharge to a holding tank or tank truck. This water will be periodically sampled and analyzed for elevated levels of lead, cadmium or hexavalent chromium. Prior arrangements will be made for analyses with a local laboratory for this purpose to ensure a rapid turnaround time for the samples. Once analyzed, the results will determine if treatment prior to disposal is

necessary to reduce the wastewater to below existing Illinois effluent limits. It is expected that, because much of the work will be performed above the water table, large amounts of water will not be encountered.

The recommended treatment method for the water is neutralization and precipitation, which are well-developed processes currently being applied to the full-scale treatment of many industrial wastewaters containing soluble heavy metals. The operating parameters and economics are well-defined and documented. Extensive research and development are usually unnecessary in determining whether a particular waste stream is amenable to this treatment. Past experience and simple laboratory treatability tests are all that is necessary in determining applicability.

With regard to wastewater that could be categorized as hazardous, the most common existing application is the removal of toxic heavy metals from wastewater by lime treatment. Practically every industry that discharges a process wastewater contaminated with suspended and/or precipitable pollutants employs some form of precipitation and/or sedimentation. Sedimentation is currently in widespread use for the removal of suspended solids; and precipitation (usually with lime) is used to remove the heavy metals.

Neutralization, precipitation, and sedimentation are generally practical, effective, and relatively low-cost processes for the removal of precipitable, soluble substances and suspended particles from aqueous waste streams. Energy consumption is very low compared to other processes. The processes produce a waste sludge.

Once excavation of the areas is completed, remaining, inert fill material, which was separated either by hand or mechanical processing, will be backfilled into the excavations. The excavated depressions will be returned to the original pre-excavation elevation by grading with existing fill material to provide a uniform slope and appearance and to allow positive drainage of surface water.

4.2 Separation

As previously stated, furnace dust consists of finely divided particles generally less than 5 microns in diameter. Because much of the fill material consists of larger-diameter non-hazardous components, excavated material can be reduced in volume by physical separation of the larger-diameter inert fill components. This concept would allow much of the inert fill material to remain on site.

Separation of the material will occur in two phases. Phase I will involve a visual examination and determination at the point of excavation. Large slag, demolition material, and other debris will be segregated by hand or by the equipment, as required.

Phase II separation will utilize the existing onsite process. This operation is an iron recovery process which uses vibrating screens of varying sizes. Furnace slag is placed in large hoppers above the screens that separate the slag into fractions as small as 7/16 inch in size. Smaller-sized screens are available for further particulate size reduction. Consideration of the fill material and the screening process suggests that a volume reduction of approximately 80 percent can be realized by utilizing a 1/4-inch screen while still providing a margin of assurance that all furnace dust will be removed. Of the total volume of excavated material, approximately 20 percent (or 11,660 cubic yards) would require offsite disposal as a hazardous waste.

Present experience indicates that a 10 cubic-yard truckload of furnace slag is processed in approximately 30 minutes. However, it is possible to accelerate the cycle time needed by making adjustments in the conveyor belt feed arrangement. An estimate of processing 10 cubic yards of fill material is expected to be about 15 minutes. The total time required to perform the separation process can also be estimated.

For the purpose of the above estimate the following assumptions are made:

- Ten-hour work-day/50 hours per week (5 days/week)
- Suitable weather conditions will exist (April to October)
- All excavated material will require processing
- All material passing through a 1/4-inch screen will be disposed of as a hazardous waste.

Given an estimated 58,300 cubic yards total volume of fill excavated, it is anticipated that 145 working days or 29 calendar weeks will be required to successfully process the fill material. This would result in an 80-percent reduction of the total excavated volume, or 11,660 cubic yards for disposal off site as a hazardous waste.

4.3 Offsite Disposal

Disposal shall be offsite in an approved landfill specifically permitted to accept electric arc furnace dust. The disposal facility, located in Calumet City and operated by Waste Management, Inc., is such a facility and is located approximately 35 miles from the Dudek Site. This facility presently accepts electric arc furnace dust generated by Thomas Steel Company.

The fill material directly identified as furnace dust during Phase I, and all material less than 1/4-inch resulting from the mechanical separation process, will be disposed of as hazardous waste. A licensed hauler will be obtained to transport the material to the disposal facility and all necessary manifests will be prepared.

4.4 Erosion and Sedimentation Control

The climate is predominantly continental, ranging from relatively warm in summer to relatively cold in winter. In late autumn and winter, air masses that are initially very cold often reach the site only after being tempered by passage over one or more of the Great Lakes. Similarly, in late spring and summer, air masses reaching the site from the north, northeast, or east are cooler because of movement over

the Great Lakes. Very low winter temperatures most often occur in air that flows southwest toward Lake Superior. In summer, the higher temperatures are with south or southwest flow and are, therefore, not influenced by the lakes.

Precipitation falls mainly from air that has passed over the Gulf of Mexico. In winter, snow fall is light, but locally heavy near the lakeshore, with Lake Michigan the principal moisture souce. Summer thundershowers are often locally heavy and variable. Longer periods of continuous precipitation are mostly in autumn, winter, and spring. About one-half of the precipitation in winter, and about 10 percent of the yearly total precipitation, falls as snow. Snowfall, from month-to-month and year-to-year, is greatly variable. There is a 50 percent likelihood that the first and last 1-inch snowfall of a season will occur by December 5 and March 20.

The average monthly values for precipitation and temperatures are presented below. The averages are calculated over a 24-year period of record, 1958 through 1981 inclusive.

	Average Precipitation (Inches)	Average Temperature (°F)
January	1.64	20.4
February	1.30	25.0
March	2.60	36.1
April	3.87	48.8
May	3.26	59.0
June	4.19	68.5
July	3.50	72.8
August	3.63	71.9
September	3.86	64.6
October	2.05	53.1
November	2.12	40.0
December	2.15	27.0
Annual Average	34.17	49.0

Source: Climatological Data, Annual Summaries for Chicago, Illinois; National Oceanic and Atmospheric Administration; National Climatic Center, Asheville, North Carolina

The surface of the site is flat, with virtually no upslope watershed. Erosion of the work site during closure activities would occur primarily as a result of direct precipitation. To prevent runoff from occurring, an earthen mound or dike will be placed above the top of the excavation areas to divert potential runoff around the exposed slopes. Straw bales may be staked at strategic points where water-borne sediment is, or may likely occur, while closure activities are ongoing. A diversion channel and sedimentation basin system is not considered necessary or practical. Once closure operations have ceased, erosion control will not be required.

4.5 Schedule of Closure

The following sequence of activities will occur during closure:

1. Modify existing onsite feed arrangement to expedite separation processing.

2. Prepare erosion control berm(s) and place straw bales as necessary about excavation areas.

3. Prepare haulways and staging areas, as required, from excavation area(s) to separation area.

4. Commence excavation operation.

5. Commence separation operation.

6. Load and transport processed material for disposal at a licensed hazardous waste disposal facility.

7. Replace inert material into excavated area(s) after excavation operations cease at that area.

5.0 DECONTAMINATION

At the completion of closure activities, all vehicular equipment that has come into contact with the waste material shall be thoroughly decontaminated with high-pressure steam. A decontamination area will be designated onsite. Decontamination water will be collected in 55-gallon drums and, when full, labeled and removed for treatment or disposal as required. Equipment or clothing that cannot be decontaminated onsite will be double-bagged and transported for decontamination or disposal.

6.0 CERTIFICATION OF CLOSURE

When closure is completed, The Ceco Corporation will submit to the Illinois Environmental Protection Agency a certification by both Ceco and an independent, registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

APPENDIX A

APPENDIX A

SUMMARY OF GROUNDWATER AND FILL MATERIAL ANALYSES
ALL UNITS IN mg/l

Well*	1983 Groundwater -- 1st Set (Unfiltered)		
	Lead	Cadmium	Chromium
1A	160*	5.3*	4.0*
2	70*	1.44*	1.38*
3	< 0.03	< 0.005	< 0.01
4	- - - - - - - - - - - -	Dry, No Sample	- - - - - - - -
5	- - - - - - - - - - - -	Dry, No Sample	- - - - - - - -
6	1.28*	0.1*	< 0.01
7	- - - - - - - - - - - -	Dry, No Sample	- - - - - - - -
8	9.68*	0.26*	0.34*
9	0.35*	0.007	0.26*
10	5.85*	0.18*	0.28*
Old Well 1	< 0.03	< 0.005	0.01
Old Well 2	< 0.03	< 0.005	< 0.01
Old Well 3	< 0.03	< 0.005	0.01
Old Well 4	< 0.03	< 0.005	0.01

Well*	1983 Groundwater -- 2nd Set (Unfiltered)		
	Lead	Cadmium	Chromium
1A	34*	1.1*	0.21*
2	2.93*	0.082*	0.1*
3	< 0.03	0.010	0.01
4	0.12*	0.007	0.02
5	- - - - - - - - - - - -	Dry, No Sample	- - - - - - - -
6	4.55*	0.16*	0.09*
7	- - - - - - - - - - - -	Dry, No Sample	- - - - - - - -
8	6.94*	0.17*	0.18*
9	0.99*	0.032*	0.42*
10	6.55*	0.195*	0.16*

Well*	1984 Groundwater -- 3rd Set (Filtered) Lead	Cadmium	Chromium	Field pH
1A	- - - - - - - - - - - - - - Dry, No Sample - - - - - - - - -			
2	0.35*	0.023*	0.01	8.66
3	< 0.03	< 0.005	< 0.01	7.82
4	< 0.03	< 0.005	0.01	7.23
5	- - - - - - - - - - - - - - Dry, No Sample - - - - - - - - -			
6	0.37*	< 0.005	< 0.01	7.90
6 (duplicate)	0.41*	< 0.005	< 0.01	7.90
7	- - - - - - - - - - - - - - Dry, No Sample - - - - - - - - -			
8	- - - - - - - - - - - - Demolished, No Sample - - - - - - -			
9	< 0.03	< 0.005	< 0.01	10.45
10	- - - - - - - - - - - - - - Dry, No Sample - - - - - - - - -			

Well**	Lead	Cadmium	Chromium	Field pH
A	< 0.03	< 0.005	< 0.01	11.25
B	< 0.03	< 0.005	< 0.01	7.54
C	< 0.03	< 0.005	< 0.01	7.60
D	< 0.03	< 0.005	< 0.01	7.38
E	< 0.03	< 0.005	< 0.01	7.39
F	< 0.03	< 0.005	< 0.01	7.26
G	< 0.03	< 0.005	< 0.01	8.95
H	< 0.03	< 0.005	< 0.01	7.03
I	< 0.03	< 0.005	< 0.01	7.30
J	< 0.03	< 0.005	< 0.01	8.43
K	< 0.03	< 0.005	< 0.01	8.20

* Completed into fill material.
** Completed into bedrock.

FILL MATERIAL SAMPLES -- EP LEACHATE ANALYSES

Boring	1983 Lead	1983 Cadmium	1983 Chromium
1A	1.29	0.23	0.02
3	< 0.03	0.011	0.02
4	0.21	0.093	< 0.01
6	41*	7.4*	0.02
	250*	30*	0.02
	22.8*	5.3*	0.02
9	0.03	0.005	< 0.001
12	< 0.03	< 0.005	< 0.001
14	0.10	0.085	0.01
17	< 0.03	0.007	0.02

Boring	1984 Lead	1984 Cadmium	1984 Chromium
2	0.05	0.062	< 0.01
	0.07	0.059	< 0.01
5	180*	6.3*	0.02
	70*	3.0*	0.01
	1.2	0.034	0.01
7	0.39	0.058	< 0.01
8	3.3	0.25	< 0.01
	6.5*	0.75	< 0.01
	3.7	0.42	0.01
10	12*	6.0*	0.03
	72*	7.5*	0.05
	0.30	0.14	< 0.01

FILL MATERIAL SAMPLES--EP LEACHATE ANALYSES

	1984		
	Lead	Cadmium	Chromium
Test Pit 1	60*	13*	< 0.01
Test Pit 2	0.11	0.011	< 0.01
Test Pit 3	2.00	0.067	< 0.01
Test Pit 4	1.56	0.400	< 0.01
Test Pit 5	2.06	0.527	< 0.01
Test Pit 6	- - - - - - - - - - - - No Dust Visible - - - - - - - - - -		
Test Pit 7	0.28	0.022	< 0.01
Test Pit 8	- - - - - - - - - - - - No Dust Visible - - - - - - - -		
Test Pit 9	5.00*	0.389	< 0.01

* These values meet or exceed EPA maximum limits, see Appendix B.

APPENDIX B

APPENDIX B

EPA INTERIM PRIMARY DRINKING WATER/EP TOXICITY LIMITS

Parameter	Maximum Limits* Primary Drinking Water	EP Toxicity
Arsenic (As)	0.05	5.0
Barium (Ba)	1.0	100.0
Cadmium (Cd)**	0.01	1.0
Chromium (Cr^{+6})**	0.05	5.0
Lead (Pb)**	0.05	5.0
Mercury (Hg)	0.002	0.2
Selenium (Se)	0.01	1.0
Silver (Ag)	0.05	5.0

* Values are in mg/l.
** Basis for listing of electric arc furnace emission control dust.

APPENDIX C

APPENDIX C

CLOSURE COST ESTIMATE
JANUARY 1985

Item	Estimate	Cost
Mobilization/Demobilization	NA	$ 0
Erosion Control	Lump Sum	2,000
Excavation (Incl. Labor)	58,300 cy @ $1.00/cy	58,300
Phase II Separation (Incl. Labor)	58,300 cy @ $0.75/cy	43,725
Transportation Offsite	11,660 tons @ $0.15/ton/mi.*	61,215
Disposal (@ Calumet City)	11,660 cy @ $30.00/cy	349,800
Replacement of Inert Material	46,640 cy @ $0.70/cy	32,648
	SUBTOTAL	547,688
Health and Safety	0.15 (Excavation & Separation)	15,304
	SUBTOTAL	562,992
Dewatering:		
Pump Rental	2 Pumps @ $75/day/145 days	10,875
Wastewater Analysis	15 Samples @ $75/Sample	1,125
	SUBTOTAL	574,992
Wastewater Treatment:		
Onsite Holding Tank	5,000 Gal. Installed	7,500
Mixer/Motor	1 HP	2,000
Labor	1 Man-day/Batch/4 Batches	600
Sludge Disposal	@ Calumet City, 2 tons	150
Miscellaneous	Permits, Chemicals, etc.	3,000
	SUBTOTAL	588,242
Decontamination:		
Rental of Steam Equipment	2 days @ $200/day	400
Disposal of Decon Water	20 drums @ $40/drum	800
	SUBTOTAL	589,442

* Assume 1 cy ≈ 1 ton

APPENDIX C
CLOSURE COST ESTIMATE
JANUARY 1985
PAGE TWO

Item	Estimate	Cost
Closure Certification:		
1 Professional Engineer	24 hrs @ $60/hr	1,440
Expenses	3 days @ $100/day	300
	SUBTOTAL	591,182
Contingencies	@ 10%	59,118
	TOTAL ESTIMATED CLOSURE COST	$650,300

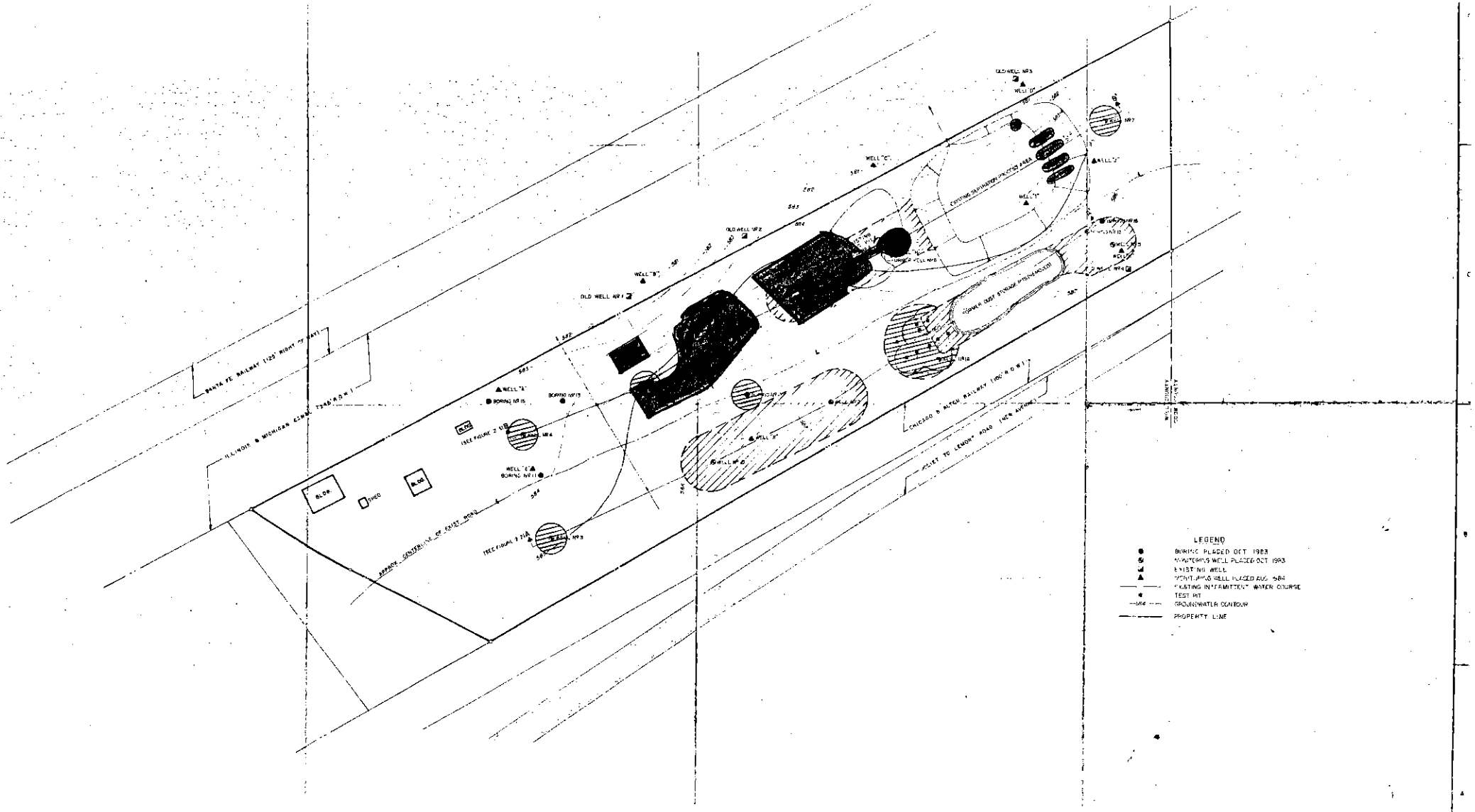
SUMMARY

1985 EXCAVATION FIELD LOG

ESTIMATED CUBIC YARDS FOR FINAL CLOSURE PLAN

WEEK ENDING	CU. YDS. EXCAVATED	EXTENDED CUBIC YARDS EXCAVATED	RELOCATED MATERIAL CUBIC YARDS	ADDITIONAL SPREADING FOR SEPARATION	BACKHOE DIRECT DUMP INTO PIT	MATERIAL* PILED AT STORAGE PILE	BACKHOE HRS.	FRONT END LOADER FR35 HRS.	FRONT END LOADER FIAT-ALLIS 645 HRS.	CRAWLER 250 LOADER	TRUCKS	SEPARATION UNIT	
9-7-'85	1,550	–	–	–	–	–	29 1/2	32	–	–	10	–	
9-14-'85	4,104	–	–	1,100 CY (SPREAD 3 TIMES)	–	–	37 1/2	32	–	–	17	–	
9-21-'85	9,005	–	–	–	–	5,771	37	43	5	–	3	9 1/2	
9-28-'85	5,345	–	1,000	–	1,266	500	48	24 1/2	45	2 1/2	12	25 1/2	
10-5-'85	4,589	–	–	–	–	1,096	48	46	24	–	–	24	
10-12-'85	2,708	1,976	–	–	–	1,261	48	47	2	1	–	2	
10-19-'85	4,527	733	–	1,100 CY SPREAD OUT WAS BACKPILED	–	905	48	47	–	1	–	–	
10-26-'85	9,060	328	–	–	2,007	200	48	47	–	–		–	
11-2-'85	9,060	–	–	–	5,509	100	48	44	3	–	–	3	
11-9-'85	6,369	1,265	–	–	4,767	380	48	41 1/2	5 1/2	–	–	–	
11-16-'85	–	7,012	–	–	1,573	1,550	48	48	–	–	–	–	
11-23-'85	2,136	–	–	–	–	450	40	36	–	–	–	–	
11-30-'85	2,059	–	–	–	–	–	24	24	–	–	–	–	
12-7-'85	3,402	3,380	–	–	–	2,034	48	45 1/2	2 1/2	–	–	–	
12-14-'85	3,142	2,066	–	–	1,111	1,562	48	42	2 1/2	10	–	–	
12-21-'85	–	4,110	–	–	316	1,233	40	42	14	–	–	–	
12-28-'85	–	2,775	–	–	194	832	32	30	–	–	–	–	
1-4-'86	–	3,558	–	–	–	1,068	40	39	20	–	–	–	
1-11-'86	–	4,205	–	–	1,710	1,262	48	48	3	–	–	–	
1-18-'86	2,223	119	2,800	–	512	702	–	48	27 1/2	18 1/2	16	–	
1-25-'86	–	–	–	–	–	–	–	12	16	8	8	–	
TOTAL	69,279	33,529	3,800	1,100 CY (SPREAD 3 TIME & BACKPILED ONCE	18,965	20,924	808	818 1/2	170	39	24	64	

NOTES: 1 * USE MULTIPLICATION FACTOR OF 1.529 FOR ESTIMATED YARDAGE FOR STORAGE PILE (HAZARDOUS WASTE). ESTIMATED CUBIC YARDS ARE 32,000.


LEGEND
BORING PLACED OCT. 1983
MONITORING WELL PLACED OCT. 1983
EXISTING WELL
MONITORING WELL PLACED AUG. 1984
EXISTING INTERMITTENT WATER COURSE
TEST PIT
GROUNDWATER CONTOUR
PROPERTY LINE
SANTA FE RAILWAY (120' RIGHT OF WAY)
ILLINOIS & MICHIGAN CANAL (240' R.O.W.)
CHICAGO & ALTON RAILWAY (100' R.O.W.)
JOLIET TO LEMONT ROAD (NEW AVENUE)
BLDG.
SHED
BLDG.
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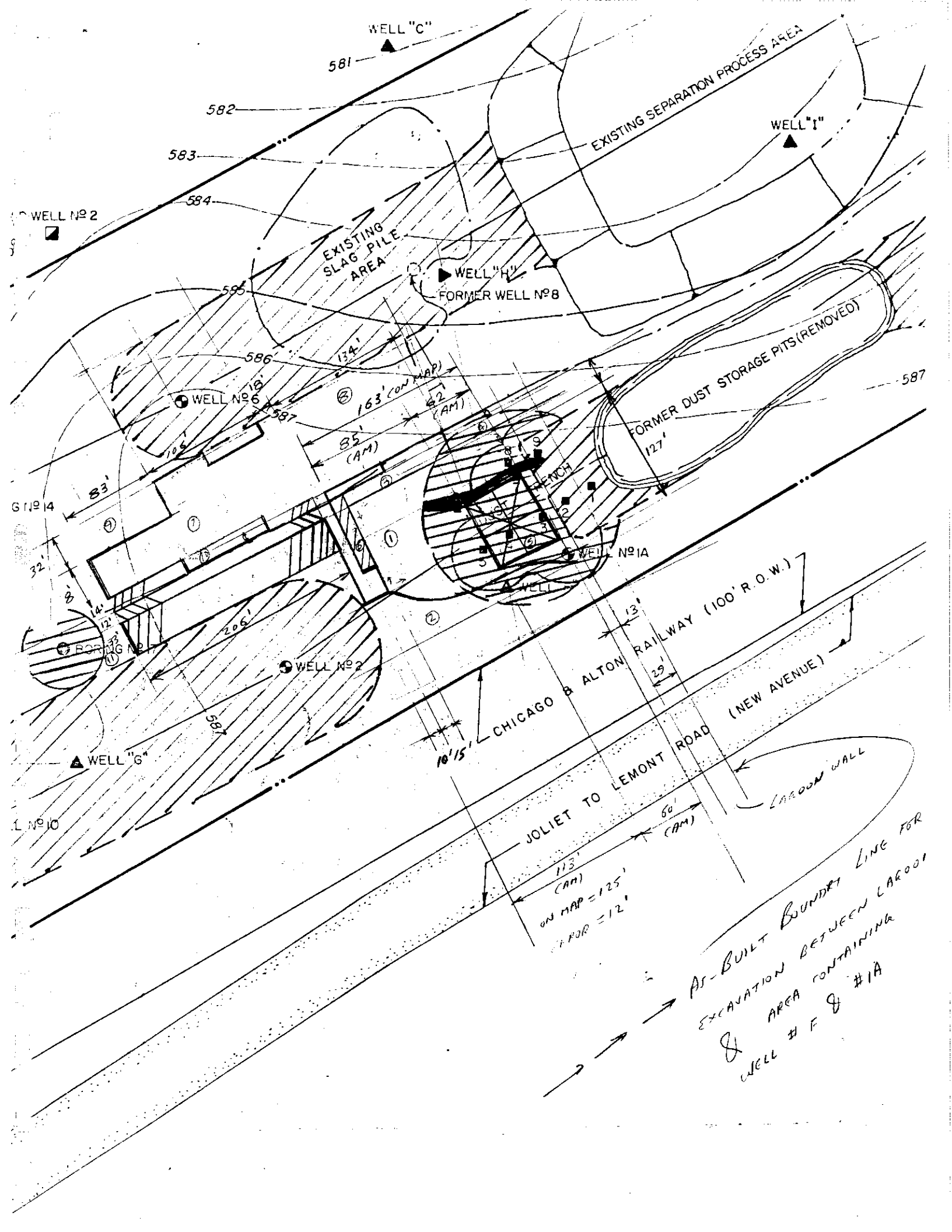
GENERAL SITE PLAN
JANUARY, 1985


WELL "C"
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EXISTING SEPARATION PROCESS AREA
WELL "I"
WELL Nº 2
EXISTING SLAG PILE AREA
WELL "H"
FORMER WELL Nº 8
FORMER DUST STORAGE PITS (REMOVED)
WELL Nº 6
134'
163' (ON MAP)
62' (AM)
85' (AM)
105'
83'
127'
G Nº 14
WELL Nº 1A
WELL
32'
8'
14'
12'
206'
BORING Nº 17
WELL Nº 2
13'
29'
CHICAGO & ALTON RAILWAY (100' R.O.W.)
JOLIET TO LEMONT ROAD (NEW AVENUE)
10'15'
WELL "G"
L Nº 10
LAGOON WALL
60' (AM)
113' (AM)
ON MAP = 125'
ERROR = 12'
AS-BUILT BOUNDRY LINE FOR EXCAVATION BETWEEN LAGOON & AREA CONTAINING WELL # F & #1A

ESTIMATED VOLUME:

VOLUME OF AREA CONTAINING WELL 'F' AND WELL #1A' ALONG WITH THE EXTENDED AREA:

$$= \text{AREA } ① + \text{AREA } ② + \text{AREA } ③ + \text{AREA } ④ - \text{AREA } ⑤^{*}_{11/30/86} - \text{AREA } ⑥^{*}_{11/30/86} - \frac{57 \times 9 \times 13.5}{27}$$

$$= \frac{163 \times 90 \times 13.5}{27} + \frac{163 \times 52 \times 13.5}{27} + \frac{108 \times 25 \times 13.5}{27} + \frac{52.5 \times 25 \times 13.5}{27}$$

$$- 2{,}059 - 503 - 257$$

$$= 7{,}335 + 4{,}238 + 1{,}350 + 656 - 2{,}059 - 503 - 257$$

$$= 10{,}760 \text{ CU. YDS.}$$

VOLUME OF EXTENDED AREA NORTH AND NORTHEAST OF WELL #10, G & 2 & ALSO, SOUTH & SOUTHEAST OF AREA CONTAINING WELL #6 & #A

$$= \text{AREA } ⑦ + \text{AREA } ⑧ - \text{AREA } ⑨ + \text{AREA } 10 + \text{AREA } ⑪$$

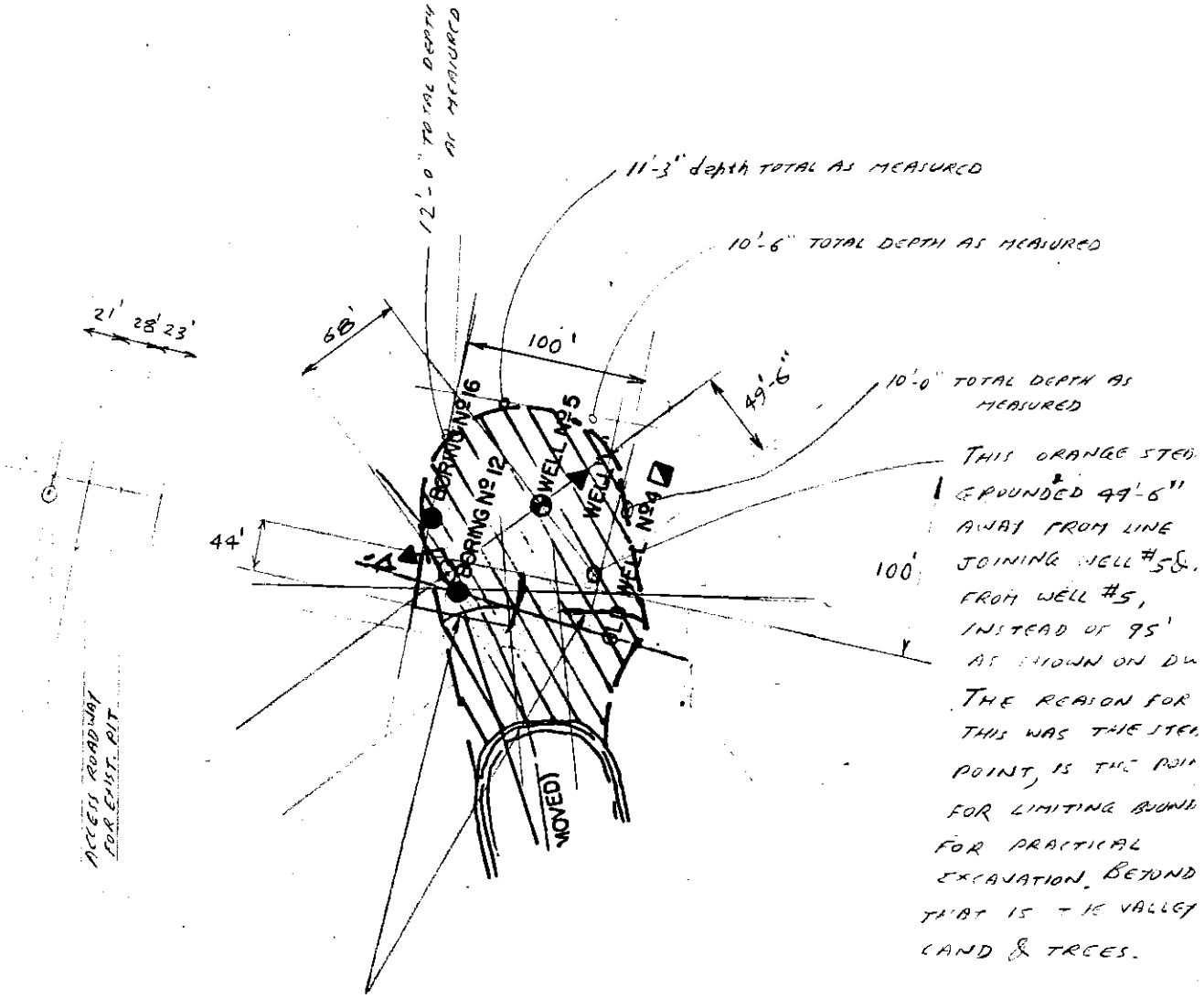
$$= \frac{(83 + 106 + 18)(70+75) \times 15}{27 \times 2} + 134 \times \frac{(90+80)}{2} \times 14 \times \frac{1}{27} - \frac{83 \times 32 \times 15}{27} + \frac{82 \times 14 \times 15}{27} + \frac{60 \times 30 \times 15}{27}$$

$$= \frac{207 \times 70 \times 15}{27} + \frac{134 \times 85 \times 14}{27} + \frac{1}{2} \times \frac{15 \times 50 \times 14}{27} + 1{,}000$$

$$= 8050 + 5{,}905 + 195 - 1475 + 638 + 1{,}000$$

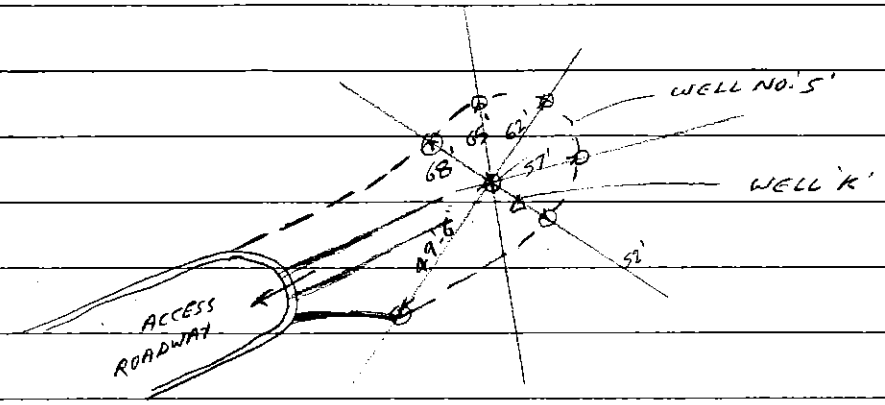
$$= 14{,}313 \text{ CU. YDS.}$$

ESTIMATED VOLUME OF AREA CONTAINING WELL 'K' AND WELL NO. 5



→ → → THE BOUNDRY STARTS HERE FOR LAGOON INSTEAD OF AS SHOWN ON MAP. (AS BUILT)

JUSTIFICATION FOR CALCULATING VOLUME OF AREA CONTAINING WELL 'K' AND WELL NO. 5 :



THE STEAK @ 68' MEASURE FROM WELL NO. '5' IN LINE WITH WEL 'K' WAS THE BOUNDRY STEAK BEYOND WHICH EXCAVATION WAS NOT POSSIBLE. THAT AREA WAS PIT IN CONTINUATION. ALSO 49'-6 MEASURE FROM WELL NO '5' ⊥ TO THE LINE JOINING WELL NO. '5' & WELL 'K' WAS THE BOUNDARY BEYOND WHICH IT WAS JUDGED THAT WAS USELESS TO EXCAVATE, AS THIS SPOT HAD PILE SITTING HERE & TAPERS OFF LIKE A CAVE ON THE SOUTHSIDE GOING TOWARDS RAILROAD TRACKS & HAD TREES.

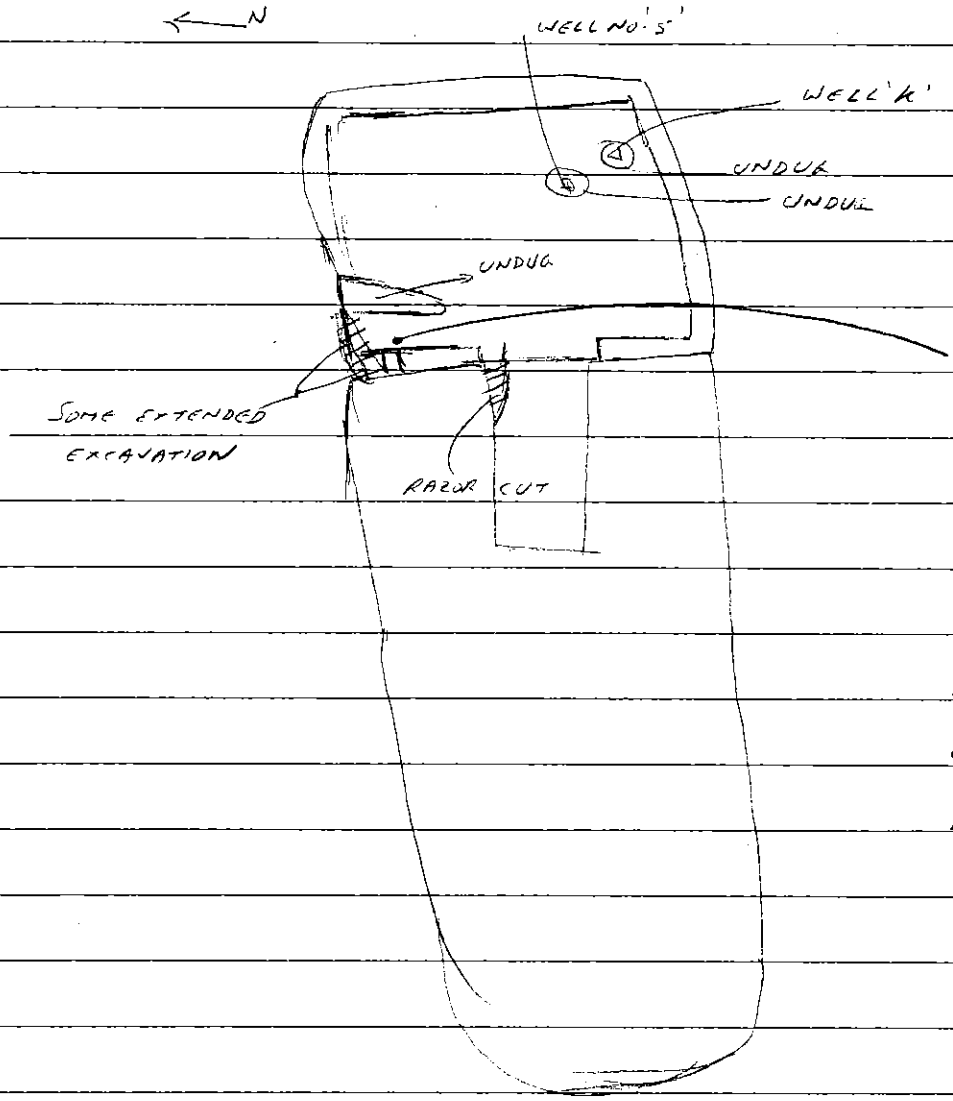
MODELLING IT CLOSELY AS SQUARE HAVING 100' × 100' SIDES, & CONSIDERING MEAN DEPTH TO BE 12'-0, WHICH IS MORE ON NON-CONSERVATIVE APPROCH, YIELDS VOLUME AS

$$= \frac{100 \times 100 \times 12}{27} = 4444 \text{ CU. YARDS.}$$

THE CONSIDERATION FOR VOLUME THAT IS NOT EXCAVATED WHERE WELL NO. '5', WELL NO 'K', AND CLOSING IN AT THE POINT OF AREA OF CONTINUITY OF FURNACE DUST, A SEGMENT WAS LEFT OFF

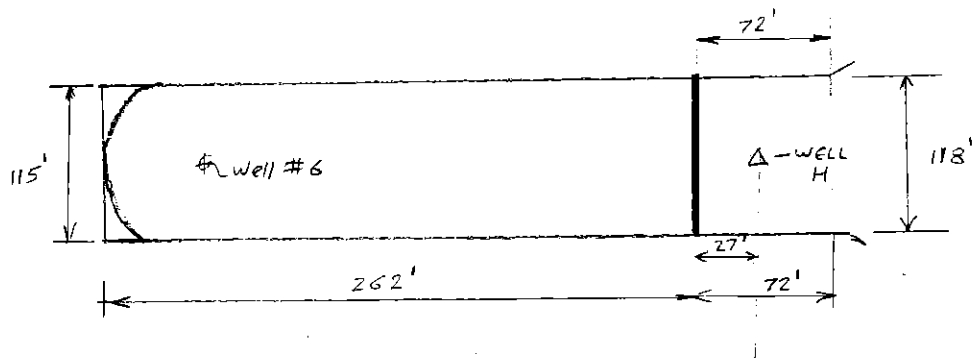
THERE WAS SOME ADDITIONAL EXCAVATION DONE TO SEARCH THE CONTINUITY OF DUST BOUNDRY & WAS CEASED JUST IN COUPLE OF FEET ADDITIONAL EXCAVATION. ALSO, ROADWAY WAS RAZORED TO SEE IF THERE WAS ANY FURNACE DUST IN THE CONSTRUCTED ROADWAY.

THE AS EXCAVATED AREA COULD BE SUMMARIZED AS:



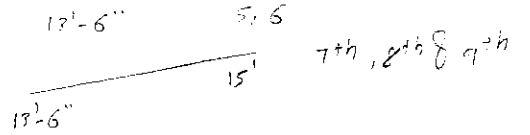
THERE WAS NO VISIBLE FURNACE DUST IN THIS AREA EXCEPT AROUND THE 68' MEASURE STEAK FROM WELL NO. 5. THIS PROBABLY WAS SOME LEFT OVER AT THE EDGE LEFT OFF WHILE CLEANING THE STORAGE PIT.

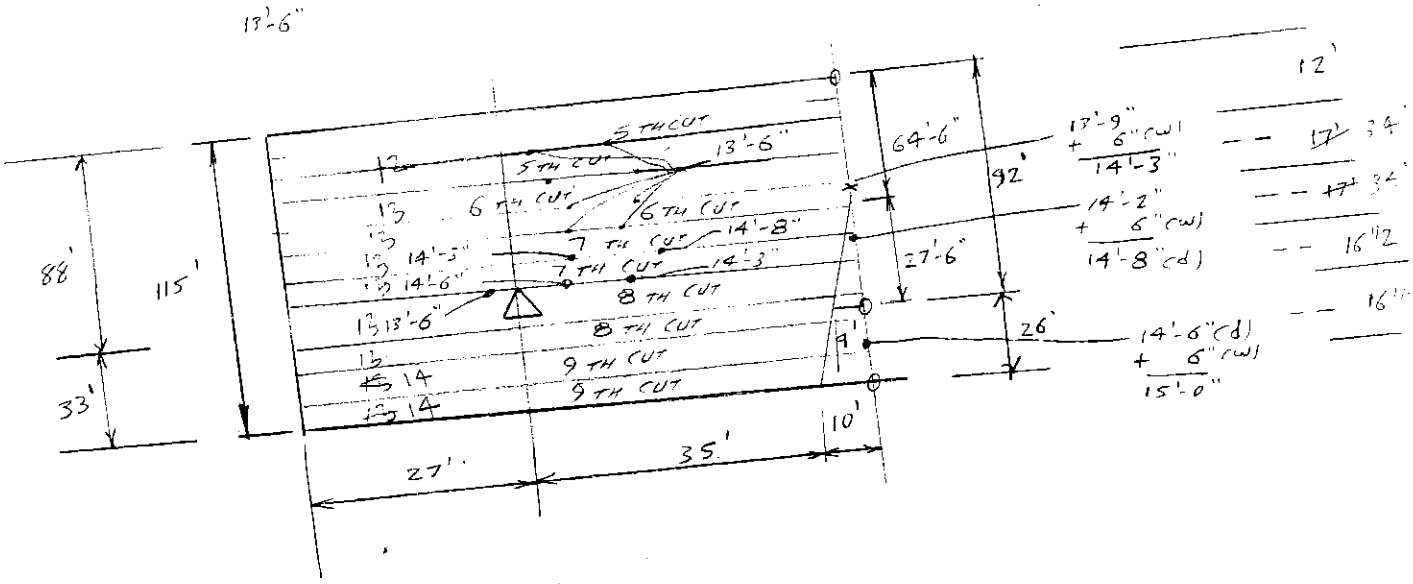
VOLUME MODEL FOR AREA CONTAINING WELL #6 & H



VOL. 1 = $\frac{262 \times 115 \times 15}{27}$ = 16,739 CU. YDS.

VOL. 2 = $\frac{118 \times 72 \times 13.5}{27}$ = 4,248 CU. YDS.





Vol. OF 5TH CUT ONLY: $\frac{72 \times 12 \times 13.5}{27}$ = 432 CU. YD.

6TH $2\left(\frac{13 \times 72}{27} \times 13.5\right)$ = 936 CU. YDS.

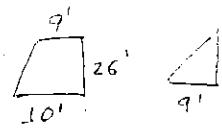
7TH $2\left(13 \times \frac{72}{27} \times 14.25_{\text{d MEAN}}\right)$ = 988 CU. YDS.

8TH $2\left(\frac{13 \times 72 \times 14.25_{\text{MEAN d}}}{27}\right)$ = 988 CU. YDS.

9TH CUT $2\left(14 \times \frac{72 \times 14.6}{27}\right)$ d MEAN VERY CONS. = 1044 CU. YDS.

ESTIMATED CU. YARDS = 432 + 936 + 988 + 988 + 1044 − 72 − 205 = 4,110 CU. YDS.

@ WELL H = $\frac{12 \times 12 \times 13.5}{27}$ = 72 CU. YDS.



$\left(\frac{9+10}{2} \times 26 \times \frac{15}{27}\right) + \left(\frac{1}{2} \times 9 \times 27.5 \times \frac{15}{27}\right)$

= 137.22 + 68.75 = 205.17 CU

315
26
289

315 (ON MAP)
26 (Error Measured)
289 —— Actual
315

Ayn Stone →

TOTAL volume = 320 (-20' Error) ×

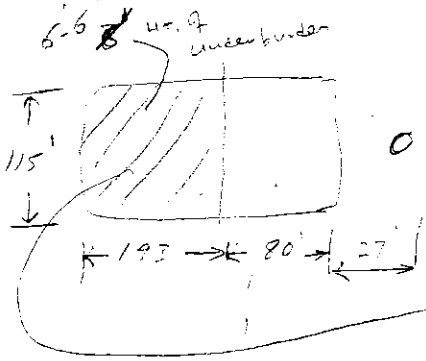
↓

~~300~~ 320 − ~~27~~ 27 = ~~273~~ 297 × 115 × ~~14'6"~~ 15' (Mean) = ~~455,227~~ 470925

= ~~16,860~~ cu yds.

TOTAL MATERIAL DUG. 17,441 cu. yds.

18,975



UNDERBURDEN = 6.5 × 193 × 115

= 5,343 cu yds.

5111 cu. yds. × 10 % = 511 cu. yds.

TOTAL BED UNDERBURDEN = 5343 cu yds.
511 cu yds.
5854 cu yds.

TOTAL yds for Area Containing well No. 10, 6 & 2

460 + 132 + 180 = 772'

$772 \times \frac{5}{27} \times 12 = 1715$ cu. yds.

50 × 62 × 15 = 1722 cu yds.

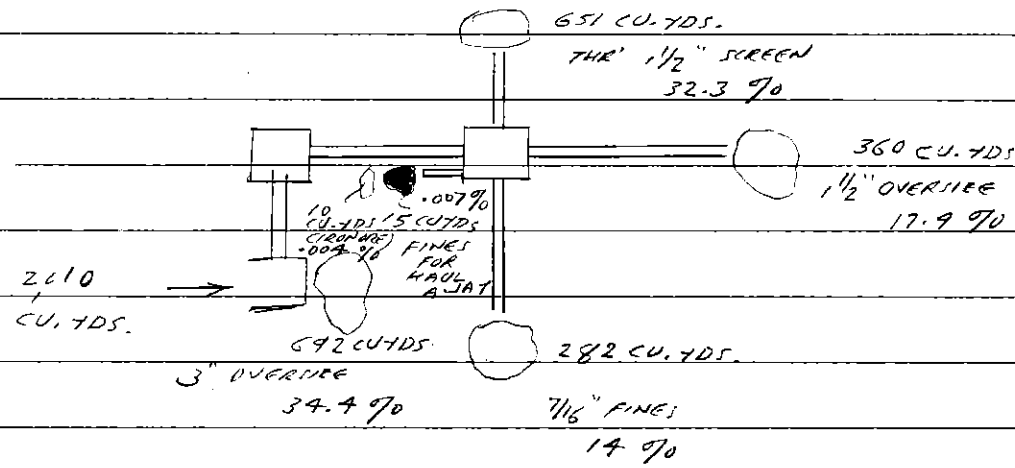
80 × ~~46 × 42~~ 46 × 14 = 1908 cu. yds.

→ 11-4-'85

SUMMARY:

1 THE CU. YDS EXCAVATED IS NOT UNIFORM BECAUSE OF THE APPROACH TO KEEP TRACK OF IT WAS BASED PRIMARILY ON WITH BACKHOE EXCAVATION AND BALANCE OF THE VOLUME. THE VARIATION OF MODE OF WORKING FROM TIME TO TIME WITH THE COMBINED USE OF FRONT END LOADER FOR EXCAVATION, THIS PROBABLY WAS THE BETTER ACCEPTED WAY IN MY JUDGEMENT.

2 THE SEPARATION PROCESS CAN BE SUMMARIZED IN TOTAL AS RUN CONCEPT AS OF TO-DAY AS:

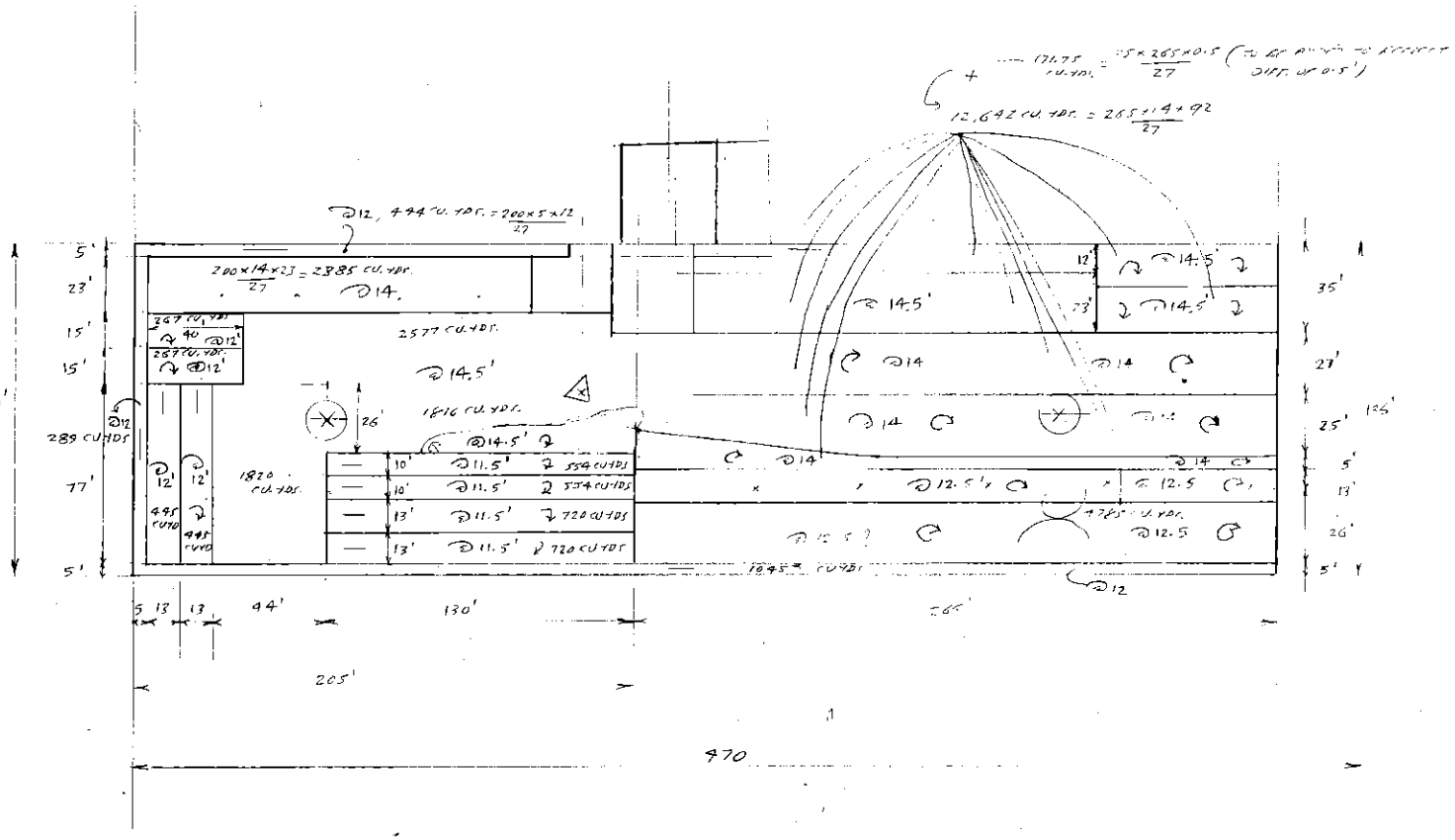


2010 → 692 BIG ROCKS 34.4
CU. YDS.
360 OVER 1 1/2" ROCKS 17.9
651 THR' 1 1/2" 32.3
282 THR' 7/16 14

DUST IS CARRIED OVER IN OTHER PILES AS THE MATERIAL FED THIS IS STILL WET, SPECIALLY THR' 7/16" PILE & THR' 1 1/2" PILE.

3 ALL MONITORING WELL, AREA W/ #6 & 4, AREA WITH/ #10, 6, #2 ARE BASICALLY EXCAVATED AS PER MAP U495. EXTENDED AREA FOR THESE TWO AREAS W/6 & 4 & W/ 10, 6 & 2 ARE & WILL BE EXCAVATED.

APPROXIMATE MODEL MAP: (WORKSHEET)



TOTAL YDS = 12,642
4,785
1,045
720
720
554
554
1816
2577
2385
1820
267
267
289
444
445
445
1,775 + 152 = 31,927 + 474 + 169 + 311
= 32,326

* 7 × 18 × 5 / 27 = 152 CU. YDS. (WITHERING DEPTH FOR 118 LENGTH)

(5 × 13 × 14 / 27) 4 = 47 CU. YDS.

(5 × 13 × 14 / 27) 5 = 169 CU. YDS.

(5 × 13 × 14 / 27) 10 = 311 CU. YDS. / 33 × 30 × 4 / 27 = 102 CU. YDS. (INTERPRETATION) / 80 CU. YDS. (INTERPRETATION)

32,326 + 674 CU. YDS. (ALLOWANCES) = 33,000

ALLOWANCES = 674 + 80 + 102 = 856 CU. YDS.

SCALE 1" = 50'

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 1-18-'86 & 1-25-'86

1. Work Accomplished

Estimated volume of excavation:

2,223 CU. YDS. EXCAVATION FOR SEGMENT CONNECTING LAGOON & AREA CONTAINING WELL #F & #1A.
119 CU. YARDS ALONG SOUTH EDGE OF AREA CONTAINING WELL #F & #1A
2,342 CU. YDS.

Estimated volume of excavated material placed in separation process:

512 C.Y. STORED AT PILE STORAGE

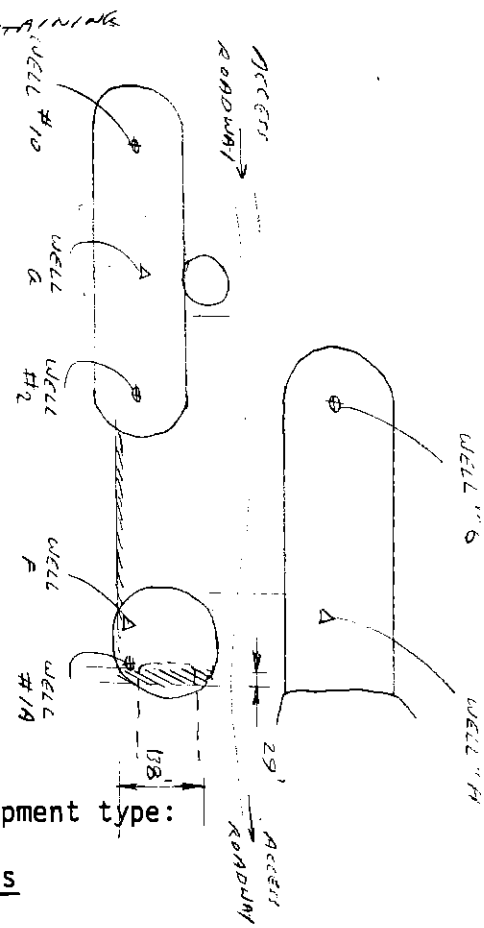
Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —



Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours	
BACKHOE - MITSUBISHI MODEL MS 280	NO HOURS	THE USE OF EQUIP'T IS OVER, WAS STEAM CLEANED & WAS SHIPPED OUT.
FRONT END LOADER - FIAT ALLIS FR35	48 HRS. + 12 HRS.	
SMALL FRONT END LOADER - FIAT ALLIS 645	27 1/2 HRS. + 16 HRS.	
INTERNATIONAL HARVESTER - 250 LOADER	18 1/2 HRS. + 8 HRS.	
TRUCK	16 HRS. + 8 HRS.	

2. Problems Encountered and Resolution

PLEASE REFER TO DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

NO FURTHER EXCAVATION REQUIRED. THE EXCAVATION IS COMPLETE AS PER CLOSURE PLAN, MAP U495-01.

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

—

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	43 1/2 HRS.	—
FRED POLLOCK	48 HRS.	—
BILL DUDEK	10 1/2 HRS.	—
LES DUDEK	8 HRS.	—
Totals	110 HRS.	

Other Direct Costs: (please specify) PLEASE REFER TO THE MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments —

NUS Field Representative

1-18-'86
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, HIGH 51 °F. CECO PO NO. 75-5-G0006

HUMIDITY-60 90 WIND 5 @ 5 MPH NUS PROJECT NO. U495

Date: 1-21-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO-SMALL FRONT END LOADER-FIAT ALLIS 64T- 8 HRS.

FRED POLLOCK- FRONT END LOADER-FIAT ALLIS FR35 - 4 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

GILDARDO SALSIDO - SMALL F.E.L. - HAULING AWAY DIFFERENT SIZE PILES @ SEPARATION STATION AND UNLOADING THEM AT FAR END IN THE SAME PIT. THIS IS DONE IN ORDER THAT THE AREA IS ALL CLEAR OF THESE PILES. SOME WORK DONE ON ACCESS ROADWAY TO SMOOTHEN IT OUT. FRED POLLOCK - F.E.L. - USED TO HAUL AWAY DIFFERENT SIZE PILES @ SEPARATION STATION.

4. Samples Collected and Deposition

SAMPLES WERE COLLECTED WHEN FRONT END LOADER WAS STEAM CLEANED.

5. Problems Encountered and Resolution

THE ROADWAY MADE IS SAFE ENOUGH AND THE BARRICADES OF DIRT ARE PLACED ALONG THE EDGE TOWARDS THE PIT. THE SETTLING OF THE GROUND ALONG THE ROADWAY MAY TAKE PLACE WITH THE LENGTH OF TIME & THE ROAD MAY EXPERIENCE POT HOLES & UNEVENNESS.

6. General Comments:

THE ENTIRE PROJECT AS PER CLOSURE PLAN AND MAP DRAWING U-495-01 TO THE POINT OF EXCAVATION AND TO THE POINT OF CONTINUATION OF VISIBLE FURNACE DUST OUT TO BAD STORAGE PILES HAS BEEN ACCOMPLISHED.

NUS Field Representative

1-21-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, HIGH 36°F CECO PO NO. 75-5-G0006

HUMIDITY - 75% 90 WIND NW @ 5 MPH NUS PROJECT NO. U495

BAROMETRIC PRESSURE 30.03" HG.

Date: 1-20-'86

1. Personnel/Equipment On Site

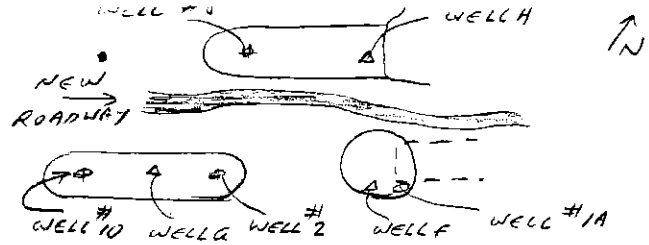
GILDARDO SALSIDO - TRUCK - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

LES DUDEK - 250 INTERNATIONAL HARVESTER LOADER - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

LEE DUDEK - CRAWLER USED TO MAKE ROADWAY MORE CONTOURED IN A MANNER THAT IT IS SAFE AND TRAPS WATER AROUND BAD STORAGE PILE FOR ITS OWN RUN-OFF.

GILDARDO SALSIDO - TRUCK IS USED TO HAUL AWAY BIG ROCKS FROM SEPARATN PIT AREA TO MAKE BACKFILL STRONGER & SMOOTH.

FRED POLLOCK - HAUL MATERIAL INTO TRUCK & BACKFILL

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: 6.1 LOTS OF TOP LAYER BACKFILL OF BIG ROCKS WERE USED FOR MAKING UP OF THE ROADWAY TO ACHIEVE FIRMNESS.

NUS Field Representative

1-20-86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CHANCE OF SHOWER CLOUDY, MILD, HIGH 47°F. CECO PO NO. 75-5-G0006

HUMIDITY-86 WINDSW @ 14 MPH NUS PROJECT NO. U495

BAROMETRIC PRESSURE 29.85" HG OF MERCURY

Date: 1-18-'86

1. Personnel/Equipment On Site

LES DUDEK - CRAWLER - INTERNATIONAL HARVESTER 250 - 8 HRS

GILDARDO SALSIDO - TRUCK - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

GILDARDO SALSIDO - TRUCK - TO HAUL AWAY OVERBURDEN TO THE AREA WHERE CENTRAL ROAD TIE-IN IS IN PROGRESS.

FRED POLLOCK - HAUL, BACKFILL & LOAD THE TRUCK FOR REQUIRED BACKFILL MATERIAL.

LES DÜDEK - CRAWLER - MAKING THE CENTER OF THE ROADWAY AND SURROUNDING AREA TOWARDS NORTH OF THIS ROADWAY CONTOURED IN SUCH A WAY THAT THE RAINWATER STAYS IN THAT AREA CONFINED.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

SHORTAGE OF EASILY AVAILABLE NEARBY VICINITY BACKFILL MATERIAL. ATTEMPT HAS BEEN MADE TO OBTAIN BACKFILL MATERIAL FROM WHENEVER POSSIBLE (THE OVERBURDEN FROM THE EXCAVATED AREA ONLY)

6. General Comments:

—

NUS Field Representative

1-18-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, WARM, HIGH 52°F CECO PO NO. 75-5-G0006

HUMIDITY- 85 90, WIND SW @ 12 MPH NUS PROJECT NO. U495

BAROMETRIC PRESSURE 30.05" HG & STEADY

Date: 1-17-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - TRUCK - 8 HRS

FRED POLLOCK - FIAT ALLIS FR 35 - 8 HRS.

BILL DUDEK - CRAWLER INTERNATIONAL HARVESTER 250 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

BILL DUDEK- WITH THE USE OF CRAWLER, THE ROADWAY IS LEVELLED IN A SAFE CONTOUR OF THE TRAFFIC ROADWAY.

GILDARDO SALSIDO- TRUCK IS USED TO HAUL THE BACKFILL MATERIAL FOR MAKING OF THE ROADWAY.

FRED POLLOCK- FRONT END LOADER IS USED TO HAUL THE MATERIAL INTO TRUCK & IN MAKING OF THE ROADWAY.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-17-'87

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: UNSEASONABLY WARM SUNSHINE, HIGH 48° F CECO PO NO. 75-5-G0006

HUMIDITY - 85% WINDS @ 7 MPH NUS PROJECT NO. U495

30.18

Date: 1-16-'86

1. Personnel/Equipment On Site

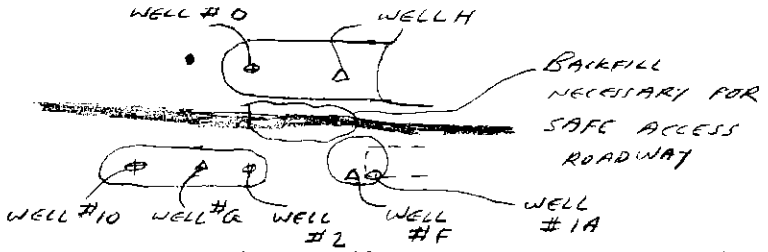
GILDARDO SALSIDO - SMALL FRONT END LOADER - FIAT ALLIS 645 - 5 1/2 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

BILL DUDEK - CRAWLER - INTERNATION HARVESTER 250 - 2 1/2 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

GILDARDO SALSIDO - BACKFILL IN THE AREA ALONG THE ROADWAY WHERE EXTENDED EXCAVATION CONNECTING THE THREE SHADED AREA, WITH WELL #6 & H, WITH WELL #10, G & 2' & WITH WELL #F & 1A. THIS IS THE CENTER AREA STRETCHING ALONG ROADWAY.
FRED POLLOCK - BACKFILL IN THE SAME AREA AS MENTIONED ABOVE.
BILL DUDEK - LEVELLING THE ROADWAY FOR A SAFE CONTOUR.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

AS THE EXTENDED AREA BETWEEN AREA CONTAINING WELL #6 & H, WELL # 10, G & 2 AND WELL #F & 1A WAS EXCAVATED AT THE TAIL END OF EXCAVATION FOR THIS ENTIRE CLOSURE AS PER MAP DWG. U495-01, THE SHORTAGE OF BACKFILL MATERIAL IN THE CLOSEBY VICIN. SOME AVAILABLE BACKFILL AROUND WELL # K & WELL #5, AND SITTING BAD PILE STORAGE NEXT TO THIS ENTIRE EXTENDED AREA MADE IT EXTRA EFFORT TAKING & ESSENTIALLY VERY NECESSARY FOR SAFE ROADWAY FOR TRANSPORTATION POINT OF VIEW & TO HAVE AN ACCESS FOR THOMAS STEEL DUMP TRUCKS TO DUMP AT THE NORTH-EAST CORNER OF THE SITE.

6. General Comments:

NUS Field Representative
1-16-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL, SUNNY, HIGH 56°F CECO PO NO. 75-5-G0006

HUMIDITY 61%, WIND SW @ 5 MPH NUS PROJECT NO. U495

Date: 1-15-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - SMALL FRONT END LOADER - FIAT ALLIS 645 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

GILDARDO SALSIDO - BACKFILLING THE AREA ALONG ROADWAY & LEVELLING

FRED POLLOCK - EXCAVATION OF OVERBURDEN AND UNDERBURDEN FOR THE WALL BETWEEN LAGOON AND AREA CONTAINING WELL #F & WELL #1A. THE UNDERBURDEN CONTAINING FURNACE DUST WAS HAULED AND PILED AT BAD STORAGE PILES. THE SKETCH IS ON YESTERDAY'S DAILY LOG.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE WALL BETWEEN THE LAGOON AND THE AREA CONTAINING WELL #F & WELL #1A WAS EXCAVATED LAST FOR THE PIT IN THIS AREA. THE WALL WAS ACTING AS BARRIER BETWEEN THESE AREAS. ONCE THE EXCAVATION IS COMPLETE IN THIS AREA, THE WATER IN THE LAGOON MAY RUSH OUT INTO THIS PIT. THE OVERBURDEN CONTAINED BIG ROCKS MAKING IT HARD TO EXCAVATE WITH ONE BIG FRONT END LOADER. BOTH LOADERS WERE USED TO WEAKEN THE WALL AT THE SAME TIME.

6. General Comments:

NUS Field Representative

1-15-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: VARIABLE CLOUDY, HIGH 29°F CECO PO NO. 75-5-G0006

HUMIDITY-68 WIND NW @ 13 MPH NUS PROJECT NO. U495
BAROMETRIC PRESSURE 30.05" HG.

Date: 1-14-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - SMALL FRONT END LOADER - FIAT ALLIS 645 - 8 HRS.

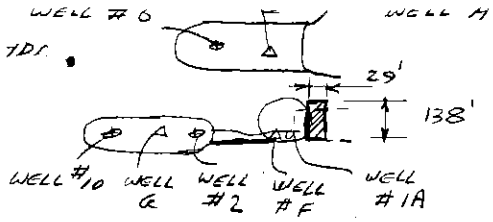
FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

LAGOON WALL volume = $\frac{29 \times 15 \times 138}{27}$ = 2,223 CU. YDS.

RAZOR CUT ALONG THE WALL FOR UNDERBURDEN DUST TRACE = $\frac{200 \times 4 \times 4}{27}$ = 119 CU. YDS.



3. Work Accomplished

FRED POLLOCK:_ CONTINUATION OF EXCAVATION ALONG THE SOUTH BOUNDRY FOR AREA CONTAINING WELL #F & #1A, WHERE FURNACE DUST IS VISIBLE. THE ATTEMPT IS MADE WITH FRONT END LOADER TO SCOOP OUT UNDERBURDEN TAKING DEEP BITE TO HAUL AWAY TO BAD STORAGE PILE.
GILDARDO SALSIDO- HAULING GOOD OVERBURDEN NORTH OF WELL #H TO THE SOUTH OF THIS AREA ALONG ROADSIDE FOR BACKFILLING AND TO MAKE GRADE CONTOUR SAFE ENOUGH.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
1-14-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, HIGH 24°F CECO PO NO. 75-5-G0006

HUMIDITY 56 90 WINDS @ 5 MPH NUS PROJECT NO. U495

Date: 1-13-86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - SMALL FRONT END LOADER - FIAT ALLIS FR 45 - 6 HRS.

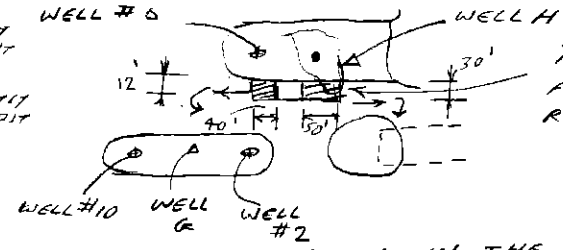
FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

$V_1 = \frac{12 \times 40 \times 7}{27} = 124$ CU.YDS DIRECTLY INTO PIT

$V_2 = \frac{30 \times 50 \times 7}{27} = 388$ CU.YDS. DIRECTLY INTO PIT



THE BAD PILE IN THE WAY FOR EXCAVATION WAS RELOCATED.

3. Work Accomplished

FRED POLLOCK - CONTINUATION OF EXCAVATION IN THE AREA SOUTH OF AREA CONTAINING WELL #6 & #H ALONG THE ROADWAY AND CLOSE TO TH BOUNDRY OF THIS AREA.

GILDARDO SALSIDO - SMALL LOADER WAS USED TO HAUL & RELOCATE SOME OF THE BAD PILE MATERIAL FOR CONTINUATION OF ABOVE EXCAVATIO AND THEN BACKFILLING TO MAKE THE ACCESS ROADWAY.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BAD STORAGE PILE IN THE WAY OF EXCAVATION WAS RELOCATED PARTIALLY. ABOUT 2,800 CU.YDS WAS RELOCATED IN TOTAL THREE PHASE. 1 FOR ACCESS ROADWAY 2 FOR EDGE OF AREA CONTAINING WELL #6 & H CLEARANCE FOR EXCAVATION & 3 A SMALL SEGMENT AS SHOWN ABOVE.

6. General Comments: THE EXCAVATION OF UNDERBURDEN AND OVERBURDEN WITH USING FRONT END LOADER WAS ATTEMPTED. FIRST KEEP TAKING BITE WITH F.E.L. FOR UNDER-BURDEN WHERE FURNACE DUST IS PRESENT AND DO SO AS FAR AS FURTHER WITH THE USE OF THE LOADER. AND THEN, HAUL AWAY OVERBURDEN FOR BACKFILLING.

NUS Field Representative

1-13-'86

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 1-11-'86

1. Work Accomplished

Estimated volume of excavation:

4,205 CU. YDS FOR EXTENDED AREA IN BETWEEN AREA CONTAINING WELL #10, & 2, WELL 6 & 4 AND WELL 'F' & '#1A.'

4,205 CU. YDS.

Estimated volume of excavated material placed in separation process:

1,710 CY STORED AT PILE STORAGE AREA

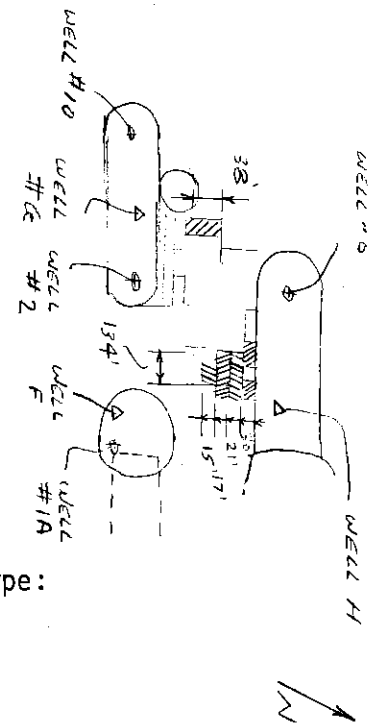
Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —



Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSUBISHI MODEL MS 280	48 HRS.
FRONT END LOADER - FIAT ALLIS FR35	48 HRS.
CRAWLER - INTERNATION HARVESTER 250	3 HRS.

2. Problems Encountered and Resolution

PLEASE REFER TO THE DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

THE LOOSE ENDS, THE WALL CONNECTING LAGOON & AREA CONTAINING WELL #F & WELL #11, THE AREA SOUTH OF WELL #6 & WELL #11 ALONG THE ROADWAY, AND ONCE THESE ARE ACCOMPLISHED FOR EXCAVATION POINT OF VIEW, THE AREA ALONG ROADWAY IN THE CENTER OF THE MAIN ARTERY WOULD BE TRIED TO BE BACKFILLED THE BEST AS CAN BE DONE WITH THE LIMITED AVAILABLE BACKFILL MATERIAL.

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

—

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	40	40
FRED POLLOCK	44	40
LES DUDEK	11	—
BURT SALSIDO	4	
Totals	99	—

Other Direct Costs: (please specify) PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

—

NUS Field Representative

1-11-'86
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, PLEASANT, HIGH 42°F CECO PO NO. 75-5-G0006

RELATIVE HUMIDITY - 92%, WIND SW @ 7MPH NUS PROJECT NO. U495

BAROMETRIC PRESSURE 30.11" HG

Date: 1-11-'86

1. Personnel/Equipment On Site

LES DUDEK - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

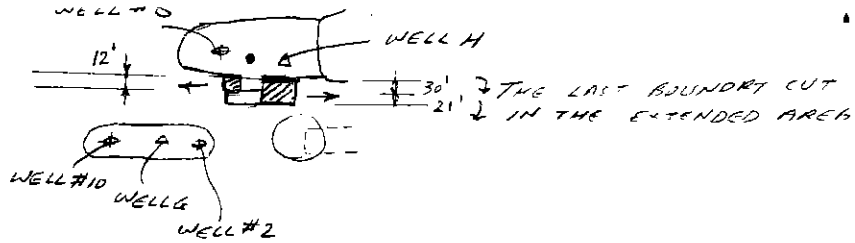
FRED POLLOCK - FRONT END LOADER - 8 HRS - FIAT ALLIS FR 35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

$V = \frac{21 \times 7 \times 50}{27} = 272$ CU. YDS

THE REMAINING IS CALCULATED ON 1/13/86.



3. Work Accomplished

LES DUDER – CONTINUE EXCAVATION TOWARDS NORTHEAST, SOUTH OF AREA CONTAINING WELL #6 & H ALONG ROADWAY & CLOSURE TO THE AREA BOUNDRY FOR CONTINUATION OF FURNACE DUST.

FRED POLLOCK: CONTINUATION OF UNDERBURDEN EXCAVATION WHERE OVERBURDEN ABOVE HAS BEEN REMOVED BY BACKHOE AND UNDERBURDEN CONTAINING FURNACE DUST IS HAULED TO BAD STORAGE PILES.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-11-86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: BRIGHT SUNSHINE, HIGH 40°F CECO PO NO. 75-5-G0006

HUMIDITY - 59 %, WIND W @ 7MPH NUS PROJECT NO. U495

Date: 1-10-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHURISHI MODEL MI 280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

LES DUDEK - CRANLER - MODEL 250 - 3 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

E. S. - CONT'N OF YESTERDAY'S WORK

F. P. - CONT'N OF YESTERDAY'S WORK

B. S. - CONT'N OF YESTERDAY'S WORK

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
1-10-'88

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, WINDY, WARMER, HIGH 35°F CECO PO NO. 75-5-G0006
WITH WIND CHILL FACTOR 9°F (BELOW)
HUMIDITY- 61%, WIND SW @ 15 MPH NUS PROJECT NO. U495
BAROMETRIC PRESSURE 30.19" HG

Date: 1-9-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 - 4 HRS.

BURT SALSIDO - FRONT END LOADER - FIAT ALLIS FR 35 - 4 HRS.

2. Visitors (Name/Affiliation/Nature)

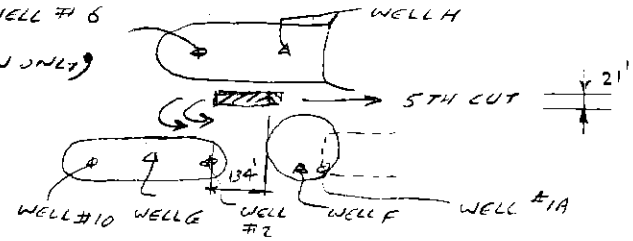
N/A

GG MATERIAL EXCAVATED W/BACKHOE THROWN DIRECTLY INTO PIT (OVERBURDEN ONLY)

VOL. = $\frac{21 \times 139 \times 7}{27}$ = 730 CU. YDS.

65 CU. YDS. EXTENDED →

795 CU. YDS



3. Work Accomplished

GILDARDO SALSIDO – CONTINUATION OF EXCAVATION TOWARDS NORTHEAST OF AREA CONTAINING WELL #10, G & 2 ALONG ROADWAY FOR CONTINUATION OF FURNACE DUST.

FRED POLLOCK – EXCAVATION OF UNDERBURDEN ALONG WITH THE ABOVE EXCAVATION AND INTO THE PIT CONTAINING WELL # F & # 1A.

BURT SALSIDO – EXCAVATION OF UNDERBURDEN ALONG WITH THE ABOVE EXCAVATION AND INTO THE PIT CONTAINING WELL # F & # 1A.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-9-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, COLD, HIGH 15°F CECO PO NO. 75-5-G0006

HUMIDITY 64%, WIND SW @ 3 MPH NUS PROJECT NO. U495

Date: 1-8-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

GILDARDO SALSIDO - FURTHER EXCAVATION ALONG ROADWAY NORTHEAST DIRECTION OF AREA CONTAINING WELL #10, 6 & 2.

FRED POLLOCK - UNDERBURDEN EXCAVATION & OVERBURDEN HAULING

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-8-'86

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CHILLY, SUNNY, HIGH 12°F CECO PO NO. 75-5-G0006
WITH WIND CHILL FACTOR 21°F. BELOW
HUMIDITY - 61 %, WIND NW @ 7MPH NUS PROJECT NO. U495
B.P. RISING 30.66" HG.

Date: 1-7-'86

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS 280 - 8 HRS.

FRED POLLOCK - FIAT ALLIS FR35 - 8 HRS.

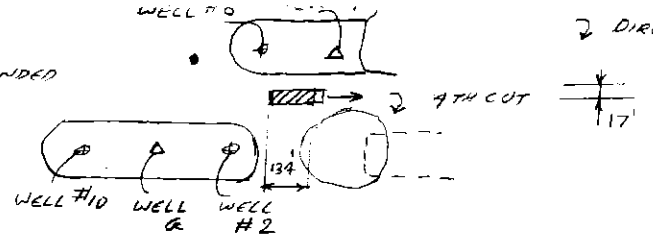
2. Visitors (Name/Affiliation/Nature)

N/A

Vol. = $\frac{134 \times 17 \times 7}{27}$ = 591 CU. YDS.

52 CU. YDS EXTENDED

643 CU. YDS.



3. Work Accomplished

GILDARDO SALSIDO - FURTHER EXCAVATION ALONG ROADWAY NORTHEAST DIRECTION OF AREA CONTAINING WELL #10, G & 2.

FRED POLLOCK — UNDERBURDEN EXCAVATION AND OVERBURDEN HAULING FOR BACKFILL

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-7-88

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLEAR SKY, SUNNY, COLD, HIGH 14°F CECO PO NO. 75-5-G0006
WITH WIND CHILL FACTOR 7°F BELOW
HUMIDITY-47%, WIND NW @ 7 MPH NUS PROJECT NO. U495
BAROMETRIC PRESSURE 30.17" HG.

Date: 1-6-86

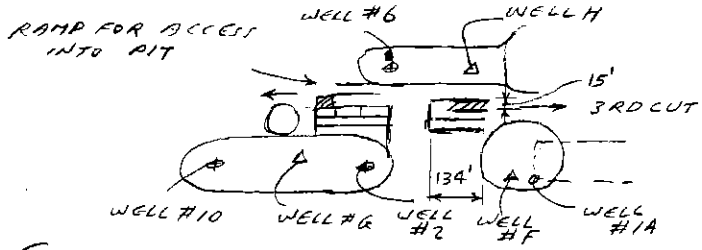
1. Personnel/Equipment On Site

GILDARDO SALIDO - MITSHUBISHI MODEL MS 280 - 8 HRS

FRED POLLOCK - FIAT ALLIS FR 35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

BILL ALBRECHT - CECO CORPORATION



3. Work Accomplished

GILDARDO SALSIDO- CONTINUATION OF EXCAVATION FOR THE EXTENDED AREA NORTH OF AREA CONTAINING WELL #10, G & 2.

FRED POLLOCK- CONTINUATION OF UNDERBURDEN IN THE EXTENDED PIT AREA AND OVERBURDEN HAULING FOR BACKFILLING OF THE EXCAVATED MATERIAL

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-6-'86

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 1-4-'86

1. Work Accomplished

Estimated volume of excavation:

1,752 CU. YDS FOR EXTENDED AREA BETWEEN AREA CONTAINING WELL #6 & H AND AREA CONTAINING WELL #10, G & 2.

1,806 CU. YDS FOR EXTENDED AREA NORTH OF WELL #F & #1A

3,558 CU. YDS.

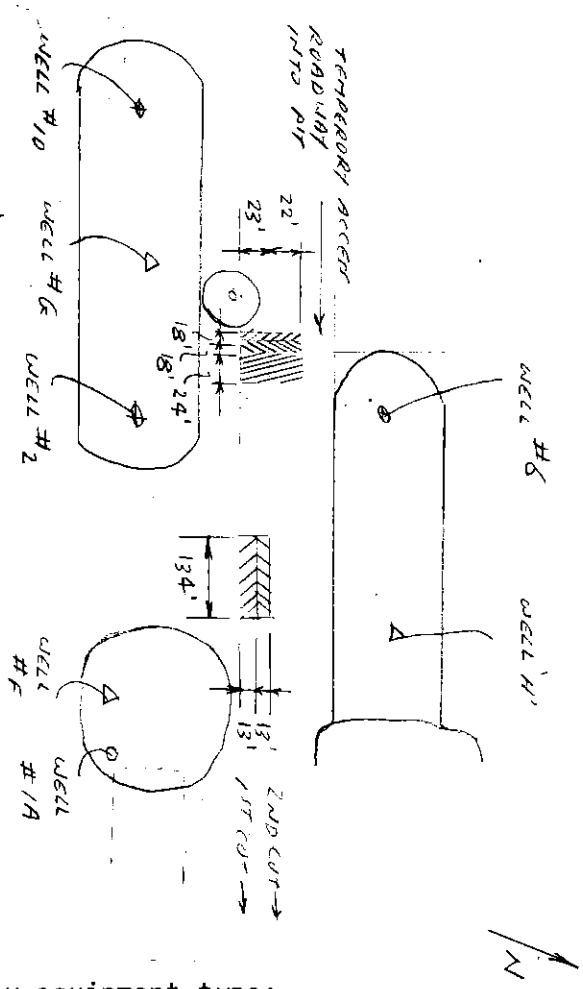
Estimated volume of excavated material placed in separation process:

1,068 C.Y. STORED AT STORAGE PILE

Estimated volume of processed material resulting in disposable waste:

Volume of resultant waste material transported offsite for disposal: (from manifests)

Other:



Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
FRONT END LOADER-FIAT ALLIS FR 35	40 HRS.
BACKHOE- MITSHUBISHI MODEL MS 280	39 HRS.
FRONT END LOADER- FIAT ALLIS FR 645	20 HRS.

2. Problems Encountered and Resolution

PLEASE REFER TO THE DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

CONT'N OF LAST WEEK'S WORK

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

—

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	40 HRS.	48 HRS.
FRED POLLOCK	39 HRS.	48 HRS.
LES DUDEK	12 HRS.	
BURT SALSIDO	8 HRS.	
Totals	99 HRS.	96 HRS.

Other Direct Costs: (please specify)	PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments —

NUS Field Representative

1-4-'86
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL, HIGH 30 °F WITH WIND CHILL FACTOR 13°F ABOVE HUMIDITY 88%, WIND SE @ 9 MPH 29.99

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 1-4-'85

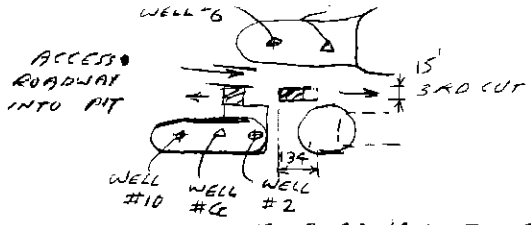
1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

GILDARDO SALSIDO - CONTINUATION OF EXCAVATION ALONG ROADWAY TOWARDS NORTHEAST OF AREA CONTAINING WELL #10, 6 & 2. POUNDING USED AT TIMES TO CRACK GROUND LOOSE. THERE STILL IS CONTINUATION OF FURNACE DUST. ALSO, CONTINUATION ALONG NORTHWEST WAS ON FOR CHECKING STILL FURTHER SPREAD.

FRED POLLOCK - HAULING AWAY OVERBURDEN AND BACKFILLING. UNDERBURDEN EXCAVATION HAULING FURNACE DUST CONTAINING MATERIAL OUT TO BAD STORAGE AILE.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
1-4-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, MILD, HIGH 30°F. WITH WIND CHILL FACTOR 8°F ABOVE HUMIDITY-85%, WIND NW @ 12 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 1-3-'85

1. Personnel/Equipment On Site

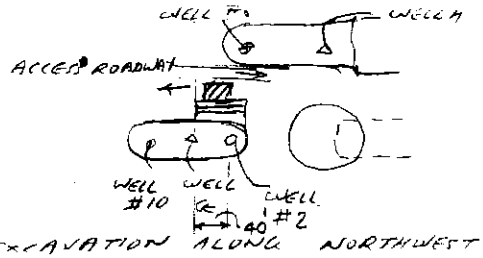
LES DUDEK - FRONT END LOADER FIAT ALLIS FR645 - 4 HRS.

FRED POLLOCK - FRONT END LOADER FIAT ALLIS FR35 - 8 HRS.

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

GILDARDO SALSIDO - CONTINUATION OF EXCAVATION ALONG NORTHWEST ALONG ROADWAY NORTH OF AREA CONTAINING WELL #10, G & 2. THE THICKNESS AND VOLUME OF FURNACE DUST SEEMS, TO BE TAPERING OFF.

FRED POLLOCK - HAUL AWAY OVERBURDEN AND BACKFILL, AND HAUL AWAY DUST CONTAINING MATERIAL TO BAD STORAGE PILE.

LES DUDEK - HAUL AWAY TO RELOCATE BAD PILE WHICH IS IN THE WAY FOR AN ACCESS OF ROADWAY.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

1-3-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: MOSTLY CLOUDY HIGH 36°F WITH WIND CHILL FACTOR 21°F ABOVE HUMIDITY-69% WIND S @ 6 MPH BAROMETRIC PRESSURE 29.96" OF MERCURY

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 1-2-'86

1. Personnel/Equipment On Site

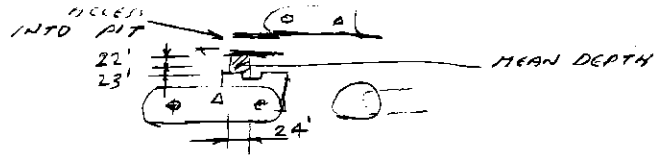
BURT SALSIDO - FRONT END LOADER - FIAT ALLIS FR 645 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 - 7 HRS.

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished GILDARDO SALSIDO - THE POUNDING EXCERCISED TO LOOSEN THE GROUND. THE CONTINUATION OF EXCAVATION TOWARDS NORTHWEST NORTH OF AREA CONTAINING WELL #10, 6 & 2 ALONG ROADWAY IN THE EXTENDED AREA.
BURT SALSIDO - HAULING & RELOCATING SEGMENT OF BAD STORAGE PILE OUT OF THE WAY FOR AN EXCESS OF ROADWAY TO CONTINUE WORKING ALONG ROADWAY TOWARDS NORTHEAST OF AREA CONTAINING WELL #10, 6 & 2.
FRED POLLOCK - HAUL AWAY FURNACE DUST CONTAINING MATERIAL TO THE BAD STORAGE PILE IN THE EXTENDED AREA FOR LEFT OVER UNDERBURDEN

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

SOME POUNDING USING CRANE TO BREAK THE GROUND LOOSE WAS EXCER

6. General Comments:

NUS Field Representative

1-2-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNSHINE AFTERNOON, COOL, HIGH 28F WIND CHILL FACTOR HUMIDITY 68%, WIND NW @ 15 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-31-'85

1. Personnel/Equipment On Site

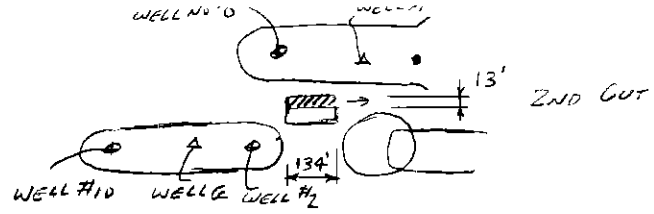
LES DUDEK - FRONT END LOADER - FIAT ALLIS FR 645 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

GILDARDO SALSIDO - BACK HOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

GILDARDO SALTIDO - FURTHER EXCAVATION TOWARDS NORTHEAST ALONG THE EXTENDED AREA FOR ROADWAY DUE TO CONTINUATION OF FURNACE DUST.

FRED POLLOCK - EXCAVATION IN THE PIT CONTAINING WELL NO 'F' & #1A; AND HAUL AWAY EXCAVATED OVERBURDEN AWAY FOR BACKFILL.

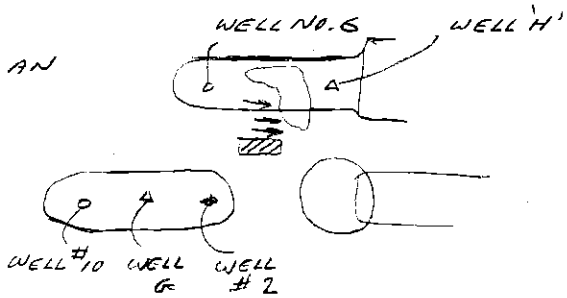
LES DUDEK - THE BAD STORAGE PILE IN THE WAY FOR NEW ACCESS ROADWA - MATERIAL RELOCATED TO HAVE AN ACCEN FOR ROADWAY BY RELOCATING MATERIAL IN THE WAY.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BAD STORAGE PILE FOR AN ACCESS TO ROADWAY HAS BEEN RELOCATED WHICH IS IN THE WAY FOR AN ACCESS.



6. General Comments:

NUS Field Representative
12-31-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL, CLOUDY, HIGH TEMP. 28°F CECO PO NO. 75-5-G0006

HUMIDITY - 78%, WIND S 0 6 MPH NUS PROJECT NO. U495
30.07"

Date: 12-30-'85

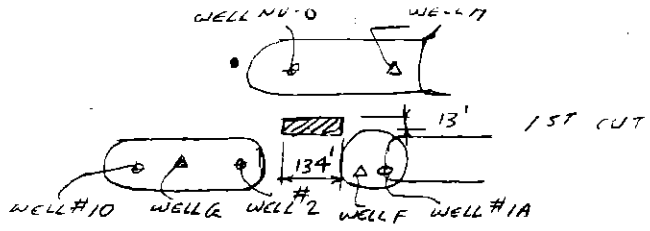
1. Personnel/Equipment On Site

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

GILDARDO SALSIDO - USED CRANE TO DROP BALL TO BREAK GROUND LOOSE, AND THEN USE FRONT END LOADER AND BACK HOE TO BREAK THE GROUND, THE ATTEMPT WAS SUCCESSFUL.

FRED POLLOCK - HELD BACKHOE OPERATION, ALONG WITH DROP BALL GROUND LOOSENING; ATTEMPTS WERE MADE TO BREAK GROUND LOOSE, MAINLY THE UPPER CRUST THAT ACTS LIKE ROCK.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

ONCE THE GROUND IS BROKEN LOOSE, IT OFFERED

6. General Comments:

THE FREEZING TEMPERATURES FOR PAST FEW DAYS AND THE EXCAVATED GROUND FROM GRADE LEVEL TO TOP OF THE BEDROCK GOT EXPOSED TO FULL WEATHERIZED CONDITIONS MAKING THE EXPOSED SURFACE & ESPECIALLY FROM GRADE LEVEL DOWN TOWARDS BEDROCK

NUS Field Representative

12-30-'85

SUBJECT TO FROST. THIS ALONG WITH THE EXCAVATION ITSELF IS IN THE AREA WHERE ROADWAY EXITS MAKES THE EXCAVATION TOUGH & INSIDE CASES, MAKING IMPOSSIBLE. SO, DROP BALL FROM CRANE WAS USED TO BREAK THE GROUND.

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 12-28-'85

1. Work Accomplished

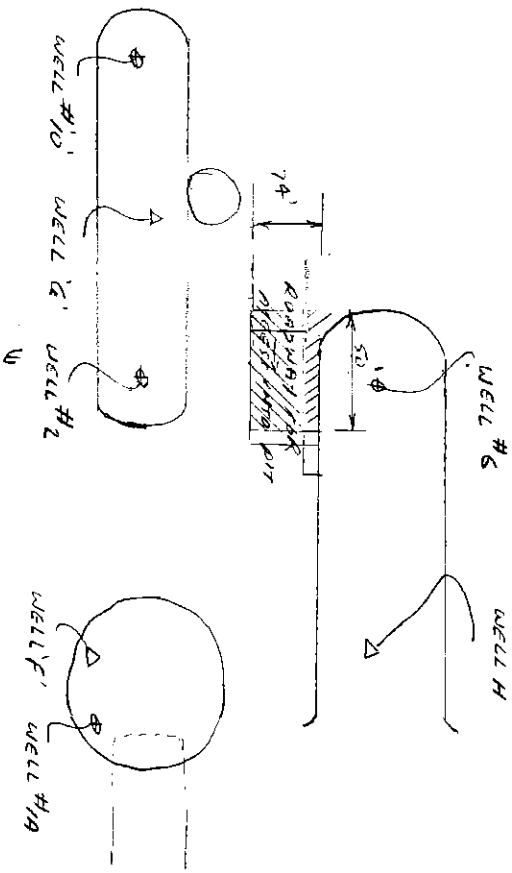
Estimated volume of excavation:

2,775 CU. YDS FOR EXTENDED AREA BETWEEN AREA CONTAINING WELL #6 & H AND AREA CONTAINING WELL #10, G & 2

2,775 CU. YDS.

Estimated volume of excavated material placed in separation process:

832 CY STORED @ STORAGE PILE



Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSHUBISHI MODEL MS 280	32 HRS.
FRONT END LOADER - FIAT ALLIS FR35	30 HRS.

2. Problems Encountered and Resolution

REFER TO DAILY FIELD LOG, PLEASE

3. Projected Work Next Week (Describe briefly)

CONTINUE TO WORK AND EXCAVATE REMAINING EXTENDED AREA TILL FURNACE DUST CONTINUITY CEASES.

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

THE EXCAVATION AREA IS THE EXTENDED AREA DUE TO CONTINUAT OF FURNACE DUST AND IS NOT INCLUDED IN THE DRAWING U495_01 (NUS).

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO JALISDO	32	48
FRED POLLOCK	22	48
LES DUDEK	8	
Totals	62	96

Other Direct Costs: (please specify)	PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments —

NUS Field Representative

12-28-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, CHILLY, HIGH 20°F. WITH WIND CHILL 15°F. BELOW HUMIDITY 68% WIND SW @ 9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-28-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - FRONT END LOADER - FIAT ALLIS FR 35 - 8 HRS

LES DUDEK — BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

LES DUDEK - CONTINUED EXCAVATION FOR OVERBURDEN TILL THE LEVEL OF FURNACE DUST HITS.

GILDARDO SALSIDO - CONTINUATION IN THE PIT AREA AND EXTENDED AREA ALONG ROADWAY FOR UNDERBURDEN CONTAINING FURNACE DUST.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
12-28-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SNOW, WINDY, HIGH 24°F
WITH WIND CHILL FACTOR 6°F ABOVE
HUMIDITY- 74%, WIND W @ 8 MPH
BAROMETRIC PRESSURE 29.86" MERCURY & FALLING

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-27-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. – EXTENDED AREA EXCAVATION IN THE AREA NORTH OF WELL #10, G & Z GOING WEST ALONG MAIN ROADWAY. THE CONTINUATION OF DUST STILL EXIST.

F.P. – HAUL AWAY UNDERBURDEN CONTAINING FURNACE DUST IN THE EXTENDED AREA NORTH OF AREA ALONG ROADWAY TOWARDS WEST OF WELL #10, G AND Z AND ALSO UNDERBURDEN CONTAINING FURNACE DUST IN THE AREA CONTAINING WELL #1A & F.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-27-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COLD, HIGH 20°F WITH WIND CHILL FACTOR -10°F. BELOW HUMIDITY- 84%, WIND SW @ 16 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-26-'85

1. Personnel/Equipment On Site

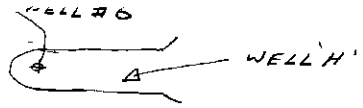
GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

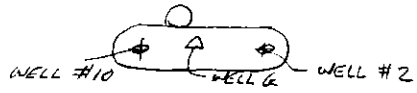
FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

$\rightarrow$ VOL. = $\frac{50 \times 7 \times 15}{27}$ = 194 CU. YDS.





3. Work Accomplished

G.S. - EXTENDED AREA EXCAVATION IN THE AREA NORTH OF WELL #10, G & 2 GOING WEST ALONG MAIN ROADWAY. THE CONTINUATION OF DUST STILL EXISTS.

F.P. THE ATTEMPT TO REMOVE UNDERBURDEN CONTAINING FURNACE DUST IN THE EXTENDED AREA NORTH OF AREA ALONG ROADWAY TOWARDS WEST OF WELL #10, G & 2 & ALSO UNDERBURDEN CONTAINING FURNACE DUST IN THE AREA CONTAINING WELL # 1A & F.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-26-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: INCREASINGLY CLOUDY, COLD, HIGH 34°F WITH WIND CHILL FACTOR 16°F ABOVE

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-23-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 6 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. - EXCAVATION IN EXTENDED AREA NORTH OF AREA CONTAINING WELL #10, 6 & 2

F.P. - HAULING & BACKFILLING

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-23-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 12-21-'85

1. Work Accomplished

Estimated volume of excavation:

4,110 CU. YDS FOR EXTENDED AREA BETWEEN AREA CONTAINING WELL #6 & H AND AREA CONTAINING WELL # 10, G & 2

4,110 CU. YDS.

Estimated volume of excavated material placed in separation process:

1,233 CY STORED @ STORAGE PILE

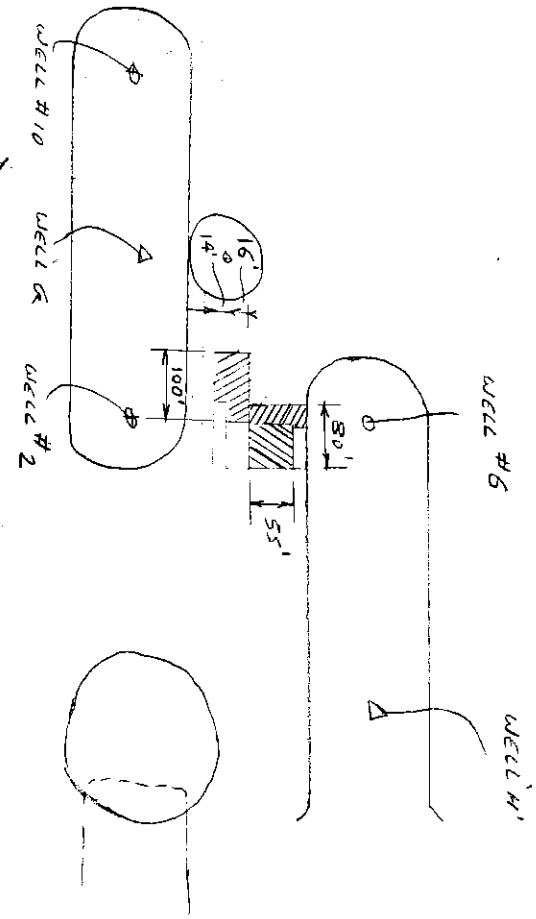
Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —



Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSHUBISHI MODEL MS 280	40 HRS.
FRONT END LOADER - FIAT ALLIS FR35	42 HRS.
SMALL FRONT END LOADER - FIAT ALLIS 745-C	14 HRS

2. Problems Encountered and Resolution

REFER TO DAILY FIELD LOG. PLEASE.

3. Projected Work Next Week (Describe briefly)

CONTINUE TO WORK AND EXCAVATE REMAINING EXTENDED AREA TILL FURNACE DUST CONTINUITY CEASES.

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

THE EXCAVATION AREA IS EXTENDED AREA DUE TO CONTINUATION OF FURNACE DUST.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LES DUDEK	8	
GILDARDO SALSIDO	48	48
FRED POLLOCK	38	48
Totals	96	96

Other Direct Costs: (please specify)	PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments —

NUS Field Representative

12-21-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: PLEASANT SUNSHINE. CHILLY, 19°F HIGH 13° BELOW WITH WINDCHILL HUMIDITY - 69%, WIND W TO 15 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-21-85

1. Personnel/Equipment On Site

GILDARDO JALSIDO - FIAT ALLIS FR-35 - FRONT END LOADER (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. PROVIDE ROADWAY FOR AN ACCESS INTO PIT FOR CONTINUATION OF EXCAVATION FOR THE EXTENDED AREA EXCAVATION.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

BACKHOE BUCKET WAS BEATEN UP SO MUCH WITH THE CONTINUOUS USE AND HARD EXCAVATION AT TIMES AND HARD EXCAVATION DUE TO FREEZING TEMPERATURES THAT IT WAS NECESSARY TO REPAIR THE BUCKET WITH LARGE HOLES. THE REINFORCING & REPAIR IS DONE TO-DAY.

6. General Comments: —

NUS Field Representative

12-21-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

PARTLY CLOUDY

WEATHER: VERY COLD, HIGH NEAR 14°F CECO PO NO. 75-5-G0006

HUMIDITY 63%, WIND NW @ 5 MPH NUS PROJECT NO. U495

BAROMETRIC PRESSURE 30.29" & RISING

Date: 12-20-'85

1. Personnel/Equipment On Site

GILOARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. - CONT'N OF YESTERDAY'S WORK

F.P. - CONT'N OF YESTERDAY'S WORK

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-20-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, COLD, HIGH 13°F (ABOVE) WITH WINDCHILL 20 BELOW
HUMIDITY - 65%, WD 8 MPH WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-19-'85

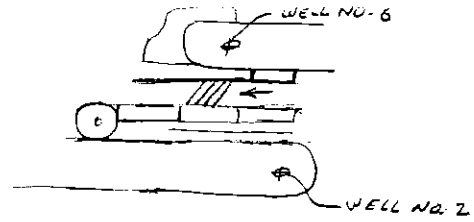
1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 (8 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

G.S. - CONTINUATION OF EXCAVATION FOR OVERBURDEN IN THE EXTENDED AREA NORTH OF WELL NO. 2

F.P. - EXCAVATION IN THE UPPER EXCAVATED AREA TAKING UNDERBURDEN OUT AND TAKING UNDERBURDEN OUT FROM THE AREA CONTAINING WELL NO. '1A' AND WELL '1F'.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: 6.1 DUE TO FREEZING TEMPERATURES THE GROUND LEVEL EXCAVATION REALLY GETS TOUGH TO EXCAVATE WITH. ALSO, THE LOWER CRUST WHILE EXCAVATING, THE WARM GROUND AND FREEZING WEATHER TEMPERATURES MAKES LOTS OF MOISTURE RELEASED WHILE EXCAVATING WITH BACKHOE, MAKING VERY POOR VISIBILITY OF THE

NUS Field Representative
12-19-'85

AREA BEING EXCAVATED.

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDS CLEAR
CLEAR SKY, COLD. HIGH TEMP. 8°F
WITH WINDCHILL FACTOR 37° BELOW
HUMIDITY 55%, WINDOUTOF WEIT @ 12 MPH
30.53" & HOLDING STEADY - BAROMETRIC PRESSURE

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-18-'85

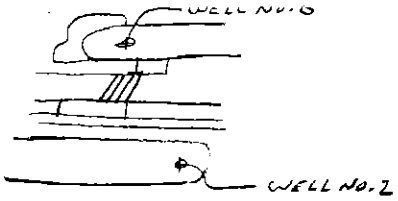
1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK. FRONT END LOADER - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

G.S. - CONTINUATION OF EXCAVATION FOR OVERBURDEN IN THE EXTENDED AREA NORTH OF WELL NO. 2

F.P. - EXCAVATION IN THE UPPER EXCAVATED AREA TAKING UNDERBURDEN OUT AND ALSO TAKING UNDERBURDEN OUT FROM THE AREA CONTAINING WELL NO. 'A' AND WELL 'F'.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-18-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SNOW FLURRIES, COLD, SUNNY, HIGH 11°F. 6 BELOW WITH WIND CHILL FACTOR HUMIDITY 56%, WIND W @ 5 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-17-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 (2 HRS.)

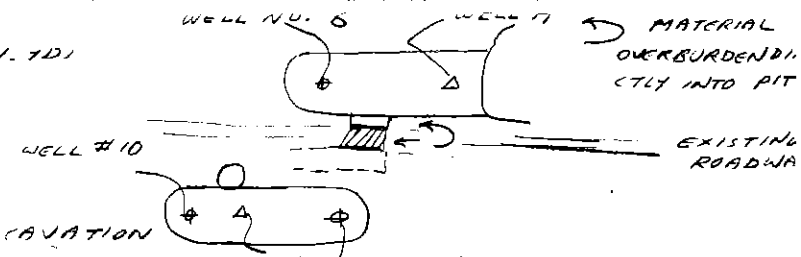
FRED POLLOCK - SMALL FRONT END LOADER - FIAT ALLIS 745-C (6 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

DIRECTLY INTO PIT

VOL. = $\frac{(106-50) \times 8 \times 15}{27}$ = 316 CU. YDS



3. Work Accomplished

G.S. FURTHER EXTENDED EXCAVATION LINKING AREA CONTAINING WELL #6 & H AND WELL #2

F.P. HAUL AWAY OVERBURDEN AND BACKFILL IN THE AREA CONTAINING WELL #10, 6 AND 2 TO BRIDGE THE AREA EXCAVATED WITH THE AREA ALREADY BACKFILLED.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

FRONT END LOADER - FIAT ALLIS FR35 - WOULD NOT GET STARTED. A SERVICE-MAN WAS CALLED IN AND WAS FIXED.

6. General Comments: 6.1 SNOW ALL OVER THE EXCAVATED AREAS

NUS Field Representative

12-17-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL SUNNY SKY, HIGH 24° F CECO PO NO. 75-5-G0006

HUMIDITY 77%, WIND SW @ 7MPH NUS PROJECT NO. U495

Date: 12-16-'85

1. Personnel/Equipment On Site

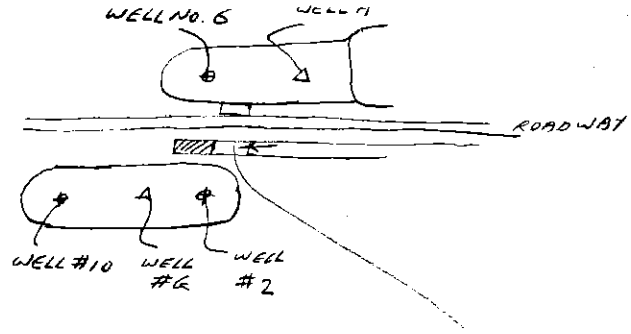
LES DUDEK - SMALL FRONT END LOADER - FIAT ALLIS 745-C (8 HRS.)

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

G. S. - EXCAVATION IN EXTENDED AREA NORTH OF WELL #2

F. P. EXCAVATION FOR UNDERBURDEN CONTAINING FURNACE DUST THICK LAYERS OF DUST CONTINUATION, TAPERS OFF AS GOING WEST.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-16-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 12-14-'85

1. Work Accomplished

Estimated volume of excavation:

3,142 CU. YDS FOR AREA CONTAINING WELL #K AND WELL NO. 5
1,800 CU. YDS. EXTENDED AREA NORTH OF AREA CONTAINING WELL 'F' & '1A'
266 CU. YDS. EXTENDED AREA NORTH OF WELL 10, 6 & 2.
5,208 CU. YDS.

Estimated volume of excavated material placed in separation process:

1,562 CY STORED @ STORAGE PILE

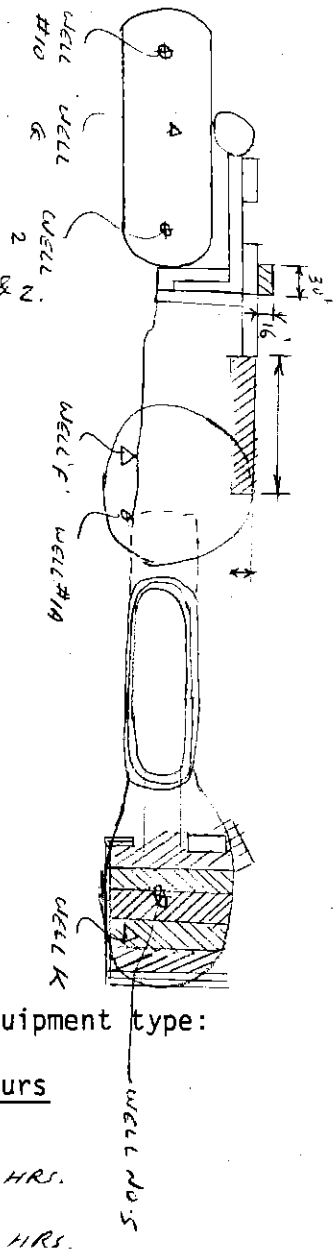
Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —



Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSHUBISHI MODEL MS 380	48 HRS.
FRONT END LOADER - FIAT ALLIS FR35	42 HRS.
INTERNATIONAL HARVESTER - CRAWLER 250	2 1/2 HRS.
SMALL FRONT END LOADER 745 C	10 HRS.

2. Problems Encountered and Resolution

REFER TO THE DAILY FIELD LOG

3. Projected Work Next Week (Describe briefly)

CONTINUE TO WORK AND EXCAVATE REMAINING EXTENDED AREA EXCAVATION TILL FURNACE DUST CONTINUATION CEASES.

4. Anticipated Problems & Resolution Options —

5. Significant Deviations from Closure Plan

THE AREA IN WHICH EXCAVATION CONTINUES IS EXTENDED AREA BEYOND THE BOUNDRY SHOWN ON DRAWING U495-01. THE FURNACE DUST IS FOUND IN THE EXTENDED AREA AND WILL CONTINUE TILL FURNACE DUST CONTINUATION CEASES.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	48 HRS	48 HRS.
FRED POLLOCK	42 HRS	48 HRS.
LES DUDEK	12 1/2 HRS	
Totals	102 1/2	96 HRS.

Other Direct Costs: (please specify) REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments —

NUS Field Representative

12-14-85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL, CLOUDY, 10 °F. WITH WIND CHILL FACTOR 30 °F BELOW HUMIDITY 56%, WINDS @ 5 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-14-'85

1. Personnel/Equipment On Site

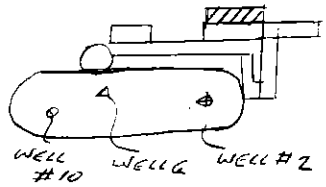
GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)
(LES WORKED ON HOE FOR 2 1/2 HRS.)

FRED PULLOCK - FRONT END LOADER - FIAT ALLIS FR 35 (8 HRS.)

LES DUDEK - SMALL FRONT END LOADER - FIAT ALLIS 745 C

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

G.S. - EXCAVATION IN THE EXTENDED AREA NORTH OF WELL NO. 2 NEAR EXISTING ROAD

LES DUDEK. MOVED SOME MATERIAL AT OTHER LOCATION AS THE MATERIAL WAS IN THE WAY FOR FURTHER DIGGING AND ALSO TO PROVIDE AN ACCESS TO THE VEHICLE FOR NEW ROAD-WAY, AND TO LET EXTRA LONG CERO TRUCKS PASS THROUGH THERE.

FRED POLLOCK: EXCAVATION OF UNDERBURDEN CONTAINING FURNACE DUST IN THE AREA CONTAINING WELL 'F' AND WELL #1A.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE EXTENT OF FURNACE DUST SPREADING KEPT ON GOING FARTHER TO NEAR ROADWAY NECESITIATING THE BAD PILE SEGMENT TO BE MOVED AWAY FOR AN ACCESS OF NEW ROADWAY - BYPASS.

6. General Comments: 6.1 DUE TO FREEZING TEMPERATURES, THE UPPER LAYE OF CUT OUT GROUND SECTION WAS REALLY HARD TO DIG WITH. ONCE IT IS BROKEN, WOULD BE FEASIBLE TO EXCAVATE FURTHER.

NUS Field Representative

12-14-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 10 °F
WIND CHILL FACTOR 18°F BELOW
HUMIDITY- 64 %, WIND NW @ 9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-13-'85

1. Personnel/Equipment On Site

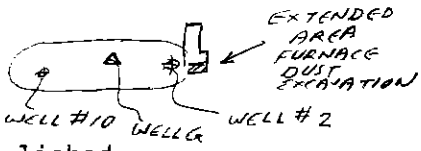
LES DUDEK - FRONT END LOADER - FIAT ALLIS 645 (4 HRS.)

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

G. S. EXCAVATION (TOTAL DEPTH) CONTINUATION IN THE AREA CONTAINING WEL NO. 5' AND WELL 'K'. THE FURNACE DUST FOUND IN THIS AREA WAS ONLY A THE NORTHWEST CORNER OF THE AREA. ALSO SOME EXCAVATION FOR AREA 10, 6 & 2.

F. P. EXCAVATION IN THE EXTENDED AREA NORTHEAST OF WELL NO. 2 AND SOUTHWEST OF AREA CONTAINING WELL 'F' AND WELL # 'A"

L. D. HAULING AWAY BAD MATERIAL FROM THE AREA CONTAINING WELL NO 5 AND WELL 'K' TO THE BAD PILE STORAGE AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution —

6. General Comments: 6.1 THE LOW TEMPERATURES AT FREEZING RANGES CONTRIBUTE TO DRY EXCAVATION

NUS Field Representative

12-13-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COLD, HIGH 22°F
WIND CHILL FACTOR 6° BELOW
HUMIDITY- 84% WIND SW @ 9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-12-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS280 (8 HRS.)

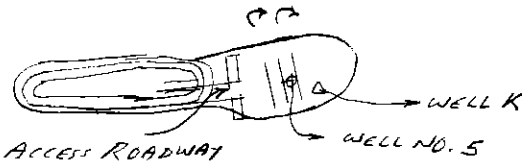
FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 (5½ HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

$V = \frac{50 \times 50 \times 12}{27} = 1,111$ CU. YDS

DIRECTLY INTO PIT



3. Work Accomplished G. S.

FURTHER EXCAVATION IN THE AREA CONTAINING WELL K & WELL NO. 5

F. P. STARTED MAKING ROADWAY INTO PIT CONTAINING WELL #10, 6 & 2 TO HAV AN EXCESS TO EXCAVATE UNDERBURDEN CONTAINING FURNACE DUST. THIS WILL ALSO CUT THE TRAVEL ROUTE, OTHERWISE WOULD BE USED, TO EXCAVATE AND HAL THE MATERIAL CONTAINING FURNACE DUST TO BAD STORAGE PILE LOCATIONS.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-12-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, OCCASSIONAL DRIZZLES, LIGHT SHOWER ENDING, HIGH 38°F. CECO PO NO. 75-5-G0006

HUMIDITY- 96%, WIND N @ 8MPH NUS PROJECT NO. U495

Date: 12-11-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACK HOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 (4 1/2 HRS.)

LES DUDEK - INTERNATIONAL HARVESTER CRAWLER - MODEL 250 (2 1/2 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. EXCAVATION CONTINUED IN THE AREA CONTAINING WELL 'K' & WELL NO. 5.

F.P. EXCAVATION OF UNDERBURDEN IN THE MANNER TO SCOOP OUT FURNACE DUST CONTAINING MATERIAL WITH MUCH CARE & TO ELIMINATE NON-DUST CONTAINING MATERIAL.

L.D. - AN EFFORT TO EXCAVATE FURNACE DUST CONTAINING UNDERBURDEN WITH CARE HAS BEEN TRIED.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE PROBLEM OF FURNACE DUST CONTAINING MATERIAL IN THE UNDER-BURDEN TO REMOVE IT SURGICALLY OUT WITH TREMENDOUS CARE HAD BEEN TRIED WITH THE AVAILABLE EQUIPMENT LIKE FRONT END LOADER AND CRAWLER. THE CHANGING CONTOUR OF THE LAYERS OF FURNACE DUST ALONG WITH THE VARIATION IN THE DEPTH OF LAYER ITSELF AND THE WATER PRESENT @ LOW ELEVATION WHILE EXCAVATIN POSES THE UNSATISFACTORY YIELD OF SURGICALLY REMOVING THE DUST.

6. General Comments:

NUS Field Representative

12-11-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: DRIZZLES, COOL CLOUDY, HIGH 34°F HUMIDITY- 96%, WIND NE @ 5 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-10-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACK HOE - MITSHUBISHI MODEL MS 280 (8 HRS)

BURT SALSIDO - FRONT END LOADER - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

BILL ALBRECHT - CECO CORPORATION

3. Work Accomplished G.S. ADDITIONAL SEGMENT NORTHEAST OF WELL NO. 2 IN THE EXTENDED AREA EXCAVATION AS THE FURNACE DUST STILL CONTINUES TO EXIST AND EXTEND.

FRED POLLOCK - HAUL AWAY OVERBURDEN AND BACKFILL IT TO AREA CONTAINING WELL #10, 6 & 2.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: —

NUS Field Representative

12-10-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY COOL, HIGH 38°F CECO PO NO. 75-5-G0006

HUMIDITY- 81%, WIND W @ 5 MPH NUS PROJECT NO. U495

Date: 12-9-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACK HOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G. S. EXCAVATION FOR OVERBURDEN IN THE AREA CONTAINING WELL NO. F AND WELL #1A

FRED POLLOCK- HAUL AWAY OVERBURDEN MATERIAL & BACKFILL THE AREA CONTAINING WELL #10, G AND 2

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-9-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 12-7-'85

1. Work Accomplished

Estimated volume of excavation:

3,402 CU. YD. AREA CONTAINING WELL 'F' & #'1A'

3,380 CU. YD. EXTENDED AREA EXCAVATION IN BETWEEN AREA CONT. 10, 6 & 2 & AREA CONTAINING WELL 'F' & #1A.

6,782 CU. YDS.

Estimated volume of excavated material placed in separation process:

2,034 CY STORED @ STORAGE PILE

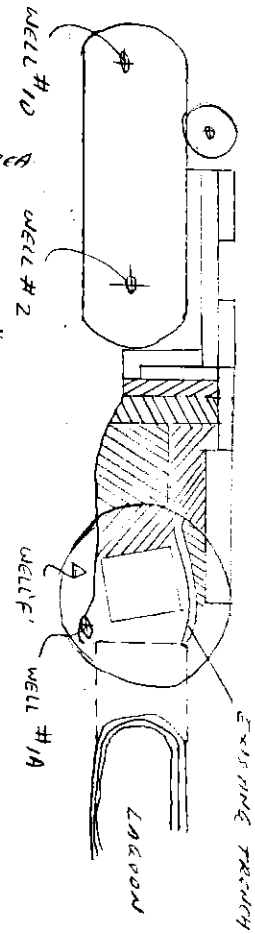
Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —



Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSHUBISHI MODEL MS 280	48 HRS.
FRONT END LOADER - FIAT ALLIS FR35	45 1/2 HRS.
FIAT ALLIS 645 - FEL	2 1/2 HRS.

2. Problems Encountered and Resolution

PLEASE REFER TO THE DAILY FIELD LOG

3. Projected Work Next Week (Describe briefly)

CONTINUATION OF EXCAVATION IN THE AREA CONTAINING WELL NO. 5 AND WELL 'K' AND EXTENDED AREA AROUND NORTH OF WELL NO. 2 AND NORTH OF WELL 'F' AND WELL NO. 1A'.

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

—

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LES DUDEK	4	
GILDARDO SALSIDO	44	48
FRED POLLOCK	48	48
Totals	96	96

Other Direct Costs: (please specify)	PLEASE REFER TO MONTHLY EXPENSE REPORT	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments —

NUS Field Representative

12-7-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 35 °F CECO PO NO. 75-5-G0006

HUMIDITY-85%, WIND S 10 MPH NUS PROJECT NO. U495

Date: 12-7-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACK HOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FRONT END LOADER FR 35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. – EXCAVATION FOR OVERBURDEN IN EXTENDED AREA BETWEEN AREA CONTAINING WELL #10, G & 2 & WELL # F & 1A.

F.P. –

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: —

NUS Field Representative
12-7-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 29°F CECO PO NO. 75-5-G0006

HUMIDITY 75%, WIND NW @ 5MPH NUS PROJECT NO. U495

Date: 12-6-'85

1. Personnel/Equipment On Site

GILDARDO SALCIDO - BACKHOE - MITSHUBISHI MODEL MS 280 - 8 HRS

FRED POLLOCK . FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. — CONT'N OF YESTERDAY'S WORK

F.P. — CONT'N OF YESTERDAY'S WORK

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-6-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, CHILLY, HIGH 28°F. CECO PO NO. 75-5-G0006

HUMIDITY - 81 %, WIND NW @ 5MPH NUS PROJECT NO. U495

Date: 12-5-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACK HOE - MITSHUBISHI MODEL MS 280 - 8 HRS.

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR35 - 8 HRS

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. – CONT'N OF YESTERDAY'S WORK

F.P. – CONT'N OF YESTERDAY'S WORK

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution –

6. General Comments: –

NUS Field Representative

12-5-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, SUNNY, HIGH 34°F WITH WINDCHILL 14°F ABOVE, HUMIDITY 72 %, WIND SW@9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-4-85

1. Personnel/Equipment On Site

LES DUDEK - BACKHOE - MITSHUBISHI MODEL MS 280 (4 HRS.)

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (4 HRS.)

FRED POLLOCK - FRONT END LOADER - FIAT ALLIS FR 35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

L.D. } CONTINUATION OF EXCAVATION TO REMOVE OVERBURDEN IN THE
G.S. } EXTENDED AREA CONTAINING WELL #F & #1A.

F.P. CONTINUATION OF HAUL AWAY & BACKFILL AREA CONTAINING WELL #G & H ON WEST END & ALSO ON EAST END OF THE SAME AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: 6.1 THE FURNACE DUST FOUND BELOW OVERBURDE SEEM TO BE ABOUT 3' UP FROM BEDROCK WIT ABOUT 9" TO 1' SEAM. SPOT CHECK OF CONTINU TION OF FURNACE DUST IS THUS MADE BY SPOT DIGGING ALL THE WAY TO THE BEDROCK WHILE CONTINUING EXCAVATION IN THE EXTEND AREA.

NUS Field Representative

12-4-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, HIGH 19°F
WIND CALM, WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-3-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO. BACKHOE - MITSHUBISHI MODEL MJ 280 (8 HRS.)

FRED POLLOCK - F.S.L. - FIAT-ALLIS FR 35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

G.S. - CONTINUATION OF OVERBURDEN EXCAVATION IN THE AREA CONTAINING WELL #F & #1A.

F.P. - HAUL AWAY OVERBURDEN, MADE SOME ROADWAY NEAR LEFT OFF DUST AREA CONTAINING WELL #10, G & #2.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

12-3-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: PARTLY CLOUDY, BRIGHT SUNSHINE, HIGH 14°F ABOVE, WINDCHILL FACTOR 20°F BELOW WIND NW 21 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 12-2-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - BACKHOE - MITSHUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - F.E.L. - FIAT ALLIS FR35 5 1/2 HR.

FIAT-ALLIS C45 2 1/2 HR.

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished G.S.

CONTINUATION OF OVERBURDEN EXCAVATION IN THE AREA CONTAINING WELL #F & #1A. (EXTENDED AREA)

F.P. HAUL AWAY GOOD OVERBURDEN TO AREA CONTAINING WELL # 6 & #H FOR ROADWAY ON WEST SIDE OF THE AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

DUE TO PREVENT WEATHER AND STORM OVER WEEKEND CONTRIBUTED TO DELAYED START UP OF MACHINERYS USED FOR EXCAVATION.

6. General Comments: 6.1 DUE TO SEVERE WEATHER CONDITIONS, THE EXCAVATED AREA - THE EXPOSED SURFACE CHANGES COLOR - FROST & ICE IN ADDITION TO WATER THAT IS CHANGED TO ICE MAKES IT CUMBERSOME TASK TO DISTINGUISH THE COLOR OF THE DUST.

NUS Field Representative

12-2-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 11-30-'85

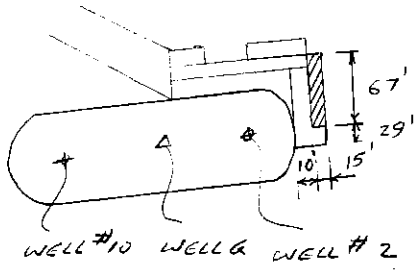
1. Work Accomplished

Estimated volume of excavation:

503* EXTENDED AREA OVERBURDEN EXCAVATION (CONSIDERED TOTAL EXCAVATION FOR CALC. ONLY)

2,059 CU. YDS. WELL 'F' & #'1A' CONTAINING AREA

2,562 CU. YDS

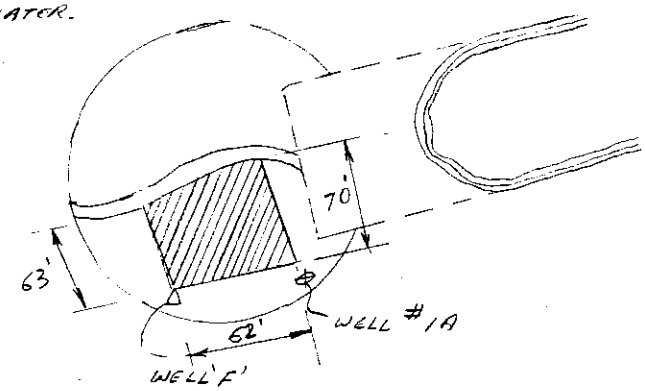


Estimated volume of excavated material placed in separation process:

UNDERBURDEN WILL BE EXCAVATED LATER.

Estimated volume of processed material resulting in disposable waste:

—



Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other:

—

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSHUBISHI MODEL MS 280	24 HRS.
FRONT END LOADER - FIAT ALLIS FR-5	24 HRS.

* EXTENDED AREA CUBIC YARDS

2. Problems Encountered and Resolution PLEASE REFER TO THE DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

CONTINUATION OF WORK IN THE AREA CONTAINING WELL 'F' AND WELL #1A - TO REMOVE OVERBURDEN BY USING BACKHOE AND TO REMOVE UNDERBURDEN CONTAINING FURNACE DUST BY USING FRONT END LOADER.

4. Anticipated Problems & Resolution Options

MORE STEPS ARE TAKEN TO CAREFULLY REMOVE OVERBURDEN WITHOUT GETTING MIXED & WITH MINIMAL OVERBURDEN COMING IN THE WAY OF UNDERBURDEN. — BY COMBING MUCH OF THE OVERBURDEN MORE CAREFULLY & REMOVING OVERBURDEN OUT WITH USE OF BACKHOE.

5. Significant Deviations from Closure Plan

THE EXTENDED AREA EXCAVATION CONTINUES WHERE FURNACE DUST IS FOUND TO BE CONTINUED.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	24	48
FRED POLLOCK	24	48
Totals	48 HRS.	96

Other Direct Costs: (please specify)	PLEASE REFER TO THIS MONTH EXPENSE SHEET	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments 7.1 THIS IS A SHORT WORKING WEEK DUE TO THANKSGIVING HOLIDAYS.

NUS Field Representative

11-30-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: MOSTLY CLOUDY, COOL, HIGH 38°F RAIN DEVELOPING, HUMIDITY 75%, WIND N @ 9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-27-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL HS280 (8 HRS.)

FRED POLLOCK - FIAT ALLIS FR 35 (8 HRS.)

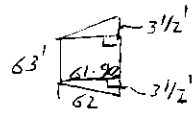
2. Visitors (Name/Affiliation/Nature)

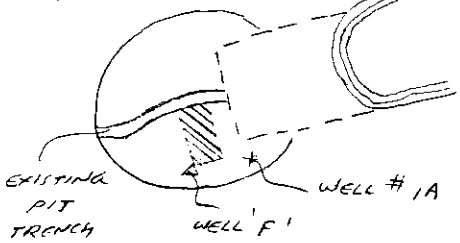
N/A

$$\text{Vol.} = \left[\frac{(2\times 1/2 \times 3.5 \times 61.90) + (63 \times 61.90)}{27}\right] 13.5^{*} = 2059 \text{ CU. yds.}$$

CONSIDERED TOTAL EXCAVATION FOR CALC. ONLY. ACTUALLY, ONL OVERBURDEN IS REMOVED

* MEAN-DEPTH ASSUMED MODELLED AS





3. Work Accomplished

GILDARDO SALCIDO - CONTINUATION OF OVERBURDEN EXCAVATION IN THE AREA CONTAINING WELL # F & WELL # 1A.

FRED POLLOCK: BACKFILL HAULING TO AREA CONTAINING AREA # 6 & 4, AND AREA CONTAINING WELL # 10, 6 & 2 AND ALSO MAKE ANOTHER ROAD-WAY LEADING TO THIS AREA - WELL 'F' & WELL # 1A.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments: 6.1 MORE COMBING BY BACKHOE TO EXCAVATE & ELIMINATE OVERBURDEN CONTAINING ROCKS, DEBRIS, ETC.

NUS Field Representative
11-27-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 46°F
DRIZZLE, OCCASIONAL RAIN
HUMIDITY 82 %, WIND W @ 12 MPH
BAROMETER 29.86" HG-STEADY

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-26-'85

1. Personnel/Equipment On Site

GUILLARDO SALTIDO - MITSHUBISHI MODEL MS 280 (8 HRS)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

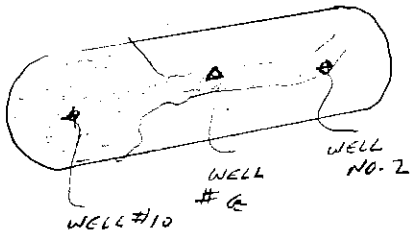
N/A

3. Work Accomplished GILDARDO SALSIDO: EXCAVATION IN THE AREA CONTAINING WELL # F & # 1A. MUCH CARE IS TAKEN TO ALLEVIATE MIXING OF UNDESIRED STONES & DEBRIS.

FRED POLLOCK: BACKFILLING IN THE AREA CONTAINING WELL # 6 & H AND ALSO IN THE AREA CONTAINING WELL # 10, G & # 2. THE ROAD-WAY IN THE AREA CONTAINING WELL # 10, G & # 2 WAS MADE FOR BACKFILLING THE HOLE AND ALSO TO HAVE AN ACCESS TO GET THE FURNACE DUST OUT.

4. Samples Collected and Deposition

N/A



5. Problems Encountered and Resolution

N/A

6. General Comments: 6.1 AN ATTEMPT TO MINIMIZE THE OVERBURDEN, CAVING IN AND OTHER MATERIAL GETTING MIXED WITH THE DUST HAS BEEN TRIED. BACKHOE IS USED TO TAKE OVERBURDEN OUT, COMBING OUT IN A MANNER TO GET RID OF UNNECESSARY BURDEN. ALSO, SECOND ATTEMPT, IF NECESSARY WOULD BE TRIED, IF FURTHER COMBING IS NECESSARY.

NUS Field Representative
11-26-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 35°F CECO PO NO. 75-5-G0006

HUMIDITY - 58%, WIND E @ 11 MPH NUS PROJECT NO. U495

Date: 11-25-'85

1. Personnel/Equipment On Site

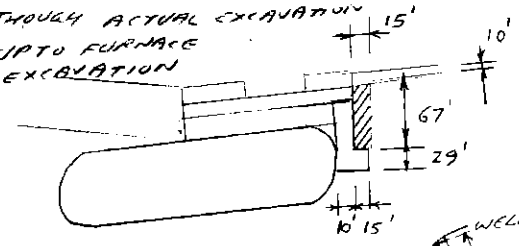
GILDARDO SALSIDO - MITSHUBISHI MODEL MS280 (8 HRS

FRED POLLOCK - FIAT ALLIS FR35 (6 HRS.)

2. Visitors (Name/Affiliation/Nature)

BILL ALBRECHT (CECO CORP.)

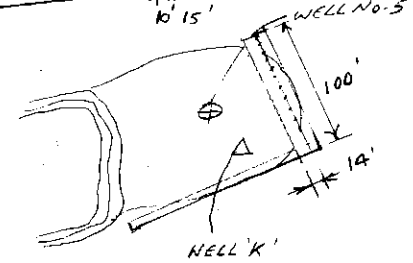
$V_1 = \frac{67 \times 15 \times 13.5^{*}}{27} = 503$ CU YDS * MEAN DEPTH CONSIDERED, THOUGH ACTUAL EXCAVATION IS DONE BY BACKHOE UPTO FURNACE BUIT. ONLY OVERBURDEN EXCAVATION



3. Work Accomplished GILDARDO SALSIDO

OVERBURDEN EXCAVATION IN THE EXTENDED AREA CONTAINING WELL # 10, & & #2. EXCAVATION STRETCH OF 14' x 100' x 11.25' HAS ALREADY BEEN ACCOUNTED FOR.

FRED POLLOCK: HAUL AWAY OVERBURDEN TO USE IT AS BACKFILL FOR MAKING ROAD-WAY



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

SERVICING ON FRONT END LOADER FOR 2 HRS. LOST TIME.

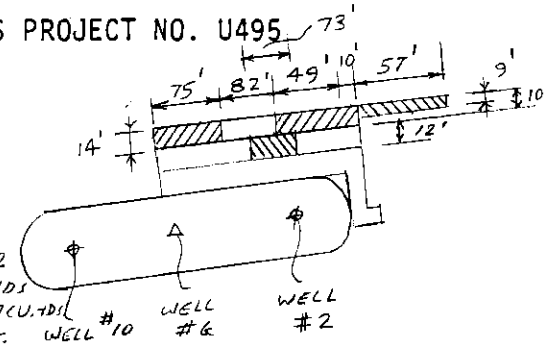
6. General Comments: 6.1 BILL ALBRECHT VISITED THE SITE THIS MORNING AND WAS BRIEFED ON PROGRESS STATUS FOR THE SITE @ LAMONT.

NUS Field Representative
11-25-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 11-23-'85



1. Work Accomplished

Estimated volume of excavation:

1,499* EXTENDED CU.YDS AREA CONT. WELL #10, 6 & #2 - TOTAL EXCAVATION (257 CU.YDS - ASSUMED TOTAL EXCAVATION)

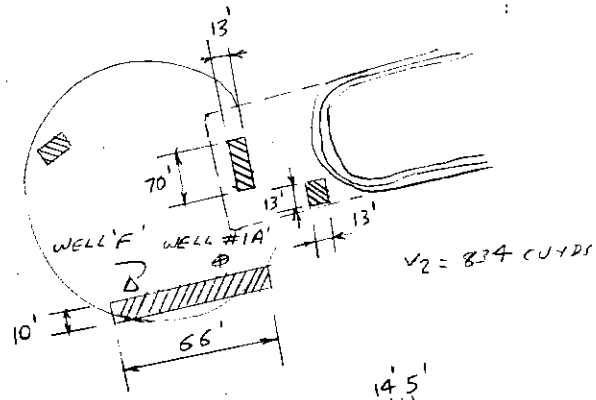
834 CU.YDS AREA CONTAINING WELL #F & 1A - TOTAL EXC.

1,302 CU.YDS. AREA CONTAINING WELL #K & #5 - TOTAL EXC.

3,735 CU.YDS

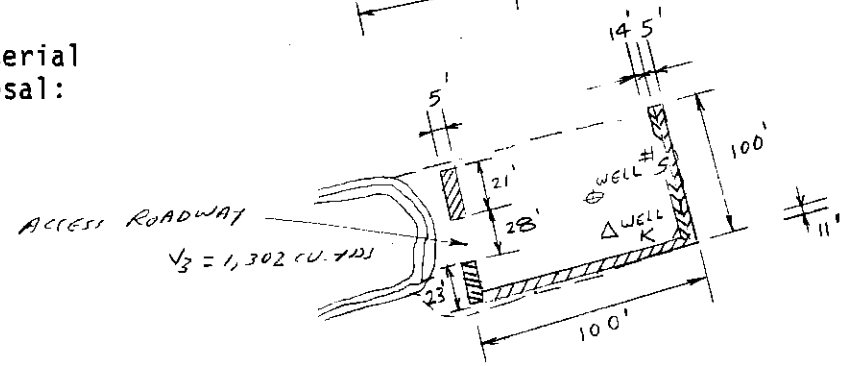
Estimated volume of excavated material placed in separation process:

450 CU.YDS STORED AT PILE



Estimated volume of processed material resulting in disposable waste:

Volume of resultant waste material transported offsite for disposal: (from manifests)



Other:

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
BACKHOE - MITSHUBISHI MODEL MS 280	40 HRS
FRONT END LOADER - FIAT ALLIS FR 35	36 HRS

* EXTENDED AREA CUBIC YARDS

2. Problems Encountered and Resolution

PLEASE REFER TO DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

CONTINUATION OF EXCAVATION UPTO TOP OF DUST LEVEL, IN THE AREA WHERE DUST IS FOUND.

4. Anticipated Problems & Resolution Options

AN EFFORT TO COMB OUT OVERBURDEN MORE SKILLFULLY WITH THE USE OF BACKHOE

5. Significant Deviations from Closure Plan

EXCAVATION CONTINUES IN THE AREA BEYOND THE MAP U-495-01, FOR CONTINUITY OF THE DUST.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	37 1/2 HRS.	
FRED POLLOCK	30 1/2 HRS.	24
LES DUDEK	8 HRS.	24
Totals	76 HRS.	48

Other Direct Costs: (please specify) PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

NUS Field Representative

11-25-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 36°F

HUMIDITY-72 %, WIND CALM

BAROMETER 30.24" HG - DROPPING

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-23-85

1. Personnel/Equipment On Site

LES DUDEK - MITSHUBISHI MODEL MI 230 (8 HRS.)

GILDARDO SALSIDO - FIAT ALLIS FR 35 (5 1/2 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

WELL NO. 3 WAS EXCAVATED. MOSTLY COMPACT FILLED WITH SLAG.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BUCKET STARTED GETTING SHEARED. THE ACTUATING CYLINDER FOR BACKHOE STARTED LEAKING.

6. General Comments:

FOR WELL #3:
7' DRY DEPTH + 5' STAGNANT WATER DEPTH = 12' TOTAL DEPTH FROM TOP OF BEDROCK TO GROUND LEVEL

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny 78°F.

Light Wind

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 7-3-'85

1. Personnel/Equipment On Site

Les Dudek Ranger Backhoe (8 Hrs)

Fred Pollock Fiat Allis FR 35 (8 Hrs)

2. Visitors (Name/Affiliation/Nature)

Bill Albrecht — Ceco Corp.

3. <u>Work Accomplished</u>

STARTED EXCAVATING WELL NO. 4, NORTHWEST FAR SIDE, MOSTLY COMPACT FILLED WITH SLAG, 70 x 70' OPENING @ TOP, TO ~~[illegible]~~ 10' x 10' @ ROCK TOP.

F.E.L. WAS USED TO PUSH THE SLUDGE OUT OF THE WAY @ THE LOCATION FOR WELL # 3.

4. <u>Samples Collected and Deposition</u>

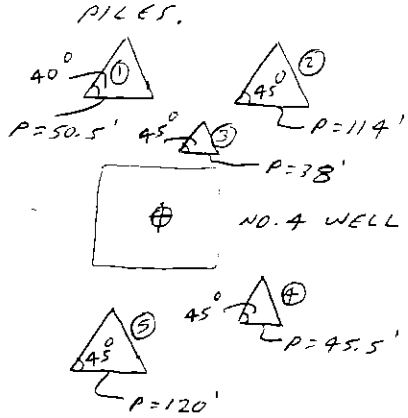
N/A

THE SITE #4 WILL BE BACKFILLED LATER.

5. <u>Problems Encountered and Resolution</u>

THE TOUCH ON BUCKET KEPT COMING OFF.

6. <u>General Comments:</u> THE EXCAVATED MATERIAL SHOWED NO SIGN OF FURNACE DUST. THE TOTAL MATERIAL EXCAVATED CONSISTED OF 5 CONE SHAPED PILES.



Holland R. Hall
NUS Field Representative

VOLUME = CONE ① + CONE ② + CONE ③ + CONE ④ + CONE ⑤

$V_{①}$ = 0.2618 x 16^2 x 6.712 = 449 CUFT = 16.62 CU.YD.

$V_{②}$ = 0.2618 x 36.28^2 x 18.14 = 6250 CUFT = 231.48 CUYDS

$V_{③}$ = 0.2618 x 12^2 x 6 = 226 CUFT = 8.37 CUYDS

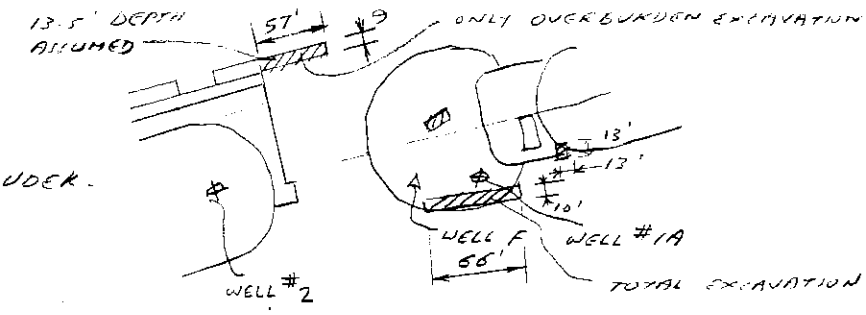
$V_{④}$ = 0.2618 x 14.48^2 x 7.24 = 397.41 CUFT = 14.71 CUYDS

$V_{⑤}$ = 0.2618 x 38.19^2 x 19.09 = 7289 CUFT = 269.96 CUYDS

TOTAL CUYDS = 541.14 SO, FOR WELL NO. 4 & NO. 3, SAME VOLUME IS ASSUME.

$V1 = \frac{57 \times 9 \times 13.5}{27} = 257$ CU. YDS.

$V2 = \frac{66 \times 10 \times 12}{27} = 294$ CU. YDS.



3. Work Accomplished LES DUDEK.

GILDARDO SALSIDO: BACKFILL IN THE AREA CONTAINING WELL #6 & WELL H, AROUND WELL #6 TO MAKE DETOUR ROAD FOR THE LOCAL TRAFFIC

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments:

NUS Field Representative

11-23-75

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL 32°F

H-82 90, WIND E @ 7MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-22-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS280 (8 HRS)

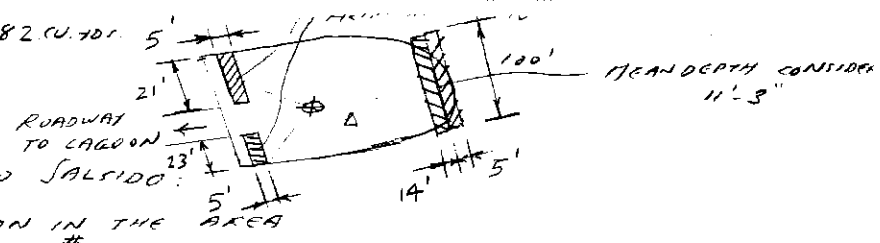
FRED POLLOCK - FIAT ALLIS FR 35 (6 1/2 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A

$V_1 = 21 \times \frac{5 \times 10}{27} + 23 \times \frac{5 \times 10}{27} = 39 + 43 = 82$ CU. YDS.

$V_2 = 100 \times \frac{19 \times 19.25}{27} = 792$ CU YDS.



3. Work Accomplished GILDARDO SALSIDO:

CONTIN OF TRENCH EXCAVATION IN THE AREA CONTAINING WELL #5 AND WELL #K

FRED POLLOCK - BACKFILLING IN THE AREA CONTAINING WELL #6 & #11

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: 6.1 THE GROUND WAS COVERED WITH SNOW - ALL OVER.

NUS Field Representative

11-22-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 46°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-21-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI BACKHOE - MODEL MS 280 (8 HRS)

FRED POLLOCK - FIAT ALLIS FR 35 - FRONT END LOADER (8 HRS.)

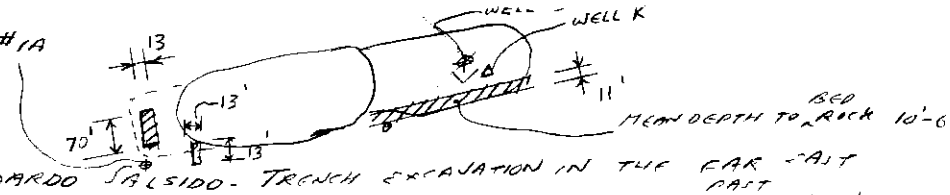
2. Visitors (Name/Affiliation/Nature)

N/A

$V_1 = \frac{70 \times 13 \times 13.5}{27} = 455$ CUYDS WELL #1A

$V_2 = \frac{100 \times 11 \times 105}{27} = 428$ CUYDS

$V_3 = \frac{13 \times 13 \times 13.5}{27} = 85$ CU.YDS.



3. Work Accomplished GILDARDO SALSIDO - TRENCH EXCAVATION IN THE FAR EAST AREA CONTAINING WELL # K & WELL #5. CONTINUATION OF THE PAST TUESDAY'S WORK.

FRED POLLOCK: BACKFILL AREA CONTAINING WELL #6 & WELL H,

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
11-21-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL, TEMP. HIGH 38°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-20-'85

1. Personnel/Equipment On Site

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished THE MATERIAL IN THE WAY OF EXCAVATION EAST OF WELL # 2 AND NORTH OF WELL # F & WELL # 1A WAS CLEANED UP FOR THE MATERIAL THAT WAS LATING THERE FOR RECLAIM OPERATION

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments: THE MEETING @ EPA, SPRINGFIELD OFFICE INCLUDED BILL ALBRECHT (CECO), NANCY WISE (CECO), ED BAER (NUS), GEORGE GARDENER, DAVE WILSON (US-EPA), CHARLOE ZEAL (ILL-EPA), HARRY CHAPEL (ILL-EPA), A LAWYER (ILL-EPA), CLIFTON LAKE AND JERYL DEZELICK (ROOKS, PITS & POUST) AND ME. THE CLOSURE PLAN DATED JUNE 13, '85 & ILL-EPA'S LETTER DATED SEPT 27, 1985 AFTER THE SITE VISIT DATED SEPT 18, 1985 WERE DISCUSSED.

NUS Field Representative

11-20-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, HIGH 56°F SCATTERED SHOWERS HUMIDITY 82%, WIND 5 ~ 7 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-19-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSUBISHI MODEL MS 280 (8 HRS.)

FRED POLLOCK - FIAT ALLIS FR-35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SCATTERED SHOWERS, THUNDERSTORMS, HIGH 62°F CECO PO NO. 75-5-G0006
CLOUDY, WINDS @ 12 MPH. HUMIDITY 86% NUS PROJECT NO. U495

Date: 11-18-'85

1. Personnel/Equipment On Site

GILDARDO SALCIDO - MITSUBISHI MODEL MT 280 (8 HRS.)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

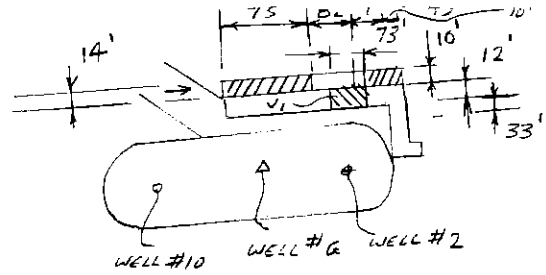
2. Visitors (Name/Affiliation/Nature)

N/A

VOL. V_1 = $\frac{73 \times 12 \times 13.5}{27}$ = 438 CU. YDS.

VOL. V_2 = $(75 + 49 + 10)\left(\frac{10+14}{2}\right) \times \frac{13.5}{27}$ = 804 CU. YDS.

VOL. V_1 + VOL V_2 = 438 + 804 = 1,242 CU. YDS.



3. Work Accomplished GILDARDO SALSIDO-

CONTINUATION EXCAVATION IN EXTENDED AREA WITH BACKHOE- TOTAL EXCAVATION, THE WORK IS CONTINUED TOMORROW.

FRED POLLOCK- BACKFILL AREA CONTAINING WELL #6 & H,

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE OVERBURDEN COULD BE DIRECTLY DUMPED INTO PIT. BUT, WE ARE RUNNING SHORT ON BACKFILL. ALSO, AREA CONTAINING WELL #6 & #H SHOULD BE BACKFILLED FOR AN ACCESS ROAD-WAY. SO, OVERBURDEN WAS HAULED TO BACKFILL AREA CONTAINING WELL #6 & #H TO MAKE THE ROAD-WAY.

6. General Comments: —

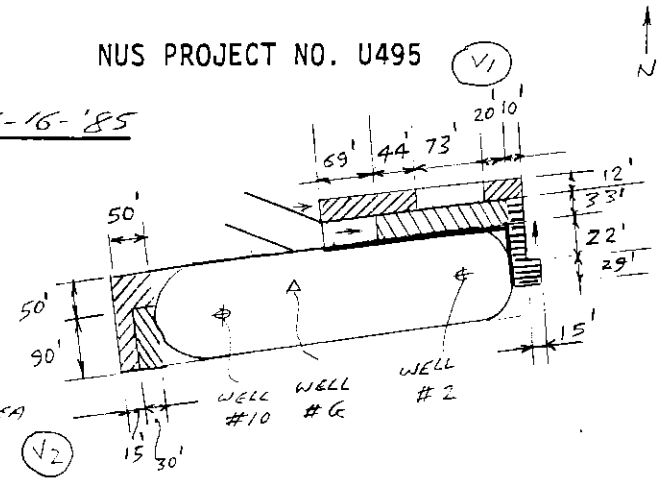
NUS Field Representative

11-18-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 11-16-'85



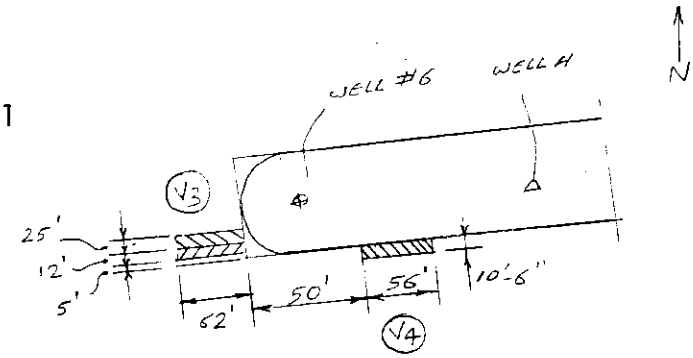
1. Work Accomplished

EXTENDED AREA: Estimated volume of excavation:

3,779 CY* EAST OF #10 WELL-EXTENDED AREA
1,770 CY* WEST OF #10 WELL-EXTENDED AREA
1,147 CY* WEST OF #6 WELL-EXTENDED AREA
316 CY* SOUTH OF #6 WELL-EXTENDED AREA
7,012 CY

Estimated volume of excavated material placed in separation process:

— 1550 CY STORED AT STORAGE PILE



Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other:

—

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
MITSHUBISHI MODEL MS 280	48 HRS
FIAT ALLIS FR 35	48 HRS.

* EXTENDED AREA EXCAVATION

V_1 = 293 + 1197 + 620 + 1376 + 293 = 3779 CU YDS → 1138 CU. YDS (ESTIMATED DUST)
V_2 = 1,200 + 200 + 370 = 1770 CU YDS → 265 CU. YDS (ESTIMATED DUST)
V_3 = 775 + 372 = 1,147 CU. YDS. → 114 CU. YDS (ESTIMATED DUST)
V_4 = 316 CU. YDS → 33 CU. YDS (ESTIMATED DUST)

2. Problems Encountered and Resolution

REFER TO DAILY FIELD LOG

3. Projected Work Next Week (Describe briefly)

CONTINUATION OF EXCAVATION IN THE AREA CONTAINING WELL #10, [illegible] AND ALSO AREA CONTAINING WELL #6 & #11, WHERE BOUNDARIES EXCAVATED THUS FAR STILL INDICATES PRESENCE OF FURNACE DUST.

4. Anticipated Problems & Resolution Options

THE WATER DEPTH IN THE AREA CONTAINING WELL # 10, 6 & 2 WAS A PROBLEM FOR FRONT END LOADER FOR ITS CONTINUOUS USE. BACKHOE WAS THEN USED.

5. Significant Deviations from Closure Plan

THIS WEEK'S ENTIRE EXCAVATION IS EXTENDED EXCAVATION TO INVESTIGATE & ASSURE THE TERMINATION OF CONTINUATION OF DUST.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SOLSIDO	44½	48
FRED POLLOCK	48	48
LES DUDEK	3½	
Totals	96	96

Other Direct Costs: (please specify) REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments See DAILY FIELD LOG.

NUS Field Representative

11-16-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: FOGGY, HIGH 51 °F

HUMIDITY 93%, WIND S @ 9 MPH

BAROMETRIC PRESSURE FALLING 29.85" HG.

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-16-'85

1. Personnel/Equipment On Site

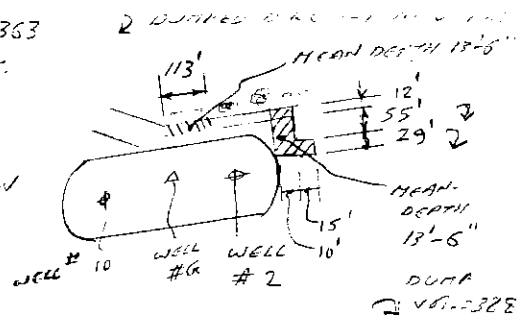
GILDARDO SALCIDO - MITSUBISHI MODEL MS230 (8 HRS.)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

Vol. $= \frac{113 \times 12 \times 13.5}{27} + \frac{62 \times 10 \times 13.5}{27} + \frac{29 \times 25 \times 13.5}{27} = 678 + 335 + 363$
$= 1{,}376$ CU. YDS.



3. Work Accomplished GILDARDO SALSIDO:- OVERBURDEN OUT TO BE USED FOR BACKFILL FOR AREA #6 & #H

FRED POLLOCK: BACKFILL AREA CONTAINING WELL # 6 & #H IN THE VICINITY OF WELL #H

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments: —

NUS Field Representative

10-16-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, LIGHT RAIN, HIGH 43°F CECO PO NO. 75-5-G0006

HUMIDITY 65%, WIND E @ 17MPH NUS PROJECT NO. U495
BAROMETER STEADY @ 30.43

Date: 11-15-85

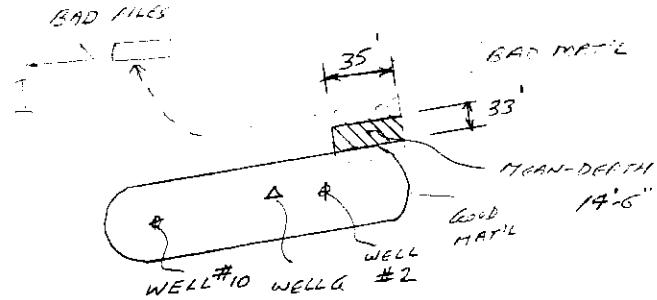
1. Personnel/Equipment On Site

LES DUDEK — MITSUBISHI MODEL MS-80 (3 1/2 HRS)
GILDARDO JALSIDO — " " " (4 1/2 HRS)
FRED POLLOK — FIAT-ALLIS FR35 (8 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A

VOL. 1 = $\frac{35 \times 33 \times 14.5}{27}$ = 620 CU. YDS



3. Work Accomplished LES DUDER

FRED POLLOCK: HAUL AWAY BAD MATERIAL TO STORAGE PILE AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE TOOTH WAS REPLACED ON BACKHOE (BY LES).

THE RAINY WEATHER CAUSED MUD ALL OVER WORKING AREAS.

6. General Comments: 6.1 THE AREA DUG BY BACKHOE HAD VERY THICK LAYERS OF DUST AT DIFFERENT LEVELS.

NUS Field Representative

11-15-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, WITH DRIZZLE 45°F
WIND NW @ 13 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-19-'85

1. Personnel/Equipment On Site

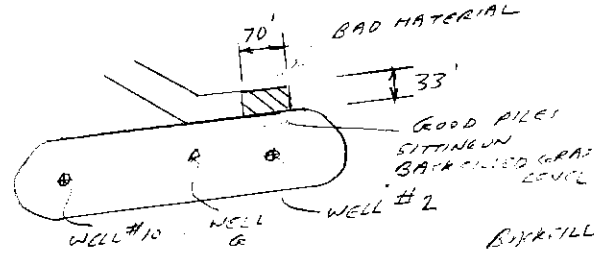
LES DUDEK - MITSHUBISHI MODEL MS280 (8 HRS)

GILDARDO SALSIDO - FIAT ALLIS FR35 (5 HRS)

2. Visitors (Name/Affiliation/Nature)

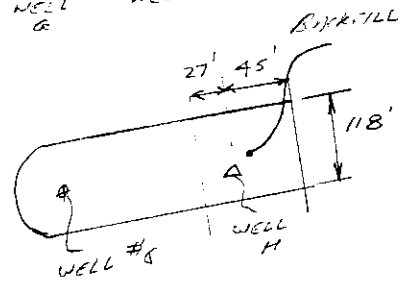
BILL ALBRECHT - CECO CORPORATION

VOL. 1 = $\frac{70 \times 33 \times 14}{27}$ = 1197 CU. YDS.



3. Work Accomplished LES DUDEK

GILDARDO SALINAS: PRIMARILY BACKFILLED AREA IN THE VICINITY NEAR WELL H NEAR CONTROL ROOM FOR SEPARATION STATION, AND HAUL AWAY BAD MATERIAL TO SEPARATE STORAGE PILE.



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE OIL FILTER ON MITSUBISHI MODEL MS 280 WAS REPLACED.

6. General Comments: 6.1 BILL ALBRECHT FROM CERO CORP. VISITED THE SITE.

NUS Field Representative
10-14-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: HIGH 46°F CLOUDY, COOL
OCCASIONAL DRIZZLE
86% HUMIDITY, WIND N @ 7 MPH
BAROMETRIC READING 30.15" HG.

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-15-85

1. Personnel/Equipment On Site

GILDARDO JALSIDO - MITSHUBISHI MODEL MS280 (8 HRS.)

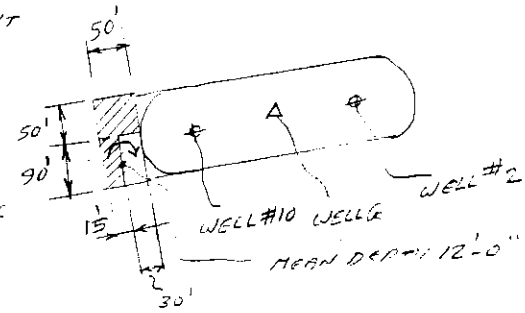
FRED POLLOCK - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

Vol. 1 = $90 \times \frac{15 \times 4'}{27}$ = 200 CU. YDS. DIRECTLY INTO PIT

Vol. 2 = $50 \times \frac{50 \times 4}{27}$ = 370 CU. YDS.



3. Work Accomplished GILDARDO SALINDO

EXTENDED AREA EXCAVATION UPTO DUST LEVEL ONLY

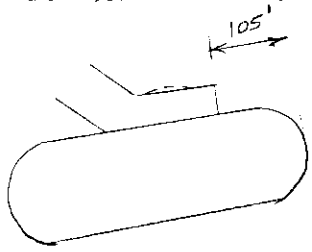
FRED POLLOCK: HAUL AWAY BAD MATERIAL TO STORAGE PILE,

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

FRED POLLOCK ENCOUNTERED PROBLEM OF HIGH WATER LEVEL WHILE DOING ALLY EXCAVATING TOTAL DEPTH IN THE EXTENDED AREA BEYOND EAST WEST BOUNDRY TOWARDS NORTH. IT WAS INTENDED TO CONTINUE REMAINING STRETCH OF LENGTH TO BE EXCAVATED WITH THE USE OF BACKHOE.



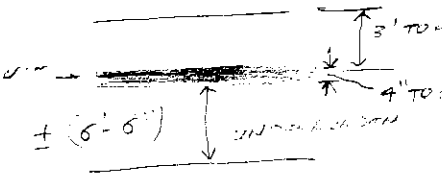
6. General Comments:

6.1 IN EXTENDED EXCAVATION, A NEW APPROACH BASED ON JUDGEMENT THAT THE SEAM CONTAINING FURNACE DUST WAS UNDERLAIN IN OVERBURDEN,

NUS Field Representative

11-13-85

ONLY ABOUT 4' BELOW GRADE LEVEL. SO, ONLY EXCAVATION DONE WAS UPTO THE DUST LEVEL. THIS WAS PRACTICED AS THE [illegible] EXCAVATED IN THE EXTENDED AREA WAS LIKE



THERE WAS NO VISIBLE DUST IN THE FEE. DUST UNDERBURDEN.

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY COOL HIGH 49°F

HUMIDITY 93%, WIND NE @ 5 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-12-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSUBISHI MODEL MS280 (8 HRS.)

FRED POLLOCK - FIAT ALLIS FR35 (8 HRS.)

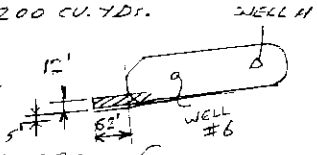
2. Visitors (Name/Affiliation/Nature)

N/A

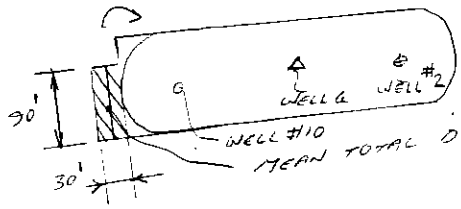
CU. YDS. = $\frac{90 \times 30 \times 12}{27}$ = 1200 CU. YDS.

CU. YDS. = $\frac{12 \times 62 \times 13.5}{27}$ = 372 CUYDS

CU. YDS. = $\frac{16 \times 32 \times 15}{27}$ = 293 CUYDS.



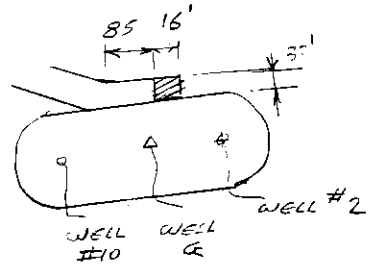
2ND CUT – WAS PILED ON GRADE LEVEL
1ST CUT PILED ON GRADE LEVEL



3. Work Accomplished GILDARDO SALSIDO

TOTAL EXCAVATION

FRED POLLOCK: CONT'N OF FULL DEPTH EXCAVATION IN THE AREA CONTAINING WELL # 10, G & #2.



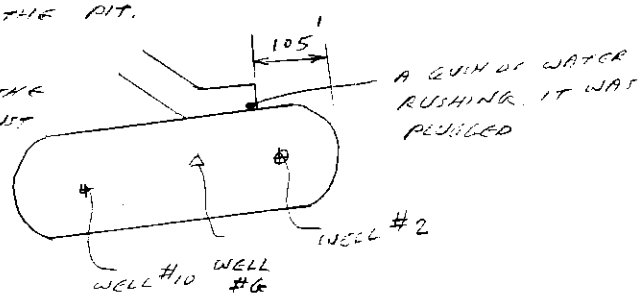
4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

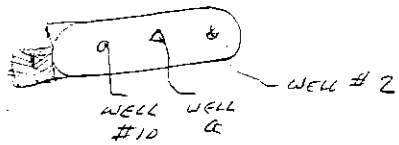
WHILE EXCAVATING IN THE AREA (EXTENDED) CONTAINING WELL #10, G & #2, A GUSH OF WATER STARTED RUSHING INTO THE PIT.

THE AREA WAS PLUGGED AND IT WAS THOUGHT OF WIDENING THIS PIT AS THE EXPOSED WALL STILL CONTAINS VISIBLE DUST IN THE AREA. SO, IT WAS PLANNED TO WIDEN THE PIT & THE WAY THE GUSHING WATER ALSO CAN BE REPAIRED.



6. General Comments:

6.1 VERY SOFT GROUND DIGGING IN THE EXTENDED AREA CONTAINING WELL #10, G & #2.



NUS Field Representative

11-12-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Cloudy, Cool, High 44°F, Humidity - 76% Wind NE @ 15 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-11-'85

1. Personnel/Equipment On Site

Gildardo Salsido - Mitshubishi (Model MS 230) - 8 HRS

Fred Pollock - Fiat Allis FR35 - 8 HRS.

2. Visitors (Name/Affiliation/Nature)

N/A

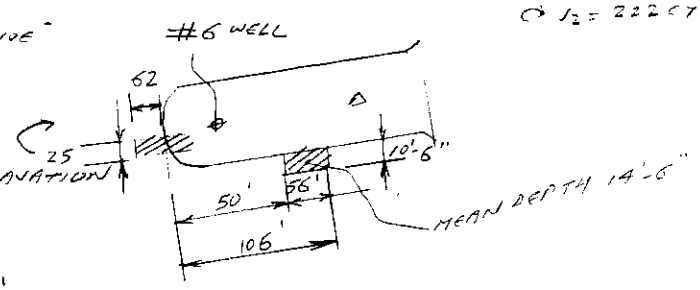
vol. 1 = $\frac{62 \times 25 \times 13.5}{27}$ = 775 CU. YDS. BACK-HOE DIRECTLY INTO PIT EXCEPT RAD MATERIAL

V_1 = 553 CY
V_2 = 222 CY

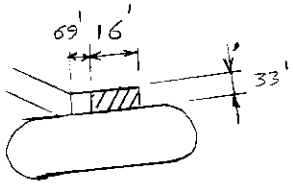
vol. 2 = $\frac{56 \times 10.5 \times 14.5}{27}$ = 316 CU. YARDS. BACK-HOE

vol. 3 = $\frac{33 \times 16 \times 15}{27}$ = 293 CU. YARDS. (FEL)

3. Work Accomplished GILDARDO SALSIDO - EXTENDED AREA EXCAVATION



FRED POLLOCK. EXTENDED EXCAVATION



4. Samples Collected and Deposition

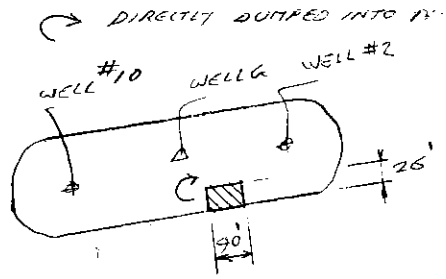
N/A

5. Problems Encountered and Resolution

—

6. General Comments: —

NUS Field Representative
11-11-'85

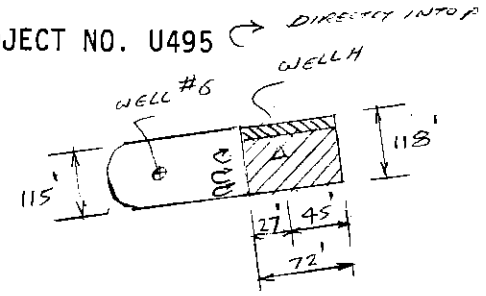


WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

REPORTING PERIOD: 11-9-'85



1. Work Accomplished

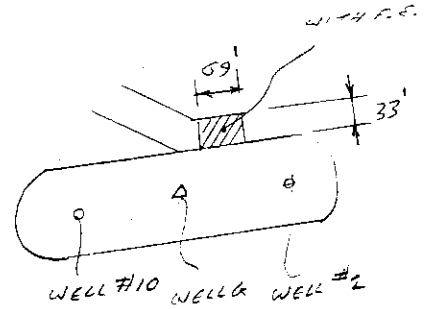
Estimated volume of excavation:

2,259 CU. YDS. THE BALANCE FOR TOTAL CUBIC YARDS AS PER MAP U495 FOR AREA CONTAINING WELL 10, G & 2

4,110 CU. YDS. FOR BALANCE FOR REMAINING CUBIC YARDS FOR AREA CONTAINING #6 & #H

1,265* CU. YDS FOR EXTENDED TOTAL EXCAVATION WITH FEL FOR AREA CONTAINING WELL #10, G & #2.

7,634 CU. YDS.



Estimated volume of excavated material placed in separation process:

— 380 CUBIC YARDS STORED AT STORAGE PILE

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other:

—

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
MITSUBISHI MODEL MS 280	48 HRS.
FIAT-ALLIS FR35	41 1/2 HRS.
FIAT-ALLIS 745	5 1/2 HRS.

* EXTENDED AREA CUBIC YARDS.

2. Problems Encountered and Resolution

PLEASE REFER TO DAILY LOG FOR FIELD.

3. Projected Work Next Week (Describe briefly)

THE EXTENDED AREA IN THE AREA G & H & ALSO AREA CONTAINING WELL # 10, G & 2 WILL BE THE PRIORITY AREA.

4. Anticipated Problems & Resolution Options

WATER COULD BE THE PROBLEM WHILE WORKING IN THE AREA CONTAINING WELL #10, G & #2. BERMUDE, THEN WOULD BE USED IF IT HAPPENS SO WITH THE USE OF FRONT END LOADER.

5. Significant Deviations from Closure Plan

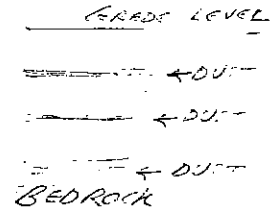
EXTENDED AREA — FOR AREA CONTAINING WELL # 10, G & #2 HAS BEEN EXCAVATED TO CHECK FURTHER SPREAD OF FURNACE DUST. DUST IS FOUND IN MULTI-LAYERS.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILBERTO SALINDO	48 HRS.	48
FRED POLLUCK	47 HRS.	48
Totals	95 HRS.	96 HRS.

Other Direct Costs: (please specify)	PLEASE REFER TO MONTHLY EXPENSE SHEET.	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments 7.1 MULTI-LAYERS OF FURNACE DUCT AT DIFFERENT CROSS SECTION ELEVATION WERE FOUND WHILE EXCAVATING TOTAL DEPTH USING FRONT END LOADER IN THE AREA CONTAINING WELL # 10, GR & #2.



NUS Field Representative

11-9-1985
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 49°F CECO PO NO. 75-5-G0006

H-93 %, WIND NE @ 5 MPH NUS PROJECT NO. U495

Date: 11-9-'85

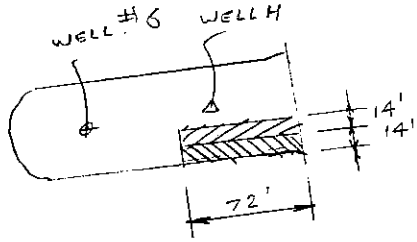
1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS280 (8 HRS)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



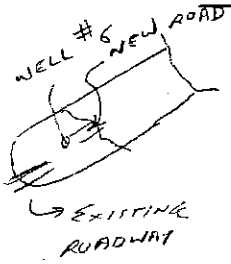
3. Work Accomplished GILDARDO SALSIDO:

FRED POLLOCK: CONT'N IN AREA CONTAINING WELL # 10, 6 & #2

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution



AN ATTEMPT WAS MADE TO MAKE A RODE-WAY GOING INTO THE PIT. THE WATER LEVEL - DUE TO ACCUMULATION & RAIN - WAS HIGH ENOUGH TO WARRAN AND LIMIT USE OF F.E.L. TO EXCAVATE THE RAMP ROAD-WAY COMING INTO THE PIT. SO, THE ATTEMPT WAS DISCONTINUED AND THE PLATFOR WAS MADE SO THAT THE RAMP COULD BE EXCAVATED FURTHER.

6. General Comments: —

NUS Field Representative
11-9-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 47°F CECO PO NO. 75-5-G0006

HUMIDITY- 85%, WIND NORTH @ 6MPH NUS PROJECT NO. U495

Date: 11-8-'85

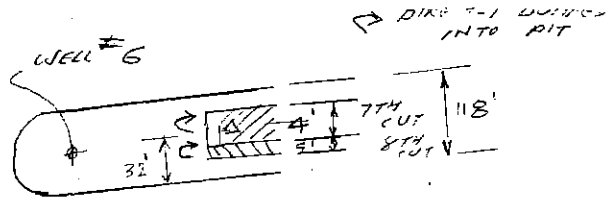
1. Personnel/Equipment On Site

GILDARDO JALISIDO- MITSUBISHI MODEL M5280 (8 HRS)

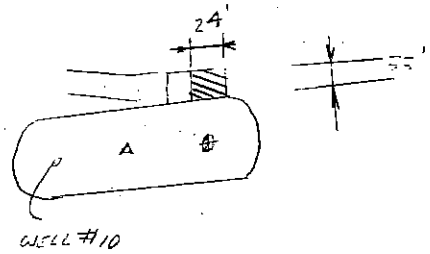
FRED POLLOCK- FIAT-ALLIS FR35 (8 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished GILDARDO SALSIDO:



FRED POLLOCK: EXTENDED TOTAL EXCAVATION

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution —

6. General Comments: 1 THE WEEKLY REPORT FOR THE MONTH OF OCTOBER WAS SUMMARIZED & TRANSMITTED TO BILL ALBRECHT

NUS Field Representative

11-8-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, HIGH 45°F CECO PO NO. 75-5-G0006

H - 79% WINDWD 10 MPH NUS PROJECT NO. U495

Date: 11-7-'85

1. Personnel/Equipment On Site

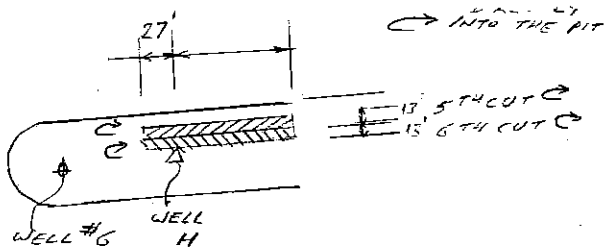
GILDARDO SALSIDO - MITSUBISHI MODEL MS 280 - BACKHOE (8 HRS)

FRED POLLOCK - FIAT ALLIS FR 35 - FRONT END LOADER (8 HRS)

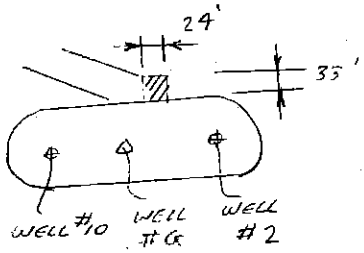
2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished GILDARDO SALSIDO:



FRED POLLOCK: CONT'N EXCAVATION IN THE AREA CONTAINING WELL # 10, 6 & 2 - EXTENDED TOTAL EXCAVATION



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution —

6. General Comments: —

NUS Field Representative
11-7-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 45°F TO HIGH 54°F CLOUDY, MILDER HUMIDITY -79%, WIND S @ 10MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-6-'85

1. Personnel/Equipment On Site

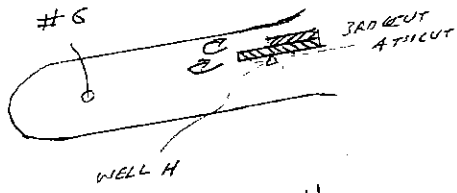
GILDARDO SALSIDO - MITSHUBISHI MODEL MS (8 HRS.)

FRED POLLOCK - FIAL ALLIS FR35 (8 HRS.)

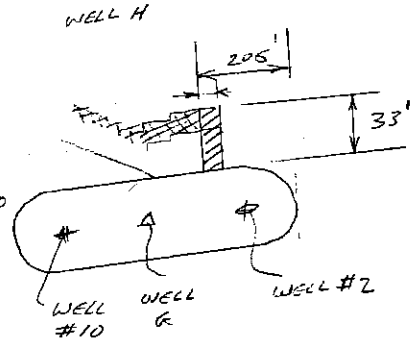
2. Visitors (Name/Affiliation/Nature)

DAVE WILSON - USEPA

BILL ALBRECHT - CECO CORP.



3. Work Accomplished 6.5.



F.P. - WIDENED ROADWAY ENTRANCE, & STARTED EXCAVATION FULL DEPTH IN THE EXTENDED AREA CONTAINING WELL #10, G & #2.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: DAVE WILSON FROM EPA & BILL ALBRECHT FROM CECO CORP. FOR A FIELD VISIT @ 9:25 A.M. FIELD VISIT WITH CO-ORDINATION TO FUTURE PLAN WAS EXPLAINED.

NUS Field Representative
11-6-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL HIGH 48°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-5-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS-80 (8 HRS.)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

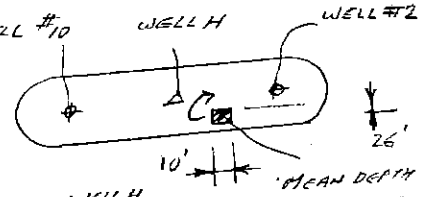
2. Visitors (Name/Affiliation/Nature)

N/A

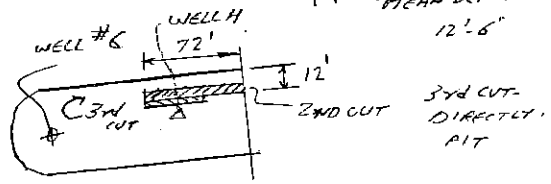
$V = \frac{90 \times 12.5 \times 26}{27} = 1083$ CU. YDS.

DIRECTLY INTO PIT

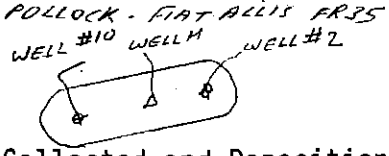
$VOL. = \frac{10 \times 26 \times 13}{27} = 126$ CU YDS.



3. Work Accomplished (GILDARDO SALSIDO (MITSHUBISHI MODEL MS280)



FRED POLLOCK - FIAT ALLIS FR35



BACKFILLING IN THE AREA CONTAINING WELL #10, 6 & #2.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE FRONT END LOADER (FIAT ALLIS FR35) WAS FIXED AND IS READY TO BE USED TO-DAY FOR OPERATION.

6. General Comments: / EXCAVATION IN THE AREA CONTAINING WELL #6 & H AT THE EAST END AROUND & BEYOND WELL H DOES NOT INDICATE PRESENCE OF FURNACE DUST THAT IS VISIBLE.

NUS Field Representative

11-5-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 49°F CECO PO NO. 75-5-G0006

HUMIDITY - 63%, WIND NW @ 15MPH NUS PROJECT NO. U495

Date: 11-4-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS 280 (8 HRS.)

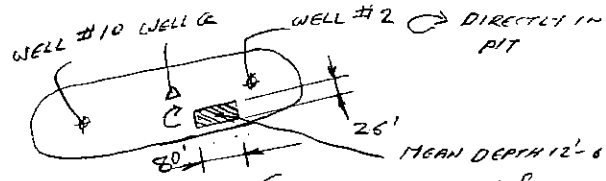
FRED PULLOCK - FIAT-ALLIS FR35 (1 1/2 HR.)

FIAT-ALLIS 645 (5 1/2 HR.)

2. Visitors (Name/Affiliation/Nature)

N/A

CU. YDS. = $\frac{80 \times 26 \times 12.5}{27}$ = 963 CU. YDS



3. Work Accomplished GILDARDO SALSIDO (MITSHUBISHI 645) - TOTAL EXCAVATION - GOOD OVERBURDEN & UNDERBURDEN DIRECTLY INTO PIT. BAD MATERIAL PILED OUTSIDE OF THE BOUNDRY EXCAVATED. THE BAD MATERIAL FOUND IN THIS STRETCH OF SEGMENT IS NIL.

FRED POLLOCK BACKFILLING IN AREA CONTAINING WELL #10, 6 & 2. MOVED PILE OF BAD MAT'L (ABOUT 80 YDS.)* INTO STORAGE PILE. THIS PILE WAS RIGHT BEHIND CONTROL ROOM. NEEDS TO BE MOVED OUT AS EXCAVATION IS GOING TO BE DONE IN THIS AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

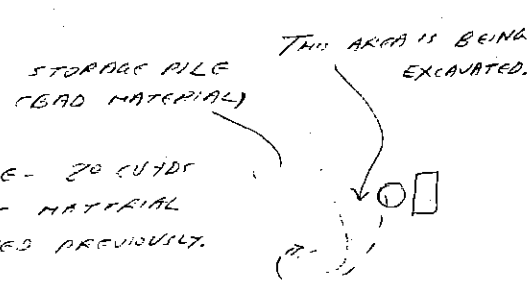
THE FRONT END LOADER FIAT-ALLIS FR 35 WENT INTO REPAIR TO FIX ONE TOOTH ON ITS BUCKET. MEANWHILE, FIAT-ALLIS 645 WAS USED.

6. General Comments:

1 THE MEETING ON NOV. 4 & NOV. 5 ARE RESCHEDULED FOR NOVEMBER 19TH & 20TH. (AS PER NANCY WOE OF CECO CORP.)

2 THERE MAY BE A REPRESENTATIVE FROM USEPA VISITING SITE TUESDAY OR WEDNUSDAY. (NOV. 5TH OR 6TH.)

NUS Field Representative
11-4-'85



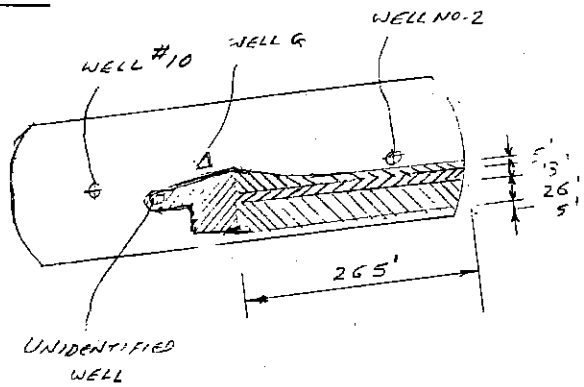
* THIS CU. YDS TO BE LISTED AS EXTRA MOVE - 20 CU YDS THIS CU. YDS IS THE PILE FROM SPREAD OUT MATERIAL WHICH HAS BEEN ALREADY INCORPORATED PREVIOUSLY.

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 11-2-'85

1. Work Accomplished



Estimated volume of excavation:

9060 CU/YDS BASED ON TOTAL VOLUME OF AREA CONTAINING WELL #10, G & #2 AND SUBTRACTING THE BALANCE DONE EARLIER

Estimated volume of excavated material placed in separation process:

— 100 CU. YDS. STORED TO STOCKPILE

AN ATTEMPT WAS MADE TO RUN SEPARATION PLANT BUT WAS IN VAIN — THE PILES UNDERNEATH SKIN WERE NOT DRY ENOUGH & IT STARTED DRIZZLING.

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —

ESTIMATED CU.YDS FOR AREA CONTAIN. WELL #10, G & 2, 22,000 CU.YDS.

21,681 TOTAL CU.YDS UP-TO WK. ENDING 10/25/'85

BALANCE = 33,000 - 21,681
= 11,319 CU.YDS.

THE EXCAVATION DONE (TRENCH) IN THE VICINITY OF WELL H, WILL BE ACCOUNTED FOR IN THE NEXT WEEK PROGRESS REPORT.

Subcontractor equipment hours in operation, by equipment type:

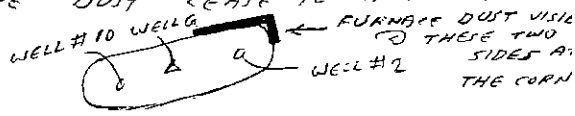
Equipment	Operational Hours
MITSUBISHI MODEL MS 280	48 HRS.
FIAT-ALLIS FR 35	44 HRS.
FIAT-ALLIS 645	5 HRS.
SEPARATION UNIT	3 HRS.

2. Problems Encountered and Resolution

SEE DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

THE AREA CONTAINING WELL NO. 10, 6 & 2 IS CONSIDERED TOTALLY EXCAVATED AS SHOWN IN THE MAP. (ACTUALLY, A LITTLE SEGMENT REMAINING WILL BE FINISHED ON MONDAY, THE 4TH NOVEMBER.) EXCEPT WHERE EXTENDED EXCAVATION WILL CONTINUE TILL FURNACE DUST CEASE TO APPEAR.



4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

THE DUST STILL VISIBLE AT THE SIDES SHOWN ABOVE ARE VISIBLE. THE EXCAVATION WILL BE DONE FURTHER TILL THE DUST CEASE TO APPEAR.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALSIDO	48 HRS.	48 HRS
FRED POLLOCK	44 HRS.	48 HRS.
LES DUDEK	3 HRS.	
BENNY MITCHELL	3 HRS.	
Totals	98 HRS.	96 HRS.

Other Direct Costs: (please specify) REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

1 THERE IS SCHEDULED MEETING @ CECO CORP., CARBROOK OFFICE ON NOVEMBER 4TH & @ SPRINGFIELD EPA OFFICE ON NOVEMBER 5TH.

2 THE EXCAVATION TOWARDS THE LOWER SIDE OF AREA CONTAINING WELL #10, E & H (I.E. SOUTH SEGMENT RUNNING EAST TO WEST) HAS PRIMARILY BEEN DUG TILL WATER LEVEL. THIS PORTION MAINLY CONSISTS OF CLAY & MIXED LIMESTONES. THE GROUND SECTION IN THIS AREA IS RELATIVELY SOFT TO EXCAVATE. IT MAY BE IN THE PAST CLAY ALONG WITH LIMESTONE RUBBLE WAS PUSHED OUT TOWARDS THIS BOUNDRY.

NUS Field Representative

11-2-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, VARIABLY COOL, BREEZY, CHILLY CECO PO NO. 75-5-G0006
HIGH 49° F - TODAY
HUMIDITY 86%, WIND NW @ 18MPH NUS PROJECT NO. U495

Date: 11-2-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS280 (8 HRS.)

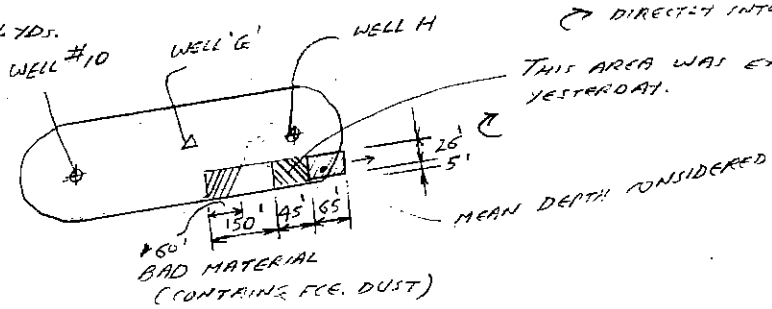
FRED POLLOCK - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

CU. YDS. = $\frac{26 \times 65 \times 12.5}{27}$ = 782.0 CU. YDS.

CU. YDS. = $\frac{60 \times 26 \times 12.5}{27}$ = 722.0 CU. YDS



3. Work Accomplished

GILDARDO SALSIDO
(MITSHUBISHI MODEL MS280)

FRED POLLOCK BACKFILLING IN THE AREA TO GET AN ACCESS TO FCE. DUST CONTAINING MATERIAL TO HAUL IT TO STORAGE PILE AND SO THAT BACKHOE CAN COME IN THIS AREA AND COULD EXCAVATE FULL DEPTH. THE GROUND IS SO SOFT THAT EXCAVATION WITH USE OF F.E.L. & ALSO WATER DEPTH PROBLEM NECESSIATES USE OF BACKHOE.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE RIDE OF F.E.L. IN THE AREA CONTAINING WELL 10, G & 2 WHILE BACKFILLING IS SLIGHT CUMBERSOME FOR F.E.L. AS THE MATERIAL EXCAVATED & BACKFILLED CONTAINS SOFT MATERIAL CONTAINING CLAY & LIME STONE RUBBISH.

6. General Comments: 1 VERY SOFT GROUND IN THIS AREA MAKING DIGGING LOT EASIER. IN FACT, THE GROUND IS SO SOFT THAT IT COLLAPSES ITSELF AT TIMES. MAY BE - THAT IS BECAUS IN THE PAST, THE DIRT & CLAY MAY HAVE BEEN PUSHED OUT FROM THE PIT - TO THE MAP ROUND E-W LINE @ THE FAR END NEAR THE RAILROAD TRACK SIDE.

NUS Field Representative
11-2-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: RAIN OFF & ON, 61°F
HUMIDITY-100%, WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 11-1-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO MITSUBISHI MODEL MS280 (8 HRS.)

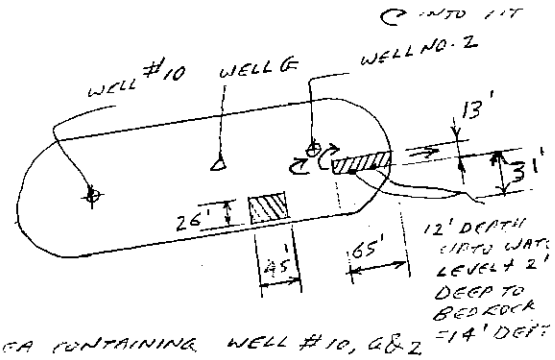
FRED POLLOCK - FIAT ALLIS FR35 (4 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

℄ CU. YDS. = $\frac{26 \times 4.5 \times 12.5}{27}$ = 542 CU YDS

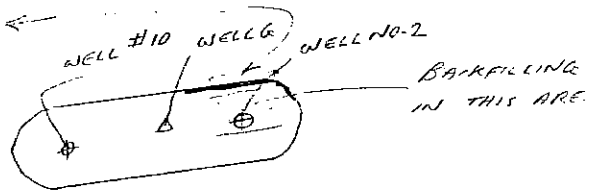
℄ CU. YDS. = $\frac{13 \times 6.5 \times 14}{27}$ = 438 CU. YDS.



3. Work Accomplished GILDARDO SALSIDO (HITACHURISHI MODEL HS 280)

FRED POLLOCK (FIAT-ALLIS FR 35) - BACKFILL IN THE AREA CONTAINING WELL #10, G & 2

GOOD PILES SITTING ON GROUND IN THIS AREA NEEDS TO BE BACKFILLED AS THE BOUNDRY WALL ON MAP UA45 SHOWS EXISTENCE OF FURNACE DUST.



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

WINDSHIELD WIPER AND BRAKEWORK TROUBLING FIX-UP - LOST TIME 4 HRS.

6. General Comments: 1) WHILE EXCAVATING IN THE AREA CONTAINING WELL #6 AND WELL 'H', GILDARDO SALSIDO RUPTURED ELECTR POWER LINES FEEDING CONTROL ROOM OF THE SEPARATION STATION. HE WAS INSTRUCTED NOT TO DIG BEYOND N-S WALL OF CONTROL ROOM (NEAR SIDE) FROM WELL #2 KEEPING 2' ATLEAST AWAY FROM THAT N-S WALL LINE.

NUS Field Representative
11-1-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 55°F, CLOUDY SKY DRIZZLES. 79% HUMIDITY, WIND NE @ 12 MPH 29.93" MERCURY & FALLING

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-31-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSUBISHI MODEL MS280 (8 HRS.)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

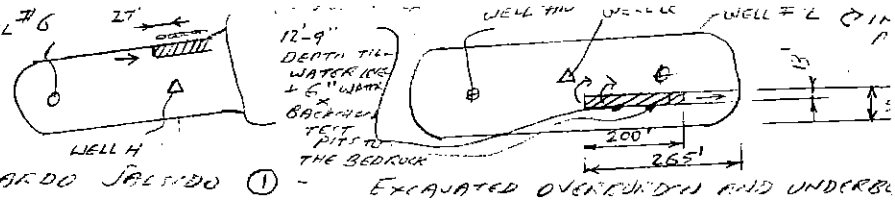
LES DUDEK - FIAT-ALLIS 845 (3 HRS.)

BENNY MITCHELL - SEPARATION UNIT (3 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

$\circlearrowright$ NET. = $\frac{200 \times 13 \times 12.5}{27}$ = 1205 U.Yds

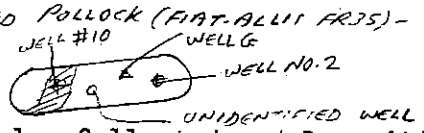


3. Work Accomplished

GILDARDO SALSIDO ① - EXCAVATED OVERBURDEN AND UNDERBU
MITSHUBISHI MODEL MT 280

DEN IN THE AREA CONTAINING WELL #6 & H - TOTAL EXCAVATION MATERIAL PILED ON SIDE.
NO TRACE OF FURNACE DUST IN THIS AREA.
② STARTED EXCAVATING TOTAL EXCAVATION IN AREA CONTAINING WELL #10, G & #2.

FRED POLLOCK (FIAT-ALLIS FR35) - BACKFILLING IN THE AREA CONTAINING WELL #10, G & H.
AND MOVE FURNACE DUST CONTAINING MATERIAL TO STORAGE PILE.



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE ATTEMPT WAS MADE TO RUN THE PILES AT SEPARATION STATION. NAMELY, 1 1/2" PILE, OVERSIZE & 3/16" PILES WERE ATTEMPTED TO RERUN THR' FEEDER MAIN TO HAVE SECOND PHASE SCREENING. THE OPERATION WAS WATCHED & IT WAS FOUND THAT THE MATERIAL FED THROUGH WAS STILL NOT DRY ENOUGH & SATISFACTORY FOR THE EFFICIENT RUNNING OF OPERATION AND SCREENING. ALSO, DRIZZLES STARTED. SO, OPERATION WAS HALTED.

6. General Comments:

NUS Field Representative
10-31-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 58°F, SUNNY, COOL

HUMIDITY - 82%, WIND NE @ 5 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-30-'85

1. Personnel/Equipment On Site

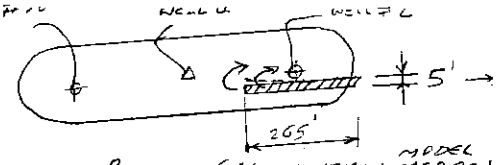
GILDARDO SALSIDO - MITSHURISHI MODEL MS280 (8 HRS.)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

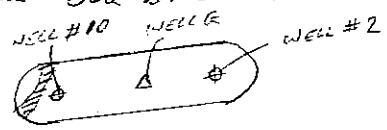
N/A.

C = CU.YDS. = $\frac{265 \times 5 \times 14}{27}$ = 387 CUYDS



3. Work Accomplished GILDARDO SALSIDO (MITSUBISHI MODEL MS280)

FRED PULLOCK (FIAT-ALLIS FR35) - BACKFILLED AREA CONTAINING WELL #10, G & 2. HAUL FUG. DUST CONTAINING MATERIAL DUG BY USE OF BACKHOE TO THE STORAGE PILE AREA.



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THERE IS STILL BERM PROBLEM ON F.E.L. BUT PRACTICALY IT WAS USABLE TO PERFORM THE WORK.

6. General Comments:

—

NUS Field Representative

10/30/85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: TEMP 46° TO HIGH 58°F
PARTLY CLOUDY, SEASONAL
68 % HUMIDITY, WIND E @12-17 MPH
Barometer @ 30.26"

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-24-'85

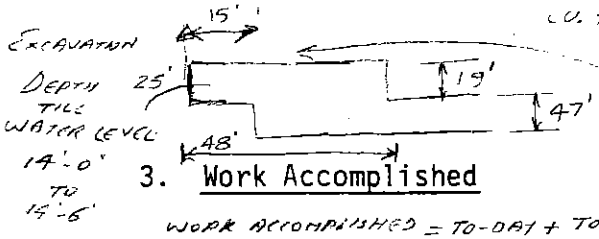
1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS 280 (8 HR.)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HR.)

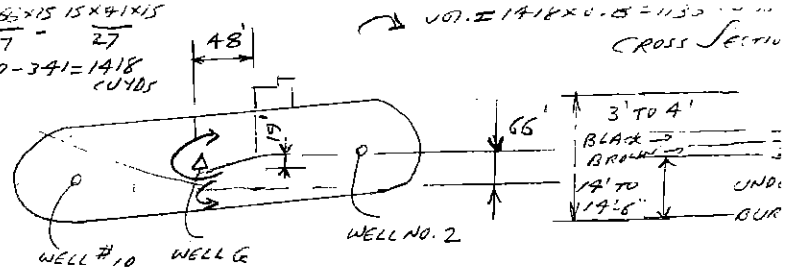
2. Visitors (Name/Affiliation/Nature)

N/A



CU. YDS. = 48×66×15 / 27 − 15×41×15 / 27 = 1760 − 341 = 1418 CUYDS

VOL. = 1418×0.8 = 1135 ...

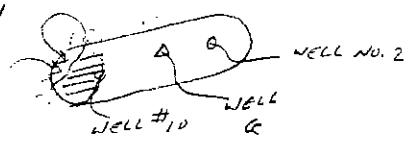


3. Work Accomplished

WORK ACCOMPLISHED FOR ABOVE CU. YDS. EXCAVATION = TO-DAY + TO-MORROW (8 HRS.) +

GILDARDO SALSIDO (BACKHOE-MITSHUBISHI) – EXCAVATE TOP BURDEN @ 3' TO 4', THROW IT INTO PIT DIRECTLY, THIN FCE. DUST LAYER – PILED SEPERATELY. UNDERBURDEN DIRECTLY INTO PIT.

FRED POLLOCK. FIAT ALLIS FR35 – BACKFILLING THE WELL PIT CONTAINING WELL #10, G & 2 BEGINING AT THE FAR WEST CORNER (NW CORNER) & IN



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BRAKES ON FIAT-ALLIS FR35 SLIPS. DOWN TIME CHARGED ON MAINTENANCE FOR 2 1/2 HRS. ON THIS DAY – CONSIDERING REGULAR MAINTENANCE.

6. General Comments:

—

NUS Field Representative
10-29-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: [illegible] JUNNY. [illegible] 64°F

85 [illegible] WIND [illegible] @ 14 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-28-'85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSHUBISHI MODEL MS 280 (8 HRS)

FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS)
(LES DUDEK WORKED AFTERNOON HOURS)

2. Visitors (Name/Affiliation/Nature)

N/A

DIRECT INTO PIT

3. Work Accomplished GILDARDO SALSIDO - EXCAVATION AROUND AND BEYOND TOWARDS BACKHOE (MITSHUBISHI)

EAST WHERE EXCAVATION WITH FRONT END LOADER DUE TO SINKING WAS NOT POSSIBLE.

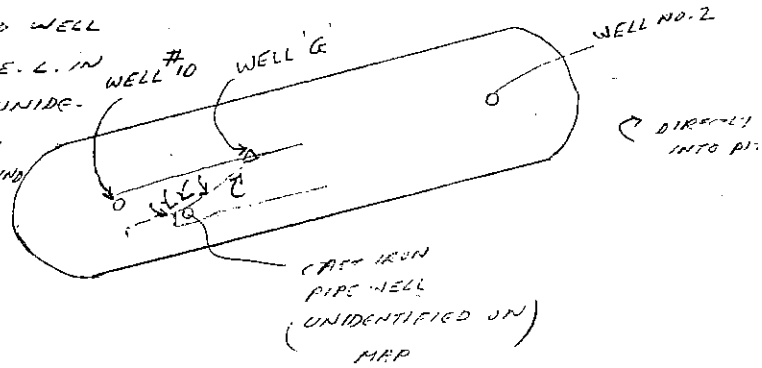
FRED POLLOCK STARTED BACKFILLING THE AREA CONTAINING WELL # 10, G & Z.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE EXCAVATION AROUND UNIDENTIFIED WELL WAS AN AREA OF PROBLEM AS THE F.E.L. IN THIS AREA WHILE EXCAVATING NEAR UNIDENTIFIED WELL STARTED SINKING. SO, BACKHOE WAS USED TO EXCAVATE AROUND UNIDENTIFIED CAST IRON PIPE



6. General Comments:

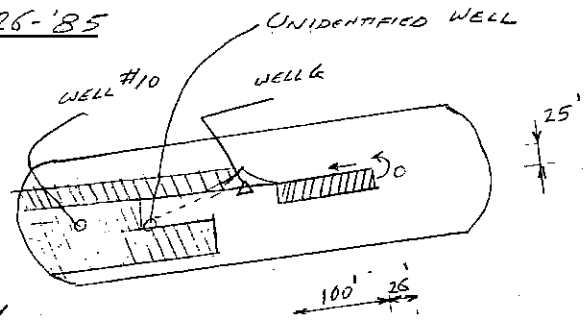
—

NUS Field Representative
10-29-85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 10-26-'85



1. Work Accomplished

Estimated volume of excavation:

9,060 CUYDS BASED ON TOTAL VOLUME OF AREA CONTAINING WELL #10, G & #2 & TAKING THE MEAN FOR THIS WK. & THE NEXT.

328 * CUYDS AREA CONTAINING WELL # G & H

9,388 CU. YDS.

Estimated volume of excavated material placed in separation process: —

ECC [illegible] PILED AT [illegible]

—

ESTIMATED CU. YDS. FOR AREA CONTAINING WELL # 10, G & #2, 35,000 CU.Y

1715 CU. YDS. FOR WK. ENDING 9-28-'85

[illegible] CU. YDS. FOR WK. ENDING 10-5-'85

2,708 CU. YDS FOR WK. ENDING 10-12-'85

4,527 CU. YDS. FOR WK. ENDING 10-19-'8.

12,621 CU. YDS.

BALANCE YDS. = 33,000 - 12,621

= 20,379 CU. YDS.

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOMATSU D355	48 HRS.
FIAT ALLIS FR35	47 HRS.

2. Problems Encountered and Resolution

SEE THE DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

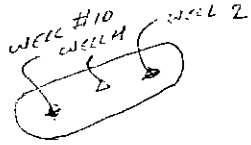
THE AREA CONTAINING WELL # 10, #6 & #2 WILL CONTINUALLY BE EXCAVATED NEXT WEEK & HOPEFULLY BE COMPLETED NEXT WEEK (THE AREA AS SHOWN IN THE MAP). EXTENDED EXCAVATION IN THIS AREA ALONG SIDES SHOWN

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

THE EXCAVATION BEYOND THE BOUNDRY OF AREA CONTAINING WELL #10, 6 & #2 WILL BE DONE WHERE FURNACE DUST IS FOUND AT THE BOUNDRY SIDE.



6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LES DUDEK	24	
FRED POLLOCK	31	48
GILDARDO SALSIDO	40	48
Totals	95	96

Other Direct Costs: (please specify) PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

—

NUS Field Representative

10-26-'85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, WARM 72°F

H-68% SW @ 12 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-16-85

1. Personnel/Equipment On Site

GILDARDO SALSIDO - MITSUBISHI MODEL MS280 (8 HRS.)

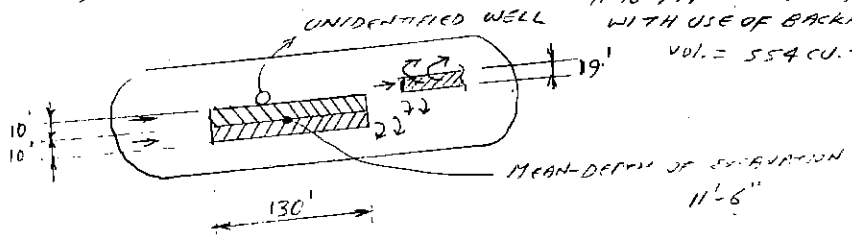
FRED POLLOCK - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

$vol. = 2\left(\frac{10 \times 130 \times 11.5}{27}\right) = 2(555.7) = 1107$ CU. YDS.

↓↓ BACKFILLED DIRECTLY INTO PIT WHILE EXCAVA WITH USE OF BACKHO. VOL. = 554 CU. YD



3. Work Accomplished

GILDARDO SALSIDO
(MITSHUBISHI MODEL MS280) - CONTINUED EXCAVATION UPTO WATER LEVEL FOR

FRED POLLOCK w/ FIAT ALLIS FR35 - TOTAL EXCAVATION - OVERBURDEN AND UNDERBURDEN - AND BACKFILL INTO THE SAME ADJACENT PIT AREA

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments: 1 THE FIRST & SECOND BATCH OF CUT (EXCAVATION) DUMPED DIRECTLY INTO PIT WHILE EXCAVATING USING BACKHOE. [illegible] EXCAVATED & DUMPED DIRECTLY [illegible] PIT).

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY WARM 68°F CECO PO NO. 75-5-G0006

HUMIDITY 89%, WIND SW @ 6 NUS PROJECT NO. U495

Date: 10-25-'85

1. Personnel/Equipment On Site

LES DUDEK MITSHUBISHI MODEL MS280 (8 HRS.)

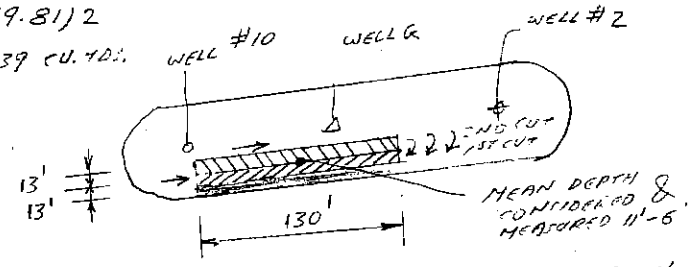
GILDARDO SALIDO FIAT-ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A

$CU.\ YDS. = \left(\frac{13 \times 130 \times 11.5}{27}\right) 2 = (719.81)\,2$
$= 1439$ CU. YDS.

3. Work Accomplished LES DUDER
MITSHUBISHI 280



1ST CUT - UPTO WATER LEVEL - PILED ON THE SIDE

2ND CUT - UP TO WATER LEVEL - DIRECTLY INTO THE PIT (1ST CUT) = VOL. = $\frac{13 \times 130 \times 11.5}{27}$
= 720 CU. YD.

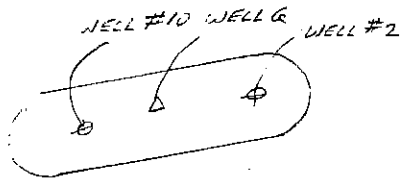
4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

GILDARDO SALSIDO
FRONT END LOADER

TIGHT WORKING CONDITIONS INTO THE PIT WHILE WORKING AROUND WELL #10



6. General Comments: (1) SECOND CUT EXCAVATED MATERIAL DUMPED DIRECTLY INTO PIT, WHILE EXCAVATING WITH BACKHOE. (720 CU. YDS DUMPED DIRECTLY INTO PIT.)

NUS Field Representative
10-25-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, DECREASING CLOUD, SUNSHINE CECO PO NO. 75-5-G0006

HIGH 67°F WIND WEST @ 12 NUS PROJECT NO. U495

HUMIDITY 81 %

Date: 10-24-'85

1. Personnel/Equipment On Site

LES DUDEK. MITSUBISHI MODEL MS380 (8 HRS.)

GILDARDO SP:100 - FIAT-ALLIS FR35 (8 HRS.)

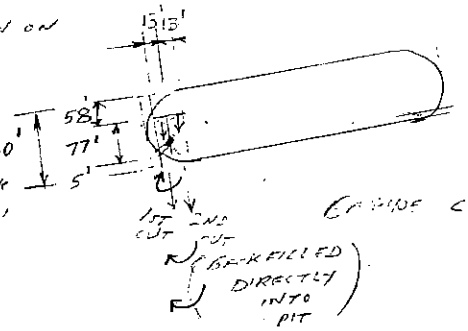
2. Visitors (Name/Affiliation/Nature)

N/A

1ST CUT - BACKHOE - TOTAL CUT - BURDEN ON TOP OF EXISTING PILE

2nd CUT - BACKHOE - TOTAL CUT - BURDEN DIRECTLY INTO PIT - VOL. = $\frac{77 \times 13 \times 12.0}{27}$

444 CU YDS



• MEAN DEPTH OF EXCAVATION 12'-0"

BACKHOE CU. YDS. = $\left(\frac{77 \times 13 \times 12}{27}\right) =$

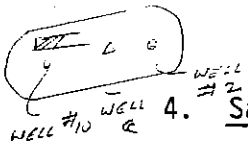
$= (444)\ 2$

$= 888$ CU. YDS

3. Work Accomplished

LES DUDEK
W/MITSHUBISHI

GILDARDO SALSIDO W/FIAT - ALLIS FR35 - HAUL AWAY DRY BAD MATERIAL CONTAINING FURNACE DUST TO STORAGE PILE



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

DIGGING IN THE AREA WITH BACKHOE - THE 2nd CUT - HARD DIGGING - SOME AREA ABOUT 80 CU. YDS

6. General Comments: 1 THE SECOND CUT (EXCAVATION) [illegible] DIRECTLY INTO PIT. (444 CU. YDS.)

NUS Field Representative
10-24-95

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 54°F RISING TO 67°F CECO PO NO. 75-5-G0006

CLOUDY, WARM, SHOWERS OFF & ON NUS PROJECT NO. U495

HUMIDITY 86%, WIND SOUTH @ 13

Date: 10-23-'85

1. Personnel/Equipment On Site

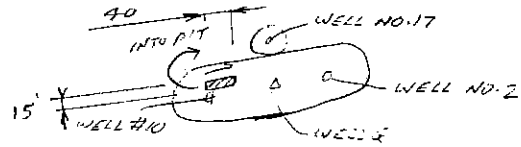
GILDARDO SALSIDO - MITSHUBISHI MODEL MS280

FRED POLLOCK - FIAT-ALLIS FR35

2. Visitors (Name/Affiliation/Nature)

N/A

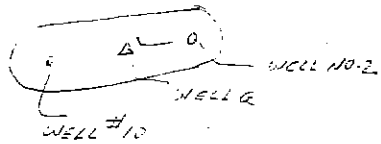
Vol. = $\frac{40 \times 15 \times 13}{27}$ = 289 CU. YDS.



INTO PIT

3. Work Accomplished GILDARDO SALSIDO - MITSHUBISHI MODEL MS 280 - EXCAVATE AND DROP IT DIRECTLY INTO PIT

FRED POLLOCK - FIAT ALLIS FR 35 - EXCAVATE & BACKFILL IN PIT - USE OF STONES TO RIDE ON & MOVE FARTHER AS EXCAVATING

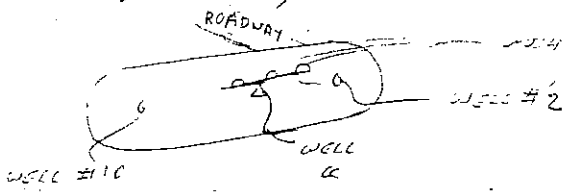


4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE FLOW OF WATER STARTED COMING INTO THE PIT WHILE EXPANDING TOTAL CUT WITH F.E.L. AT TWO PLACES. AN ATTEMPT WAS MADE TO PLUG THE OPENING WITH FINES & IT SEEMED TO WORK. AND THEN, DIGGING AROUND TO THAT SPOT WAS MADE WITH SUCCESS.



6. General Comments:

—

NUS Field Representative

10-22-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 47°F RISING TO 64°F
SUNNY, MILD
96% HUMIDITY, WIND CALM

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-22-'85

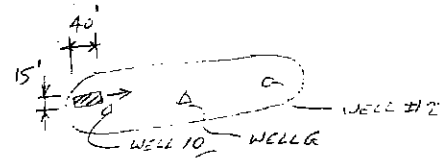
1. Personnel/Equipment On Site

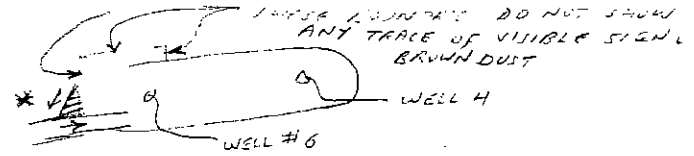
GILDARDO SALSIDO - MITSUBISHI MODEL MS 280

FRED POLLOCK - FIAT-ALLIS FR35

2. Visitors (Name/Affiliation/Nature)

N/A





3. Work Accomplished

GIEDARDO CALSIDO W/MITSHUBISHI MODEL MS280 EXCAVATED IN THE AREA CONTAINING WELL # 6 AND WELL H IN THE AREA BEYOND THE MAP AREA TO INVESTIGATE & FINALIZE FURTHER SPREAD OF FURNACE DUST IN THIS AREA – PURPOSE TO FIND THE END OF THE DUST. THE AREA THAT WAS EXCAVATED PREVIOUSLY (EXTENDED AREA) DID NOT INDICATE FURNACE DUST AT THE NORTHSIDE WALL, BUT IT STILL IS PRESENT NEAR ROADWAY AT [illegible] WALL OF THE EXTENDED AREA. SO, IT WAS DECIDED TO CUT ΔAR SECTION WITH ABOUT 10' BROE TO DETERMINE STILL FURTHER SPREAD OF THE DUST.

(SEE BACK OF PAGE)

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

FRONT END LOADER – HYDRAULIC CYLINDER CRACKED – SOME WELDING DONE. BACK IN OPERATION IN ONE HOUR

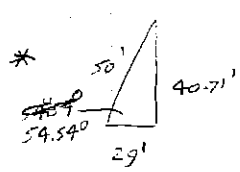
6. General Comments:

—

[signature]
NUS Field Representative
10 23 [illegible]

EXTENDED MODEL:

EXTENDED AREA WORK



$$VOL. = \frac{1}{2} \times 29 \times \frac{40.71 \times 15}{27} = 328 \text{ CU. YDS.}$$

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, 62°F, SUNNY
WIND CALM

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-21-'85

1. Personnel/Equipment On Site

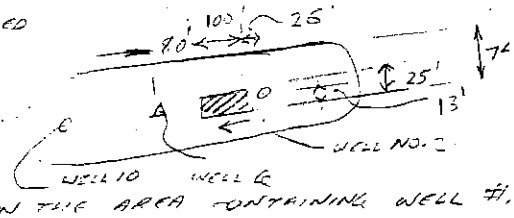
LES DUDEK MITSUBISHI MOLCO MI 280

FRED POLLOCK FIAT-ALLIS FR35

2. Visitors (Name/Affiliation/Nature)

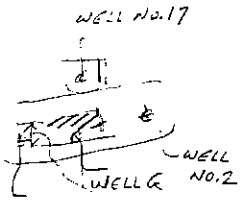
DAVE ALBRECHT - CECO CORP.

VOL. EXCAVATED
$= \frac{100 \times 25 \times 14}{27}$
$= 1296$ CU.YDS.

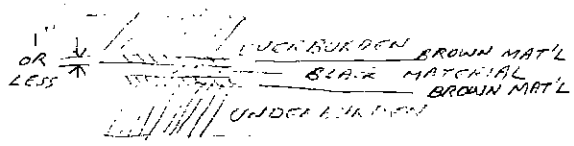


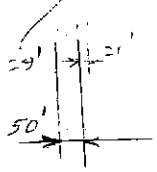
3. **Work Accomplished** (CONT'N ON BACK OF PAGE)

LES DUDEK EXCAVATED OVERBURDEN & UNDERBURDEN IN THE AREA CONTAINING WELL #, G & #2. THE WATER LEVEL ABOUT ±3' AND PIT MAY BE SUSPECTED IN THIS AREA @ BEDROCK ELEVATION, BACKHOE WAS USED FOR TOTAL RANGE OF EXCAVATION.



FRED POLLOCK W/ FIAT ALLIS FR35 - THE FIRST ATTEMPT WAS MADE TO EXCAVATE THE OVERBURDEN AND UNDERBURDEN WITH THE LOADER. THE SKIN OF BROWN DUST STILL EXISTS IN THIS AREA. THE PATTERN WAS LIKE





4. **Samples Collected and Deposition**

SEE NOTES IN GENERAL COMMENTS

5. **Problems Encountered and Resolution**

THE PART IN KEYWAY SLOT AT ONE TOOTH ON KOEHRING. BACKHOE WAS MISSED WHILE EXCAVATING SO THE STANDBY MITSHUBISHI MODEL MS 280 WAS USED.

6. **General Comments:** THE FOLLOWING SAMPLES WERE TRANSMITTED TO BILL ALBRECHT:

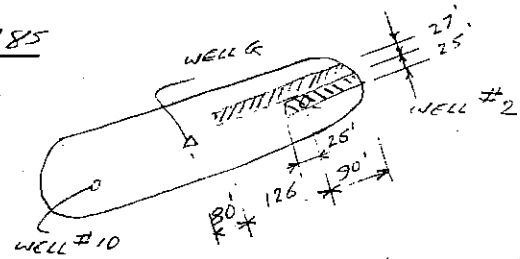
TAG #	DESCRIPTION
1111	BROWN DUST FROM PIT CONTAINING WELL # 10, G & 2.
2222	BLACK LAYER ADJACENT TO BROWN LAYER FROM PIT CONTAINING WELL # 10, G & 2.
3333	7/16" SCREEN THR' PILE SAMPLE AT THE SEPARATION UNIT
4444	1/4" SCREEN THR' PILE SAMPLE AT THE SEPARATION UNIT
5555	1 1/2" SCREEN THR' PILE SAMPLE OF THE SKIN DUST ON STONES AT THE SEPARATION UNIT.
6666	SURFACE DUST SAMPLE TAKEN NEAR WELL # 7
7777	SURFACE DUST SAMPLE TAKEN NEAR WELL # 9
8888	SURFACE DUST SAMPLE TAKEN NEAR WELL # 4

[signature]
NUS Field Representative
10-21-85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 10-19-'85

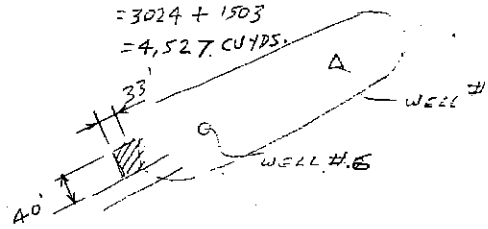


1. Work Accomplished

Estimated volume of excavation:

4527 VOLUME FROM AREA CONTAINING WELL 10, G & 2
753 VOL. FROM AREA CONTAINING WELL NO. 6 & WELL H
5,260 CU YARDS

VOLUME = $\frac{(125+90)\times 27\times 14}{27} + \frac{116\times 25\times 14}{27}$
= 3024 + 1503
= 4,527 CU YDS.



Estimated volume of excavated material placed in separation process: —

905 CU. YDS. PILED @ STORAGE PILE
[illegible] CU YDS. SPREAD OUT PILE OF 9-10-'85 WAS BACKPILED TO A STORAGE PILE

Estimated volume of processed material resulting in disposable waste:

—

VOLUME = $\frac{40\times 55\times 15}{27}$ = 733 YDS

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other:

—

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOCHING BACKHOE	48 HRS.
FIAT ALLIS FR35	47 HRS.
250 LOADER	1 HR.

2. Problems Encountered and Resolution

See DAILY FIELD LOG

3. Projected Work Next Week (Describe briefly)

THE EXCAVATION WILL BE CONTINUED IN THE AREA CONTAINING WELL # 10, 6 & 2. THE GROUND AT THE DEPTH NEAR BEDROCK MOSTLY HAS LIMESTONES MIXED WITH CLAY & WATER LEVEL IS RELATIVELY HIGH TO WORK WITH F.E.L. SO, AN ATTEMPT TO USE F.E.L. WILL BE MADE WHEREVER IT CAN BE USED.

4. Anticipated Problems & Resolution Options

— N/A —

5. Significant Deviations from Closure Plan

— N/A —

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
GILDARDO SALCIDO	48	48
FRED POLLOCK	47	48
LES	1	
Totals	96	96

Other Direct Costs: (please specify) PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

—

NUS Field Representative

10-19-85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Cloudy, Cool, [illegible] Showers CECO PO NO. 75-5-G0006

[illegible] NUS PROJECT NO. U495

Date: 10-19-'85

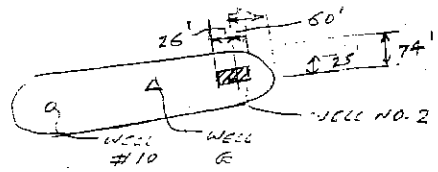
1. Personnel/Equipment On Site

GILDARDO SALSIDO - KOEHRING BACKHOE (8 HRS.)

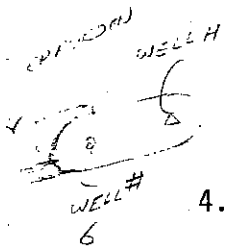
FRED POLLOCK - FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. <u>Work Accomplished</u> GILDARDO SA-SIDE S/MITSUBISHI MODEL MS280 CONTINUED EXCAVATION IN THE AREA CONTAINING WELL NO. 10, G & 2. THIS AREA CONTAINED FURNACE DUST IN THE VICINITY EAST OF WELL NO 2. SO, BACKHOE WAS USED EXCAVATE OVERBURDEN & UNDERLAYER CONTAINING FURNACE DUST. VERY DENSED & VERY THICK, MAY BE ABOUT 2' LAYER OF DUST WAS SEEN IN THIS AREA.



FRED POLLOCK W/ CAT-ALLIS FR35 WAS USED TO MOVE OVERBURDEN ON THE EXTENDED EXCAVATED AREA BECAUSE ON THIS N-S BOUNDRY, DUST STILL WAS PRESENT MORE TOWARD SOUTH-TOWARDS FUTSUAY INTO THE PIT. THE GOOD OVERBURDEN WAS MOVED INTO BACKFILL SO THAT FURTHER EXCAVATION USING BACK HOE CAN BE ACCOMPLISHED. ALSO, HAZARDOUS MATERIAL CONTAINING FURNACE DUST WAS MOVED TO THE STORAGE PILE.

4. <u>Samples Collected and Deposition</u>

N/A

5. <u>Problems Encountered and Resolution</u>

THE WATER LEVEL IN THE OPEN PIT FOR AREA CONTAINING WELL NO. 6 & H - THE AREA WAS BACKFILLED SOMEMORE & THE RAINWATER ACCUMULATED OVER THE WEEK CONTRIBUTED THE WATER LEVEL RISE IN THE PIT TO ABOUT 3 TO 4' MAKIN IT UNACCEPTABLE FOR THE FRONT END LOADER TO OPERATE TO SUCH ENVIORNM & DAMAGE THE EQUIPMENT.

6. <u>General Comments:</u>

—

NUS Field Representative
10-AUG-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLODY, COOL, OCCASIONAL RAINS CECO PO NO. 75-5-G0006

HIGH 62° F NUS PROJECT NO. U495

Date: 10-18-'85

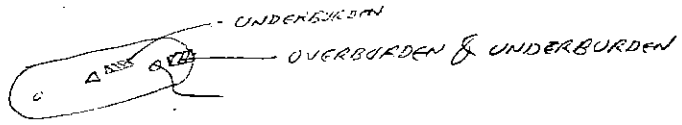
1. Personnel/Equipment On Site

GILDARDO SALSIDO - KOMATSU BACKHOE (8 HRS.)

FRED POLLOCK - FIAT-ALLIS FR35

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished GILDARDO SALSIDO W/ BACKHOE CONTINUED FURTHER INNERBURDEN EXCAVATION AND STARTED TAKING OVERBURDEN OUT & STRAIGHT BACK INTO THE PIT AND PILED BAD MATERIAL CONTAINING FURNACE DUST FOR F.E.L. TO HAUL IT TO THE AREA CONTAINING STORAGE PILE.

FRED POLLOCK W/ FIAT ALLIS FR35 HAUL AWAY BAD MATERIAL TO STORAGE PILE AND

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments: BOB DUDEK, LES DUDEK & I HAD DISCUSSION ABOUT THE ESTIMATED EXCAVATED YARDAGE AND THE MANNER IN WHICH IT WAS CALCULAT

NUS Field Representative

10-18-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, 62°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-17-'85

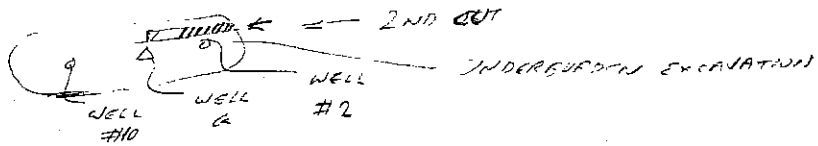
1. Personnel/Equipment On Site

GILDARDO SALSIDO - KOEHRING BACKHOE

FRED POLLOCK - FIAT-ALLIS FR 35

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished GILDARDO SALCIDO W/BACKHOE EXCAVATED IN THE AREA CONTAINING WELL #10, G & 2 TO GET UNDERBURDEN OUT WHICH PREVIOUSLY WAS PLANNED TO BE TAKEN OUT BY USING FRONT END LOADER COMING FROM THE ROADWAY ENTRANCE IN THIS PIT. THE IDEA DIDN'T WORK AS F.E.L. WAS SINKING.

FRED POLLOCK W/ FIAT ALLIS FR 35 MOVED BAD MATERIAL CONTAINING FURNACE DUST KEPT PILING AT STORAGE PILE.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments: MEETING HELD TO-DAY @ CECO CORPORATION OFFICE IN OAKBROOK. THE SUBJECT OF THE MEETING INCLUDES EPA'S COMMENTS AFTER THEIR FIELD TRIP ON SEPTEMBER 18, 1985 & THE PROGRESS REPORT OF THE SITE EXCAVATION. ALSO IN ATTENDANCE WERE ED BAER (N.U.S.), GEORGE GARDNER (N.U.S.), CLIFTON LAKE (ROOKS, PITTS & POUST), JERYL DEZELICK (ROOKS, PITTS & POUST), NANCY WISE (CECO) & BILL ALBRECHT (CECO). THE DISCUSSION CONTINUED FOR THE BALANCE OF THE DAY WITH RESOLUTION OF SOME PROBLEMS ABOUT EPA'S COMMENT LETTER. THE NEXT

[signature]
NUS Field Representative 10/17/85

MEETING IS SCHEDULED FOR NOV. 4, '85 @ 2 PM & A TRIP TO SPRINGFIELD OFFICE OF EPA ON NOVEMBER 5, 1985. THE SUMMARY OF THE MEETING NOTES WILL BE COMPILED BY GEORGE GARDNER & ADDITIONAL SAMPLES REQUIRED WILL BE TRASMITTED TO ED BAER (N.U.S.).

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY, COOL 58°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-16-'85

1. Personnel/Equipment On Site

GILDARDO SALCIDO MITSHUBISHI BACKHOE

FRED POLLOCK FIAT ALLIS FR 35

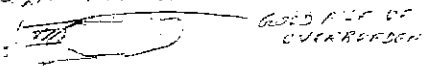
2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

GILDARDO SALSIDO W/ MITSHURISHI MODEL MS 280 TRENCHED 2 BUCKET WIDTH CUT ALL THE WAY TO THE TOP OF BEDROCK, WHICH CONFIRMS YESTERDAY'S FINDING OF SHIFT OF LEVEL @ BEDROCK. SOME TRENCHING DONE TO TRY OUT ROADWAY FOR 250 LOADER. LET TRIED TO MAKE THE ROAD. IDEA DIDN'T WORK PRACTICALLY

GILDARDO STARTED EXCAVATING OVERBURDEN IN THE AREA CONTAINING WELL #. & G FOR THE REMAINING PORTION



FRED POLLOCK BACKFILLED GOOD PILES & MOVED BAD PILES TO STORAGE AREA PILE.

4. Samples Collected and Deposition

5. Problems Encountered and Resolution

THE KEEPING BACKHOE THAT LEAKED OIL THRU HOSE RUPTURE WAS FIXED THIS MORNING.

THE LOADER WAS DOWN FOR 1 HR WHILE IT'S NEW TEETH WERE MOUNTED ON.

6. General Comments:

NUS Field Representative
10-15-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY & MILD. 53°F CECO PO NO. 75-5-G0006

89% HUMIDITY, WIND WEST 3 MPH NUS PROJECT NO. U495

Date: 10-15-'85

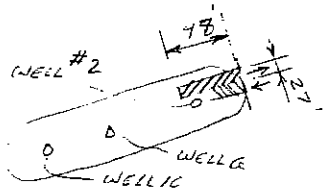
1. Personnel/Equipment On Site

GILDARDO SALSIDO KOBELCO BACKHOE

FRED POLLOCK FIAT ALLIS FR35

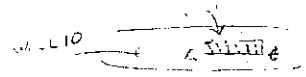
2. Visitors (Name/Affiliation/Nature)

N/A



3. **Work Accomplished**

GILDARDO SALCIDO CONTINUED EXCAVATION IN THE AREA CONTAINING WELL NO. 10, G & 2. ABOUT 40' LENGTH OF THE TRENCH (NORTH OF THE AREA BEING EXCAVATED) WAS DIRECTLY BACKFILLED BY TAKING THE OVERBURDEN OUT IN THE VICINITY BEING EXCAVATED.



FRED POLLOCK BACKFILLED MOST OF THE TRENCH RUNNING EAST-WEST ON SOUTHSIDE BOUNDRY OF THE AREA CONTAINING WELL 10, G & 2 (LEAVING PARTIALLY FILLED AT 5 OTHER LENGTHS SO THAT THE CONTINUATION OF THE TRENCH WIDTH IS EASILY VISIBLE. MOVED PILE CONTAINING FCE. DUST TO THE PILE STORAGE AREA. AND IN THE AFTERNOON, STARTED EXCAVATING UNDERBURDEN IN THE AREA WHERE OVERBURDEN WAS TAKEN OUT YESTERDAY.

4. **Samples Collected and Deposition**

—N/A—

5. **Problems Encountered and Resolution**

THE PROBLEM AROSE WHILE EXCAVATING THE UNDERBURDEN AS DESCRIBED ABOVE. THE BEDROCK LEVEL CHANGES AND SUDDENLY CAVES IN ABOUT 5' DEPTH DUE TO UNCERTAINTY OF THE CONTOUR OF THE BEDROCK IN THIS VICINITY, WHICH JUST SEEMS TO BE NEAR THE AREA TO BE EXCAVATED (UNDERBURDEN) THE OTHER ALTERNATIVE HAS TO BE USED. AN ATTEMPT WAS MADE TO MAKE A RUNWAY INTO THIS UNDERBURDEN AREA WITH BRING DUST CONTAINED TO FLATTEN OUT TO RIDE ON FOR BACKHOE TO GET UNDERBURDEN CONTAINING FURNACE DUST OUT. THIS CONCEPT FROM BILL WAS TRIED. IT WASN'T SUCCESSFUL AS THE MATERIAL CONTAINING FURNACE DUST INCREASES ON CHANGING. SO, BACK TO THE OLD ROUTINE OF TAKING IT OUT WITH BACKHOE HAS TO BE USED TO TAKE UNDERBURDEN CONTAINING FURNACE DUST OUT.

6. **General Comments:**

- N/A -

NUS Field Representative

10-15-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: MOSTLY CLOUDY, COOL, SCATTERED SHOWER 62° F. CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-14-'85

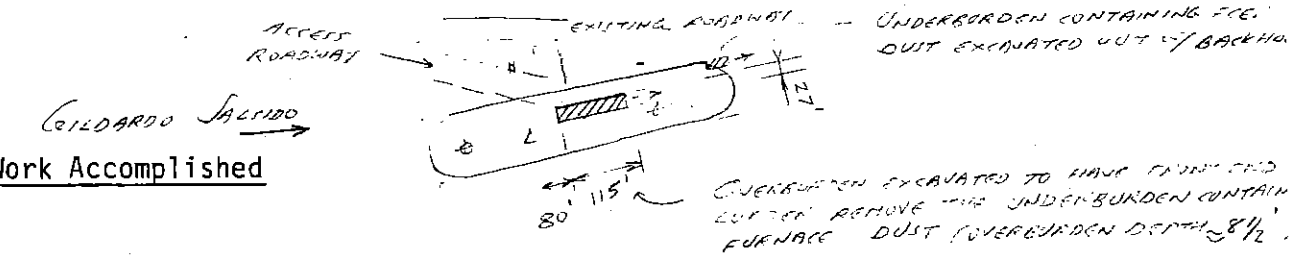
1. Personnel/Equipment On Site

GILDARDO SPEDDO MITSHUBISHI (MODEL 280) BACKHOE (8 HRS.)

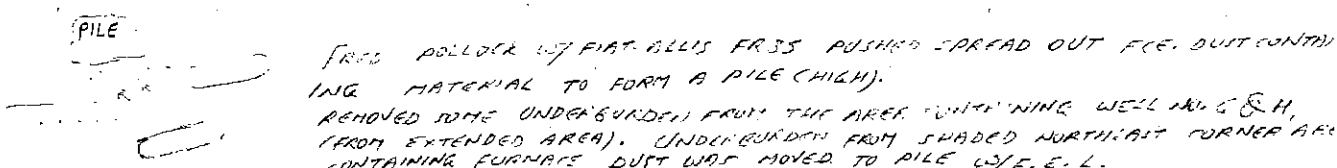
FRED POLLOCK FIAT ALLIS FR 35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished



4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

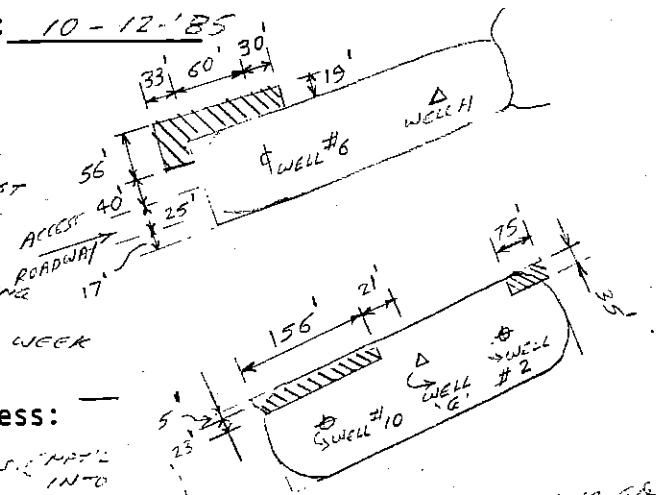
NUS Field Representative

10-14-85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 10 - 12 - '85



1. Work Accomplished

Estimated volume of excavation:

1976 * EXTENDED YARDS FOR FURNACE DUST SPREAD BEYOND BOUNDRY OF THE U 495 MAP FOR AREA WITH WELL #6 & H

2,708 EXCAVATION IN THE AREA CONTAINING WELL #10, G & #2.

4,684 ESTIMATED CUBIC YARDS FOR THIS WEEK

Estimated volume of excavated material placed in separation process: —

770 CY + 275 CU. YDS = 1,261 CU. YDS. (MAT'L INTO STORAGE PILE)

[illegible]

VOLUME: (AREA 10, G & 2)

$\frac{156 \times 23 \times 15}{27} + \frac{[illegible]}{2}$

1993 + 715 = 2,708 CU. Y.

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOEHRING RACKHOE	48 HRS.
FIAT ALLIS FR 35	47 HRS.
FIAT ALLIS 645	2 HRS.
[illegible] UNIT	2 HRS.
250 [illegible]	1 HOUR

DISTANCE BETWEEN WELL G & WELL #2 WAS MEASURED & WAS PER WITH DRAWING.

* AREA EXCAVATED BEYOND BOUNDRY SHOWN ON DRAWING U495 WHERE FURNACE [illegible] 90 x 19 x 15 [illegible] + 950 = 1,976 CU. YDS.

2. Problems Encountered and Resolution

SEE DAILY FIELD LOG.

3. Projected Work Next Week (Describe briefly)

THE EXTENDED AREA CONTAINING WELL #6 & H WILL BE THE PRIORITY EXCAVATION AREA.

4. Anticipated Problems & Resolution Options

—

5. Significant Deviations from Closure Plan

THE EXTENDED EXCAVATION IS BEYOND THE MAP AREA SHOWN AS THE BORDER LINE STILL SHOWS PRESENCE OF FURNACE DUST. EXCAVATION WILL BE CONTINUED TILL THE TERMINATION OF THE CONTINUATION OF THE FURNACE DUST.

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LES DUDEK	1 HR.	
GILDARDO SALSIDO	48 HRS	48 HRS.
FRED COLLOFF	47 HRS	48 HRS.
BURT SALSIDO	2 HRS.	
BENNY MITCHELL	2 HRS.	
Totals	100 HRS	96 HRS.

Other Direct Costs: (please specify) REFER TO MONTHLY EXPENSE SHEET.	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

NUS Field Representative

OCT. 12, '85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, RAINY, COOL HIGH 56°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-12-'85

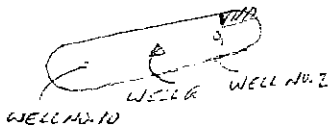
1. Personnel/Equipment On Site

GIORDANO SALSIDO MITSUBISHI BACKHOE (MODEL 280) (2 HRS)

FRED POLLOCK FIAT-ALLIS FR35 (2 HRS)

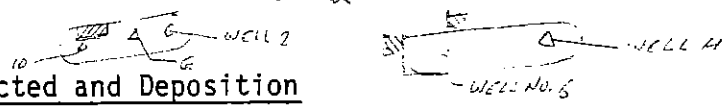
2. Visitors (Name/Affiliation/Nature)

N/A



3. <u>Work Accomplished</u> GILBERTO SALSIDO W/ MITSUBISHI MODEL 280 EXCAVATOR IN THE AREA CONTAINING WELL NO. 10, 6 & 2 @ THE NORTHEAST CORNER EXCAVATION THE FURNACE DUST BROWN) RUNS WITH BLACK STRIP & IT RUNS ALL THE WAY TO NORTHEAST CORNER UPTO THE NORTH-SOUTH BOUNDRY LINE.

FRED DELLUCK W/ FIAT ALLIS FX35 - INNER BURDEN EXCAVATION CONTINUATION IN THE AREA CONTAINING WELL NO. 10, 6 & 2 & IN THE AREA CONTAINING WELL NO. 6 & 4.



4. <u>Samples Collected and Deposition</u>

N/A

5. <u>Problems Encountered and Resolution</u>

—

6. <u>General Comments:</u>

—

NUS Field Representative
10-12-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, COOL, HIGH 52°F
LIGHT WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-11-85

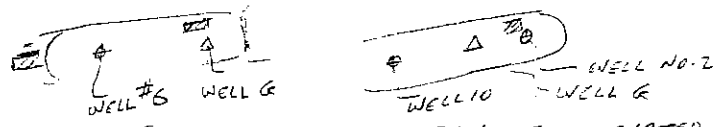
1. Personnel/Equipment On Site

GILDARDO SALSIDO KOEHRING BACKHOE

FRED POLLOCK FIAT ALLIS FR35

2. Visitors (Name/Affiliation/Nature)

N/A



3. **Work Accomplished** GILDARDO SALSIDO W/ROCKHRING BACKHOE EXCAVATED NORTH SOUTH THE WESTSIDE BOUNDRY EXTENSION. THIS WAS CEASED AS BACKHOE WAS DISABLED. THE OTHER AVAILABLE HOE WAS USED TO COMPLETE NEAR CONTROL ROOM WHERE EXCAVATION WAS LEFT OFF FOR THE TIME THAT FRONT END LOADER WAS USED TO CLEAR & BACKFILL THE PIT FOR BACKHOE TO SCOOP OUT FCE. DUST CONTAINING MATERIAL IN THE AREA CONTAINING WELL NO. 10, 6 & 2

FRED BULLOCK MADE AN ATTEMPT TO PATCH ROADWAY W/ FINES, OTHER MATERIAL EXCAVATED FROM OTHER END AND ROCKS FROM THE PIT TO SCOOP OUT SAME MATERIAL THAT THE BACKHOE WAS SUPPOSED TO SCOOP OUT. THIS EXTENSION ROADWAY COULD NOT BE USED BECAUSE OF MUD, WATER IN THAT AREA & TOO MUCH BACKFILL (CAUSED ELEVATED ROADWAY.)

4. **Samples Collected and Deposition** —

5. **Problems Encountered and Resolution**

THE HOSE RUPTURED CAUSING ALL OIL TO LEAK OUT DISABLING THE BACKHOE. STANDBY HOE (MITSUBISHI MODEL 280) WAS AVAILABLE & USED.

6. **General Comments:** (A) FRONT END LOADER WAS USED TO EXTEND ROADWAY IN THE AREA CONTAINING WELL NO. 10, 6 & 2 TO HAVE AN EXCEN TO HAUL OUT MATERIAL CONTAINING FURNACE DUST. DUE TO MUD, WATER, & MUCH BACKFILL, THE ROADWAY COULDN'T BE USED.

NUS Field Representative
10-11-85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: RAINY & CLOUDY; 56°F

NORMAL WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-10-'85

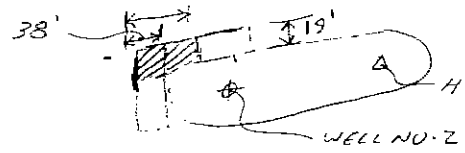
1. Personnel/Equipment On Site

GILDARDO SALSIDO KOEHRING [illegible]

FRED POLLOCK FIAT ALLIS FR 3T

2. Visitors (Name/Affiliation/Nature)

N/A



3. **Work Accomplished** GILDARDO W/ KOEHRING BACKHOE EXCAVATED TO INVESTIGATE FURTHER SPREAD OF FCE. DUST PAST BEYOND THE EASTWEST BOUNDRY LINE SHOWN IN THE DRAWING FOR THE AREA CONTAINING WELL #6 & WELL H.

FRED POLLOCK W/ FIAT ALLIS FR35 EXCAVATED UNDERBURDEN IN THE AREA CONTAINING WELL NO. 2 & WELL H - IN THE EXTENDED AREA BEYOND BOUNDARY AS SHOWN IN THE DRAWING 0-475. ALSO, THE CENTER PORTION CONTAINING WELL NO. 2 WAS EXCAVATED ALONG WITH THE PIPE & UNDERBURDEN WAS REMOVED.

4. **Samples Collected and Deposition**

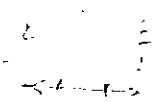
N/A

5. **Problems Encountered and Resolution**

RAINY DAY & DRIZZLES.

6. **General Comments:**

THE DISTANCE BETWEEN WELL NO. 2 & WELL G WAS MEASURED TO BE 53' + 100' + 79' ≈ 232' THIS ALMOST



53' + 100' + 79' ≈ 232'

TALLYS THE MEASURED SAME DISTANCE AS REPORTED ON 9-21-'85 WEEKLY PROGRESS REPORT. THIS DISCREPANCY IS NOTED FOR & TAKEN INTO ACCOUNT FOR CALCULATING CUBIC YARDS.

NUS Field Representative
10-10-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: RAIN & DRIZZLES. CLOUDY

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-9-'85

1. Personnel/Equipment On Site

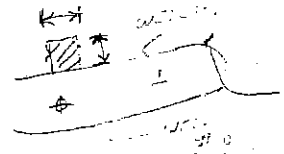
GILDARDO SALSIDO MITSUBISHI MODEL 280

FRED POLLOCK FIAT ALLIS FR35

LES DUDEK 250 LOADER

2. Visitors (Name/Affiliation/Nature)

N/A



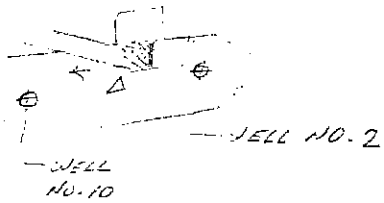
3. <u>Work Accomplished</u> GILBARDO SALINDO/W MITSUBISHI F.E.L. EXCAVATED IN THE AREA CONTAINING WELL NO. 6 & H, AT THE BOUNDARIES PART AS SHOWN IN THE MAP AS THE FURNACE DUST WAS FOUND AT THIS LIMITING BOUNDARY TO INVESTIGATE & EXCAVATE THE FURNACE DUST OUT.

FRED POLLOCK W/ KIT ACE'S FR 35 - BACKFILLED OVERBURDEN, LOADED TONEFEL INSTALLATION AREA & UNLOADED IN THE PIT TO MAKE STIFF ROADWAY FOR WORKING IN THE PIT. EXCAVATION ON WEST SIDE FURTHER. THIS OPERATION IS IN THE AREA CONTAINING WELL NO. 10, 6 & 2.

4. <u>Samples Collected and Deposition</u>

5. <u>Problems Encountered and Resolution</u>

A TYPICAL PROBLEM THAT WAS ENCOUNTERED YESTERDAY WAS THE FRONT END LOADER WAS SINKING WHILE EXCAVATING IN THE AREA CONTAINING WELL NO. 10, 6 AND 2.



6. <u>General Comments:</u> THE LOADER REFUSES SINKING AND PLACE WORK ECH. WATER REFUSES COMING DURING THE WATER LEVEL IN THE PIT TO ALMOST CENTER OF THE WHEEL (BIG WHEEL). THIS NEEDS THE CENTER PIN TO BE IMMERSED IN WATER. TO OPERATE IT IN THE LOADER IN THIS CONDITION IS UNDESIRABLE, SO TO WORK IN THE PITS AS POINTED BY ARROW TO THE WEST SIDE OF THE ROADWAY TO THE PIT AND ALSO TO PREVENT THE ACCUMULATED WATER RUSHING TO WEST SIDE

NUS Field Representative 10-9-85

WHILE EXCAVATING, THE PIT IN THE AREA WAS PARTIALLY FILLED WITH BACKFILL MATERIAL THAT WAS ALREADY EXCAVATED AND WAS STOCKED ADJACENT AT THE TOP OF THE GROUND AS OVERBURDEN. ABOUT 15 BUCKETS FULL OF ROCKS WERE BROUGHT BY F.E.L. FROM SEPARATION STATION TO LAY IT ON TOP OF THIS OVERBURDEN TO MAKE A FIRM ROADWAY STIFF ENOUGH SO THAT UNDERBURDEN FROM THE OTHER SIDE (WEST SIDE) CAN BE DUG & CAN BE DISTRIBUTED ON THE EAST SIDE WHERE WATER IS ACCUMULATED TO ABSORB & BACKFILL THIS PIT. BY DOING SO, THE UNDERBURDEN FROM THE WEST SIDE CAN BE DUMPED ON EAST SIDE ON TOP OF ROCKS AND AN ADDITIONAL ROCKS WILL BE NEED TO EXCAVATE UNDERBURDEN AREA WHERE SINKING OF THE WHEEL OF THE LOADER WAS TAKING PLACE.

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: WHOLE DAY - RAINY DAY

75°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-8-'85

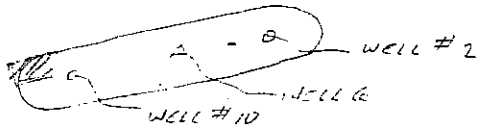
1. Personnel/Equipment On Site

GILDARDO CRESIDO KOEHNING BACKHOE (8 HRS.)

FRED POLLOCK FIAT ALLIS FR-5 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished GILDARDO SALSIDO EXCAVATED IN THE AREA CONTAINING WELL NO. 10, G & 2 AT THE NORTHWEST CORNER AND THE ROCKS IN THIS AREA WERE VERY HARD.

FRED POCLOCK.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

RAINY WEATHER SLOWS WORK EFFORTS WHEN WORKING WITH BACKHOE.

ON KOEHRING BACKHOE, O-RING ON ACTUATING CYLINDER HAD OIL LEAK. SERVICEMAN TO FIX IT WAS CALLED MEANWHILE, MITSHUBISHI MODEL 280 WAS USED.

6. General Comments:

TELEPHONE CONVERSATION WITH ED BAER OF NUS: WILL BE [illegible] RESPONSE FROM EPA AFTER FIELD VISIT (BY EPA). IT WAS INDICATED TO MINIMIZE BACKFILLING. THERE IS A MEETING SCHEDULED @ CECO CORP. ON OCT [illegible]'85 @ 10 A.M.

NUS Field Representative

10-8-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny, Warmer 69°F

79% Humidity, Wind 5 @ 5 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-7-'85

1. Personnel/Equipment On Site

Gildardo [illegible] Loading [illegible]

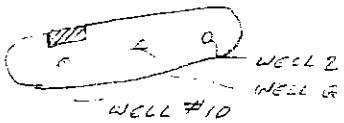
Fred Pollock Fiat Allis FR55

Burt Salsido Fiat Allis 545

Benny Mitchell [illegible]

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished GILDARDO CALSIDO W/ KOEHRING BACKHOE EXCAVATED IN THE AREA CONTAINING WELL NO. 10, G & 2.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BELT WAS BROKEN ON THE FIRST FEED HOPPER. THE SEPARATION PROCESS WAS STARTED TO RUN FOR THE PILE THR' 1½" SCREEN, THE OPERATION OF SEPARATION WAS NOT ATTACHMENT. THE PILE STILL WAS NOT DRY ENOUGH.

6. General Comments:

—

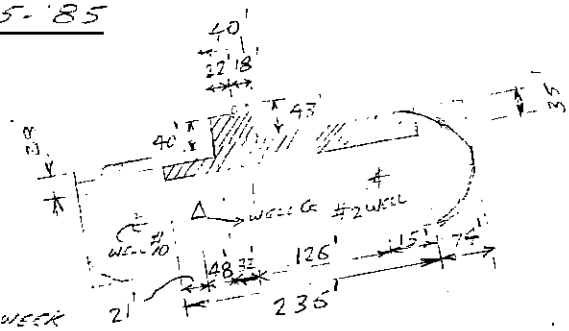
NUS Field Representative

10-7-85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 10-5-'85



1. Work Accomplished

Estimated volume of excavation:

IT. 1A 918 CY EST. VOLUME FOR WELL #17

IT. 1B 3,671 CY ESTIMATED VOL. OF EXCAVATED AREA

4,589 CY TOTAL ESTIMATED VOLUME FOR THIS WEEK

Estimated volume of excavated material placed in separation process:

1096 CU. YARDS STOCKPILED @ STORAGE $\frac{(126+15)\,15 \times 35}{27} \times \frac{5}{15} = 1,096$ (CU. YARDS)

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOEHRING BACKHOE	48 HRS.
FIAT ALLIS TR 25	46 HRS.
FIAT ALLIS 645	24 HRS.
SEPARATING UNIT	24 HRS.

IT. 1A $\frac{40 \times 43 \times 15}{27} = \frac{22 \times 3 \times 15}{27} =$ [illegible] CU. YDS.

IT. 1B $\frac{236 \times 28 \times 15}{27} =$ 5,220 CU. YDS.

2. Problems Encountered and Resolution

SEE DAILY FIELD LOG

3. Projected Work Next Week (Describe briefly)

THE WORK WOULD BE INVOLVED IN AREA CONTAINING WELL # 10, 12 & 2 & WELL # 6 & 4, WITH THE PRIORITY FOR THE LATER AREA.

4. Anticipated Problems & Resolution Options

THE FRONT END LOADER WILL BE USED WHEREVER POSSIBLE FOR UNDERBURDEN EXCAVATION. WHERE LIMITED TO ITS USE, BACKHOE WILL BE USED.

5. Significant Deviations from Closure Plan

—

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LEO DUDEK	32	
GILDARDO [illegible]	40	48
FRED [illegible]	45	48
BENNY MITCHELL	24	
Totals	141	96

Other Direct Costs: (please specify)	Refer to Monthly Expense Report	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments

—

NUS Field Representative

Oct. 5, '85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 47°F TO 54°F, CHILLY, CLOUDY, OCCASIONAL SUNBREAKS WEST WIND @ 15

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-5-'85

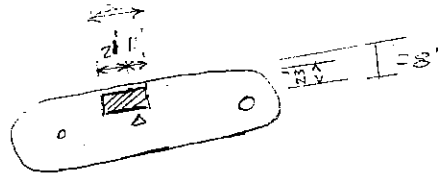
1. Personnel/Equipment On Site

GILDARDO JALSIDO KOEHRING BACKHOE (8 HRS.)

FRED POLLOCK FIAT-ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

GILDARDO SALCIDO W/BACKHOE EXCAVATED IN THE AREA CONTAINING WELL NO. 10, 6 & OVERBURDEN & SCATTERED CHECKING CUTTING THRU UNDERBURDEN

FRED POLLOCK W/ FRONT END LOADER BACKFILLED AREA CONTAINING WELL NO. 6 & H AND REMOVED INNERBURDEN CONTAINING FURNACE DUST

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
10-5-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 56°F, COOL, OCCASIONAL SHOWERS ALMOST WHOLE DAY
WIND SE 9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-4-'85

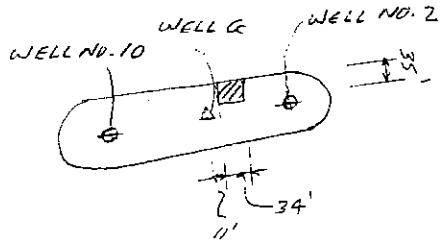
1. Personnel/Equipment On Site

GILDARDO JALSIDO KOEHRING BACKHOE (8 HRS.)

FRED POLLOCK FIAT ALLIS FR35 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



EXCAVATION VOLUME

$\approx 35 \times \frac{34}{27} \times 15 \approx 661$ CU

VOLUME BY BACKHOE, $= \frac{11'}{15} \times 661$ (DEPTH)

$= 484$ CUY

3. Work Accomplished

GILDARDO SALINDO W/ KOEHRING BACKHOE - EXCAVATION FOR THE NORTHCENTRAL AREA CONTAINING WELL NO. 10, WELL G AND WELL NO. 2.

FRED POLLOCK W/ FIAT ALLIS FR35 - BACKFILLING AREA CONTAINING WELL NO. 6 & WELL H, LEVELLING, COMPACTING AND USING LARGE SIZE SLAG, STONES FROM SEPARATION PROCESS AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

IT WAS ALMOST RAINY DAY. SEPARATION PLANT OPERATION WAS SKIPPED.

6. General Comments: I VISITED CECO-OFFICE TO PICK-UP DAILY & WEEKLY REPORT ORIGINAL FOR THE MONTH OF SEPTEMBER FROM BILL ALBRECHT.

NUS Field Representative

10-4-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 66°F, SUNNY
LIGHT WIND.

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-3-'85

1. Personnel/Equipment On Site

LES DUDEK — KOEHRING BACKHOE (8 HRS.)

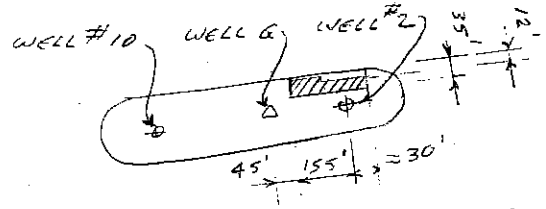
FRED POLLOCK — FIAT-ALLIS FR35 (7 HRS.)

GILDARDO SALSIDO — FIAT-ALLIS 645 (8 HRS.)

BENNY MITCHELL — SEPARATING UNIT (8 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A



Volume [illegible]
≈ 23 × 183 × 8 / 27 COVERBOX
= 1260 CUYDS

3. Work Accomplished

LES DUDEK/W KOEHRING BACKHUE - EXCAVATION IN THE AREA NORTH OF WELL NO. 2

FRED POLLOCK/W FIAT-ALLIS 35 BACKFILLING AREA CONTAINING WELL NO. 6 & H, HAULING BIG ROCKS & STONES @ SEPARATION STATION HOPPER TO ISOLATED SEPARATE PILE

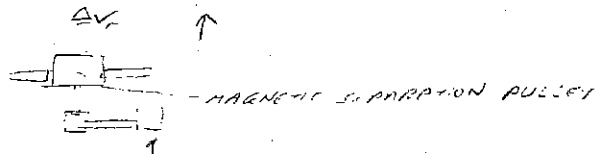
GILDARDO/W BENNY MITCHELL - RUNNING SEPARATION PROCESS AREA APPROXIMATELY RAN ABOUT 200 CUYARDS.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

LARGE PORTION OF THE ELECTRIC FURNACE EMISSION CONTROL BAGS WAS PILED, PICKED UP BY HAND, SEPARATED OUT FROM THE 1ST FEED HOPPER SCREEN. THE 2nd SCREEN AT THE MAGNETIC PULLEY UNIT USED TO GET MOSTLY PLUGGED BY THE WET FINES CAUSING FINES ALSO TO BE CARRIED AWAY AT THE OTHER PILE;

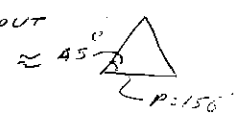


6. General Comments:

1 FINES PLUGGING AT THE 2nd SCREEN CAUSING FINES TO BE CARRIED AWAY AT THE OTHER PILES. THIS PROBLEM WAS DISCUSSED WITH BILL DUDEK. HE SUGGESTED TO INSTALL MORE LOOSE CHAINS HANGING THAT WOULD HELP THE FINES TO BREAK-UP.

NUS Field Representative
10-3-85

AN ATTEMPT WAS MADE TO RUN PILE AT SCREEN AS IT ALSO HAD FINES MIXED WITH IT. PILE VOLUME ABOUT



$V = \frac{0.2618 \times 49.65^3}{2 \times 27} = 593$ CUYD

D = 49.65'

FIAT ALLIS 645 WAS USED TO HAUL AND FEED IT THRU HOPPER SEPARATION PROCESS TO RECLAIM FINES GONE TO OTHER PILE.

BENNY MITCHELL - SEPARATING PROCESS AREA OPERATOR -

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 68°F, SUNNY
LIGHT WIND,
NICE DAY FOR RUNNING SEPARATING UNIT

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-2-'85

1. Personnel/Equipment On Site

LES DUDEK MITSUBISHI (8 HRS.)

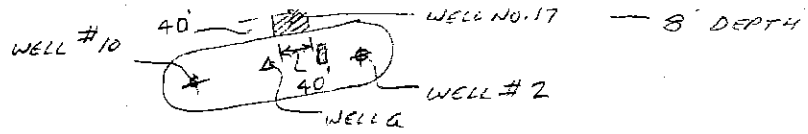
FRED POLLOCK FIAT ALLIS FR35 (7 HRS.)

GILDARDO SALSIDO FIAT-ALLIS 645 (8 HRS.)

BARRY MITCHELL SEPARATING UNIT (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

BILL ALBRECHT - CECO CORPORATION



3. <u>Work Accomplished</u> ESTIMATED EXVATED VOLUME FOR WELL NO. 17, $V = \frac{40 \times 43 \times 15}{27}$ = 918 CU. YDS (THIS INCLUDES OVERBURDEN ≈ 8' AND UNDERBURDEN ≈ 7'). AN ATTEMPT WAS MADE TO FIND THE MONITORING WELL PIPE, BUT, IT WAS IN VAIN.

THE EXCAVATED FURNACE DUST MATERIAL FROM AREA CONTAINING WELL #10, G & 2 WAS MOVED NEAR SEPARATION AREA.

4. <u>Samples Collected and Deposition</u>

N/A

5. <u>Problems Encountered and Resolution</u>

—

6. <u>General Comments:</u>

BILL ACKERMAN VISITED SITE TO-DAY. THE PROBLEM OF MATERIAL CONTAINING FURNACE DUST WAS DISCUSSED IN REFERENCE TO RUNNING IT THROUGH SEPARATION PROCESS AREA. THE MATERIAL IS NOT YET DRY ENOUGH TO RUN AT THE SEPARATION PROCESS AREA WITH SATISFACTORY EFFICIENCY. MAY BE THE ATTEMPT NOW WOULD BE MADE JUST TO GET ALL THE FURNACE DUST MATERIAL OUT ON THE GROUND & WOULD BE LEFT SPREAD OUT IN OPEN

NUS Field Representative
10-2-85

AREA TILL NEXT SUMMER. THIS WOULD PROBABLY HELP A LOT FOR THIS MATERIAL TO BREAK UP MORE, DRY UP MORE — AND MAY MAKE IT BEST SUITED TO RUN IT THE SEPARATION PROCESS AREA. WE JUST HAVE TO WAIT & SEE. MEANWHILE, ATTEMPTS WILL CONTINUALLY BE MADE FOR SOME TRIAL RUNS.

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 37°F TO 57°F, COOL DAY
80 90 HUMIDITY, LIGHT WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 10-1-'85

1. Personnel/Equipment On Site

LES DUDEK — MITSHUBISHI MODEL MS 250 (8 HRS)

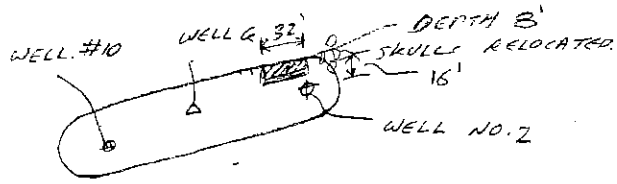
FRED POLLOCK — FIAT-ALLIS FR35 (7 HRS)

GILDARDO SALCIDO — FIAT-ALLIS 645 (8 HRS)

KENNY MITCHELL — SEPARATING UNIT (8 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished

EXCAVATION CONTINUED TOWARDS NORTHEAST BORDER IN EAST DIRECTION WITH DOUBLE THE TRENCH WIDTH TO CHECK CONTINUITY OF FURNACE DUST CROSS SECTI

FRED POLLOCK MOVED SKULLS THAT WERE IN THE WAY OF DIGGING AT THE NORTH-EAST CORNER NEAR THE CRANE. ALSO, OVERBURDEN AT THE EXCAVATED AREA CONTAINING WELL NO. 6 & 4 WAS BACKFILLED. THE EXCAVATED FURNACE DUST MATERIAL WAS MOVED NEAR TO SEPARATION AREA. PART OF THE TRENCH WAS BACKFILLE FOR HOE TO MOVE BACKWARDS

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative
10-1-'85

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 63°F, Cloudy, Cool
WINDY

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-30-85

1. Personnel/Equipment On Site

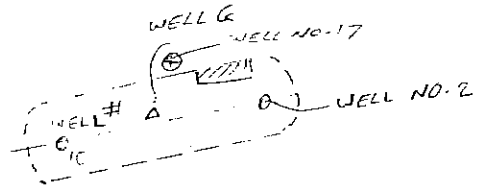
LES DUDEK - KOEHRING BACKHOE (8 [illegible]

FRED POLLOCK - FIAT-ALLIS FR35 (8 [illegible]

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished



EXCAVATION CONTINUATION IN THE NORTHEAST BORDER AREA CONTAINING WELL #10 G & 2, FURNACE DUST WAS FOUND IN THIS AREA (CROSS SECTION TRENCH)

UNDERBURDEN IN THE AREA CONTAINING WELL NO. 6 & H, AT THE CORNER (NORTHEAST) WEST OF WELL H, WAS SEPARATED. TRACES OF THIN FURNACE DUST WAS FOUND AND REMOVED TO THE PILE.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

IT WAS DRIZZLES & RAIN (MINOR), WET WEATHER, COLD & WINDY.

— SEPARATION PROCESS RATE WAS NOT UPDATED.

6. General Comments:

—

[signature]

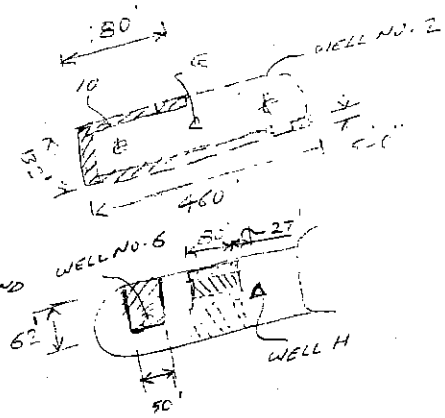
NUS Field Representative

9-30-'85

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: 9-28-'85



1. Work Accomplished

Estimated volume of excavation:

V_1 = 1715 (AREA CONT. WELL NO. 10, 6 & 12) – EXCAVATED
V_2 = 1722 AREA NEAR WELL NO. 6 – EXCAVATED
V_3 = 1908 AREA NEAR WELL H – EXCAVATED
V_4 = 1000* CU YDS. MATERIAL SITTING ON TOP OF AREA AROUND WELL NO. 6 BEFORE EXCAVATION – RELOCATED
6,345 CU. YDS.

Estimated volume of excavated material placed in separation process:

500 CU. YDS.

$V_1 = \frac{(180+132+460)\times 12\times 5}{27} = \frac{772\times 12\times 5}{27} = 1715$ CU YD

Estimated volume of processed material resulting in disposable waste:

90 CU. YDS.

$V_2 = \frac{62\times 50\times 15}{27} = 1722$ CU YDS

Volume of resultant waste material transported offsite for disposal: (from manifests)

N/A

Other:

—

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOEHRING BACKHOE	48
FIAT-ALLIS FR35	24 1/2
FIAT-ALLIS 645	45 HRS
TRUCKS	12
SEPARATING PROCESS AREA	25 1/2
250 LOADER.	2 1/2

* THIS WAS OVERBURDEN MIXED WITH LOTS OF (ABOUT 2500 BAGS) FCE. BAGS. WOULD

2. Problems Encountered and Resolution

THE ACTUATING CYLINDER SHAFT WAS BROKEN. ENTIRE CYLINDE WAS REPLACED. LOST TIME ENCOUNTERED WAS 25 1/2 HRS.

3. Projected Work Next Week (Describe briefly)

AREA CONTAINING WELL NO. 6 AND WELL H WOULD BE BACKFILLED MOST OF IT. THIS WILL ENHANCE USE OF THIS AREA FOR STORING MATERIAL IN PILE FORM AND ALSO SPEED THE MATERIAL THAT NEEDS TO RUN THROUGH SEPARATION PROCESS AREA. ALSO, AREA CONTAINING WELL NO 10, 6 AND 2 WILL BE PRIMARILY EXCAVATED.

4. Anticipated Problems & Resolution Options

AN ACCEPTABLE AND SUCCESSFUL PATTERN FOR RUNNING THE EXCAVATED MATERIAL CONTAINING FURNACE DUST HAS YET TO BE FIGURED OUT FOR PRACTICAL FEASIBILITIES.

5. Significant Deviations from Closure Plan

N/A

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LES DUDER	48	48
FRED POLLOCK	24 1/2	48
GILDARDO SALSIDO	45 + 4 HRS = 49 HRS	48
BURT SALSIDO	2 HRS	—
BENNY MITCHELL (SEPARATION [illegible])	25 1/2 HRS	10
Totals	129.5	144

Other Direct Costs: (please specify) PLEASE REFER TO MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	—

7. General Comments

THE SEPARATION PROCESS AREA IS EXTREMELY DEPENDENT ON THE MATERIAL THAT IS FED THROUGH FOR SEPARATION. THE MANY TRIAL AND RUNS MADE YET LIMITS THE CONTINUOUS RUNNING OF THE PLANT. THE MOISTURE CONTENT IN THE MATERIAL IS A LIMITING FACTOR FOR EFFICIENCY OF THE SEPARATION PROCESS.

THE RESULTS YET ARE NOT SATISFACTORY. HENCE, THE EFFORT, AT LEAST TO GET THE FURNACE DUST OUT IS [illegible]

[signature]

NUS Field Representative

9-28-'85

(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 76°F SUNNY
LIGHT WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-28-85

1. Personnel/Equipment On Site

LES DUDEK KOEHRING BACKHOE (8 HRS)

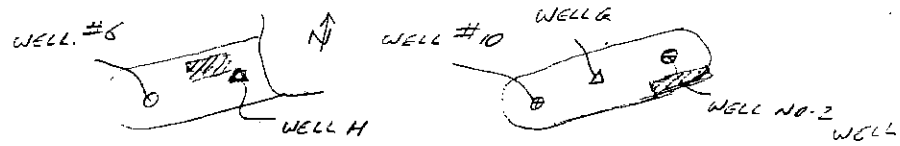
FRED POLLOCK FIAT-ALLIS FR35 (8 HRS)

GILDARDO SALSIDO FIAT-ALLIS 645 (8 HRS)

BENNY MITCHELL SEPARATION UNIT (6 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished EXCAVATION W/BACKHOE IN THE AREA CONTAINING NO. 6 & WELL H IN THE NORTHEAST CORNER, SLIGHTLY WEST OF WELL H (≈ 27'-0"), 25' W × 42' L × 3' L OVERBURDEN, THIN TRENCH WAS CONTINUED IN THE AREA CONTAINING WELL 10, G & 2 ALONG SOUTHEAST BORDER LINE ABOUT 30' LENGTH, 4'-6" WIDE AND 12' DEEP. UNDERBURDEN CONTAINING FURNACE DUST IN THE AREA NEAR WELL #6, WAS EXCAVATED USING FRONT END LOADER & WAS PILED ABOVE GROUND.

SEPARATING PROCESS AREA WAS RUN & FRONT END LOADER FIAT-ALLIS 645 WAS USED TO FEED THE HOPPER.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

BAGS FROM ELECTRIC FURNACE AREA USED TO JAM INTO THE FIRST SCREEN OF THE HOPPER. THIS RESULTS IN LOST TIME ON SEPARATION UNIT RUNNING WHILE TAKING OUT THE JAMMED BAG FROM THE SCREEN. BAGS WERE THUS MANUALLY PICKED UP & THE MATERIAL TO BE SCREENED WAS SPREAD OUT WHEN NECESSARY.

6. General Comments:

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 65°F, DENSE FOG EARLY MORNING CECO PO NO. 75-5-G0006

LIGHT WIND, SOUTHERN 5-9 MPH NUS PROJECT NO. U495

Date: 9-27-85

1. Personnel/Equipment On Site

LES DUDEK - MITSHUBISHI MODEL MS 280 (8 HRS.)
KOEHRING BACKHOE - USED FOR CHECKING IF ITS WORKING PROPERLY AFTER FIX-UP

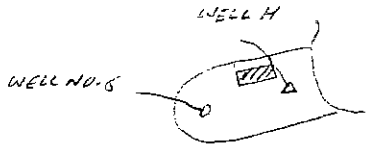
FRED POLLOCK - FIAT-ALLIS FR35 (8 HRS.)

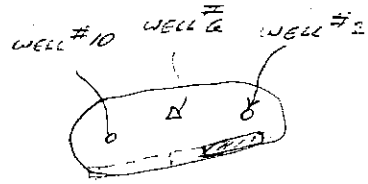
GILDARDO SALTIDO - FIAT-ALLIS 645 (8 HRS.)

BENNY MITCHELL - SEPARATION UNIT (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A





3. Work Accomplished TRENCH EXCAVATION CONTINUATION IN THE AREA CONTAINING WELL #, WELL G AND WELL #2. OVERBURDEN EXCAVATION NORTHWEST OF WELL H, UNDERBURDEN

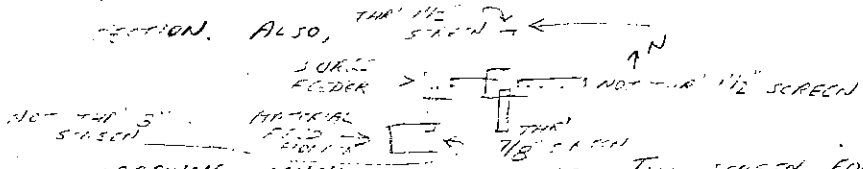
IN THE AREA NEAR WELL H WAS EXCAVATED AND THE EXCAVATED MATERIAL WAS DUMPED INTO THE NEARBY OPEN AREA OF TOTAL EXCAVATION. THERE WERE TRACES OF BROWN DUST FOUND (VERY MINIMAL, SCATTERED, VERY THIN LAYER) AND A SUCCESSFUL ATTEMP TO CAKE IT OUT WAS MADE. SEPARATING PLANT WAS RUN WHOLE DAY WITH UNSATISFACTORY PERFORMANCE.

4. Samples Collected and Deposition

N/A

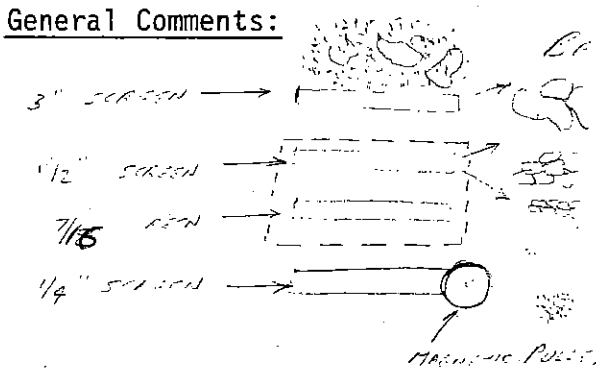
5. Problems Encountered and Resolution

THE FIRST SCREEN CROSS SECTION LOOKS LIKE . AN ATTEMPT WAS MADE TO CUT THE FLANGE ON BOTH SIDES TO MINIMIZE WIDTH OF THE CROSS SECTION. ALSO,



THIS BELT HAD BEEN CARRYING MUCH OF THE FINES. THE SCREEN FOR IT NEEDS TO BE CLEANED.

6. General Comments:



BACKFILL, SEPARATION SCREENING CONSISTS OF:

UNSCREENED THR' 3" SCREEN

UNSCREENED THR' 1 1/2" SCREEN

SCREENED THR' 1 1/2" SCREEN

SCREENED THR' 7/16" SCREEN

SCREENED THR' 1/4" SCREEN. MAGNETIC FINES

NUS Field Representative

MAGNETIC MATERIAL } [illegible] THR' 1/4" SCREEN

A[illegible] [illegible] OF [illegible] OF ANY [illegible] DUE TO WETNESS OR MOISTURE DEVIATES [illegible] SCREENING PROCESSING.

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 59°F COOL DAY

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-26-'85

1. Personnel/Equipment On Site

LES DUDEK - MITSHUBISHI MODEL MS23 (8 HRS)

GILDARDO SALSIDO - FIAT ALLIS E45 (8 HRS.)

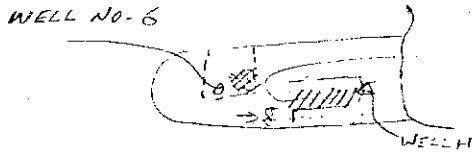
FRED POLLOCK FIAT-ALLIS FR35 (2 1/2 HRS.)

BENNY M[illegible] SEPARATING UNIT [illegible]

2. Visitors (Name/Affiliation/Nature)

N/A

$\curvearrowright$ Vol. = $\frac{32 \times 75}{27} \times 7 = 623$ CU. YDS.



EXCAVATED AREA

3. Work Accomplished AREA CONTAINING WELL NO. 6 & WELL H - OVERBURDEN BETWEEN TWO TRENCHES WAS DUG AND A SUCCESSFUL ATTEMPT WAS MADE TO DUMP THIS GOOD OVERBURDEN DIRECTLY INTO ALREADY DUG WIDE TOTAL TRENCH. THE AREA EXCAVA WAS NEARLY 32' WIDE x 75' LONG (FOR OVERBURDEN) x 7' deep.

FIAT-ALLIS 645 WAS USED TO TRENCH OUT → { AREA TO MAKE ROOM FOR THE ABOVE OVERBURDEN TO MOVE IN.

FIAT-ALLIS FR 35 WAS USED TO [illegible] - BAG [illegible] DUST TO TRANSFER [illegible] TO PILE.

SEPARATING UNIT RAN FOR 5 1/2 HRS.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

FIAT-ALLIS FR35 DISABLED UNIT WAS FIXED REPLACING [illegible] ALONG [illegible] THE SHAFT.

SEPERATION PROCESS UNIT RAN FOR 5 1/2 HRS. THE RESULTS ARE STILL NOT SATISFACTORY. MORE DOWNTIME AS BAG [illegible] GOT TANGLED INTO THE [illegible] IN THE HOPPER (VIBRATORY) SCREEN. [illegible] HAS BEEN THOUGHT [illegible] AND INSTALL [illegible]

6. General Comments: ACROSS WIDTH [illegible] BAGS OR WIRES [illegible]

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: CLOUDY, RAIN 50°F — CECO PO NO. 75-5-G0006

LIGHT WIND - SE 9 TO 12 MPH — NUS PROJECT NO. U495

Date: 9-25-'85

1. Personnel/Equipment On Site

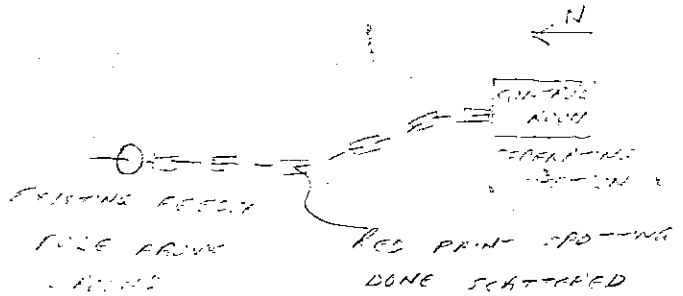
LES DUDEK MITSUBISHI MODEL MS 280 (8 HRS.)

GILBARDO CELSIDO FIAT-ALLIS 645 (8 HRS)

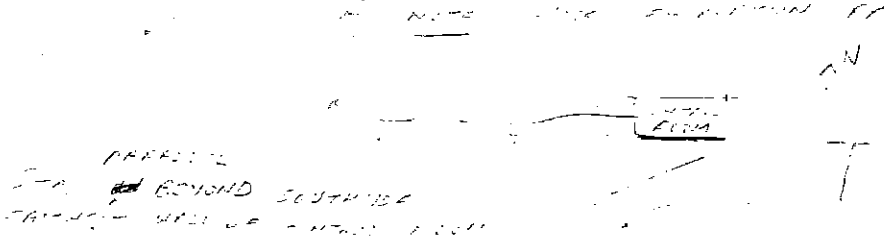
250 LOADER (2½ HR.) - WAS USED TO LEVEL THE PILE WHILE EXCAVATING TIGHT CORNER SECTION OVERBURDEN EXCAVATION NEAR WELL NO. 6

2. Visitors (Name/Affiliation/Nature)

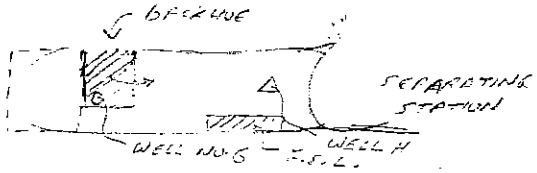
THE PERSONNEL FROM ILLINOIS BELL & COMMONWEALTH EDISON VISITED THE SITE FOR LOCATING BURIED UTILITY LINES IF THERE ARE ANY. THERE WAS NONE FOR TELEPHONE LINES. ELECTRICAL FEEDER LINE FOR CONTROL ROOM FOR SEPARATING UNIT WAS LOCATED BY THE COMPLED PERSONNEL.



NOTE [illegible] EXCAVATION FIELD ON RED [illegible] SPOTTING



$\curvearrowright$ VOL. $= \frac{62 \times 50 \times 8}{27} \times 0.7 = 643$ CU. YDS.



3. Work Accomplished THE OVERBURDEN IN THE AREA CONTAINING WELL NO. 6 & H WAS EXCAVATED. THE EXCAVATED [illegible] WAS THROWN DIRECTLY IN THE EXCAVATED AREA ADJACENT TO THE SEGMENT BEING EXCAVATED. THE OVERBURDEN WAS LEVELED USING 250 LOADER.

FIAT-ALLIS 645 WAS USED TO TRENCH OUT UNDERBURDEN W/ DUST FOUND AT SCATTERED LOCATIONS. AN ATTEMPT WAS MADE TO TAKE OUT THIS DUST MIXED MATERIAL OUT IN THE FCE. DUST PILES [illegible] THE DUST FOUND IN THIS AREA WAS [illegible] VERY THIN LAYER (3" TO 4" MAX.) FAIRLY ABOVE TOP OF BEDROCK LEVEL ABOUT 3' TO 4' ABOVE.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

PETRONE 250 LOADER WAS USED TO SLATEN OUT THE GOOD OVERBURDEN THAT WAS DUMPED DIRECTLY INTO THE TOTAL EXCAVATED AREA BY THE SIDE OF IT DUE TO THE LIMITATIONS OF BACKHOE BECAUSE OF ITS ARM AND THE AREA ON THE OTHER SIDE OF EXCAVATION HAS TO BE KEPT OPEN FOR FURTHER EXCAVATION.

6. General Comments:

—

[signature]
NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: HIGH 56°F, COOL, VARIABLE CLOUDY CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-24-'85

1. Personnel/Equipment On Site

LES DUDEK. MITSUBISHI MODEL 280 (8 HRS)

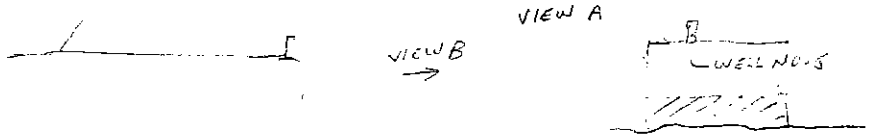
GILDARDO CELCIDO - FIAT-ALLIS 645 - FRONT END LOADER, 1 DUMP TRUCK (15 CUYD CAPACITY)

BURT CELCIDO - DUMP TRUCK (12 CUYDS CAPACITY)

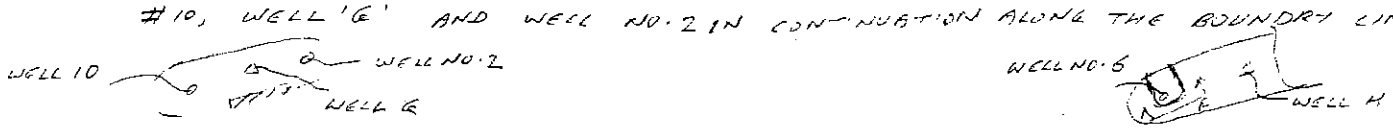
[illegible] - [illegible] STATION [illegible]

2. Visitors (Name/Affiliation/Nature)

NORTHERN ILLINOIS GAS PERSONNEL VISITED THE SITE TO LOCATE GAS LINE IN THE AREA OF EXCAVATION IF IT EXISTS. IT WAS TOLD BY HIM THAT NO GAS LINE EXISTS IN THE AREA OF EXCAVATION. THERE IS A GAS LINE RUNNING BURRIED EAST OF THE WELL NO. 5 & WELL NO. 7 - PERSONNEL AWAY FROM THESE TWO MONITORING WELLS LOCATION.



3. Work Accomplished A TRENCH WAS EXCAVATED AT THE AREA CONTAINING WELL #10, WELL 'G' AND WELL NO. 2 IN CONTINUATION ALONG THE BOUNDRY LINE



OVERBURDEN SEGMENT IN AREA CONTAINING WELL #6 & WELL H WAS EXCAVATED. TWO DUMP TRUCKS WERE USED BY BURT & GILDARDO TO MOVE CONTAMINATED MATERIAL CLOSE TO CONTROL BLDG. FOR SEPERATING STATION. GILDARDO USED F.E.L. TO RUN SEPERATING UNIT FOR PROXIMATELY AN HOUR.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

A TRENCH WAS EXCAVATED AT THE SOUTHWEST BORDER LINE OF THE AREA CONTAINING WELL NO. 10, WELL 'G' AND WELL NO. 2. THERE WAS EXISTING PILE AT PLACES NEAR THE BOUNDRY LINE AT CERTAIN PLACES. AN ATTEMPT WAS MADE TO TRENCH STRAIGHT EXCAVATION AS MUCH AS POSSIBLE.

6. General Comments:

—

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 72°F, PARTLY CLOUDY
QUICK HEAVY SHOWERS (TWICE)

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-23-'85

1. Personnel/Equipment On Site

LES DUDEK — MITSUBISHI MODEL MS280 (8 HRS.)

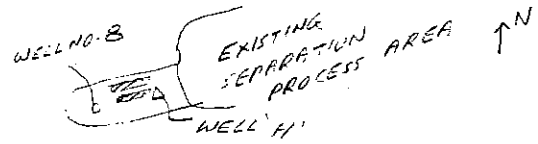
GILDARDO SALCIDO — FIAT-ALLIS 645 (5 HRS)

FRED POLLOCK — FIAT-ALLIS FR35 (6 HRS.)

BENNY [illegible] — SEPARATION STATION (5 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished TRENCHED EXCAVATION TILL TOP OF BEDROCK FOR TWO TRENCH FOR THE NORTHEAST SEGMENT AREA CONTAINING WELL #6 & WELL H AND ALSO STARTED TRENCHING FAR END CORNER OF AREA CONTAINING WELL #10, WELL 'G' AND WELL NO. 2,

FRONT END LOADER WAS USED TO EXCAVATE UNDERBURDEN CONTAINING FCE. DUST. THE EXCAVATED MATERIAL WAS PILED @ NORTHWEST OUTERSIDE BOUNDARY.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE ACTUATING SHAFT FOR BOOM BROKE ON FIAT-ALLIS FR35. THE SERVICE PERSONNEL HAS BEEN CALLED TO FIX THE PROBLEM. MEANWHILE FIAT-ALLIS 645 COULD BE USED.

6. General Comments:

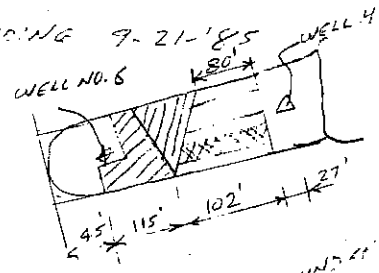
—

NUS Field Representative

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: WEEK ENDING 9-21-'85



1. Work Accomplished

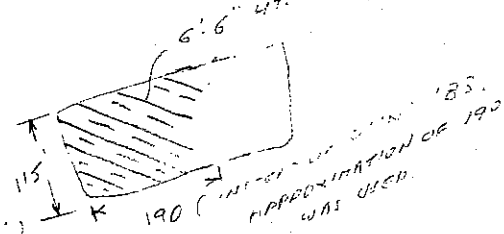
Estimated volume of excavation:

TOTAL CU. YDS. = TOTAL VOL. WEST OF WELL H (27') − VOL. DUG DURING WK. 9/14 − VOL. DUG. DURING WK 9/28

= (289*−27) 115 × 15 − 4,104 − (1722 + 1908)

= 16739 − 4,104 − 3,630

= 9,005 CU. YDS.



Estimated volume of excavated material placed in separation process: —

5260 CU YDS.
— 511 CU. YDS (80 × 115 × 15 × 0.1 × 1/27)
5771 CU. YDS (NOW, IT'S PILED & WILL BE RUN THRU [illegible])

190 × 6.5 × 115 ≈ 5260 CU YDS

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other: —

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOEHRING BACKHOE	37
FIAT-ALLIS [illegible]	43
TRUCK	3
FIAT-ALLIS [illegible]	5
SEPARATING [illegible]	7½

289* → DISTANCE ON MAP [illegible] 256' [illegible] WELL NO. 6 TO WELL [illegible]
ACTUAL MEASURED DISTANCE [illegible] 230' [illegible] WELL NO. 6 TO [illegible]
315 [illegible] MAP − 25' [illegible] due to [illegible]

2. Problems Encountered and Resolution THE TRENCHING METHOD WAS USED FOR THE BEST POSSIBLE CROSS SECTION VISIBILITY. THUS, ENGINEERING JUDGEMENT FOR THE EXCAVATION THAT WE WILL RUN INTO. TOTAL OF 7 TRENCHES WERE SCATTERED OUT IN THE AREA CONTAINING WELL #6 AND WELL H, ENABLING FOR GOOD ENGINEERING JUDGEMENT. THIS TRENCHING METHOD PROVED SOME LIMITATIONS FOR THE USE OF BACKHOE & ALSO THE USE OF FRONT END LOADER. ALL ATTEMPTS WERE MADE TO MINIMIZE SAME MATERIAL HANDLING TWICE. THE SEPARATION PROCEDURE TO SCOOP OUT FCE. DUST MIXED MATERIAL WAS WORKING SATISFACTORY WITH THE USE OF FIAT-ALLIS F85 FRONT END LOADER. THIS

3. Projected Work Next Week (Describe briefly)

WELL NO. 5 & H CONTAINING AREA IS THE AREA OF PRIORITY FOR EXCAVATION AND GETTING THE FCE. DUST CONTAMINATED UNDERBURDEN OUT. (WITH THE AREA EAST BEYOND WELL H TOWARDS EAST DIRECTION WHERE TEMPORARY STATION FOR SEPARATION STATION IS LOCATED) IS MOSTLY EXCAVATED. THIS SAME AREA COULD BE USED FOR PILING AND STAGING.

4. Anticipated Problems & Resolution Options

BACKHOE WILL BE USED IN TWO DIFFERENT AREAS TO ALLOW EFFICIENT OF OPERATION OF EXCAVATING UNDERBURDEN, SEPERATE IT OUT IF REQUIRED FOR PILING, & ONCE IT IS FULLY EXCAVATED, OVERBURDEN WHILE EXCAVATING ADJOINING AREA COULD BE THROWN DIRECTLY INTO THE TOTAL DUST EXCAVATED TRENCH.

5. Significant Deviations from Closure Plan

—

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LEE DUDEK	37	48
GILDARDO CELFIDO	8	40
BURT CELFIDO	6	40
FRED POLLOCK	37	48
Totals	88	176

Other Direct Costs: (please specify) RECEIPTS MONTHLY EXPENSE SHEET	Total Cost This Period
o Travel, Meals	
o Miscellaneous Equipment	
o Other	
Total	

7. General Comments

—

NUS Field Representative

(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: COOL, RAIN (DRIZZLE), 66°F CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-21-'85

1. Personnel/Equipment On Site

LEE DUDEK MITSUBISHI MODEL 250 (4 1/2 HRS.)

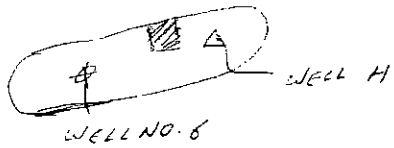
GILDARDO CELSIDO FIAT-ALLIS FR35 (8 HRS.)

BURT CELSIDO FIAT-ALLIS 645 (3 HRS.)

GENNY MITCHELL SEPARATING STATION (3 HRS.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished WORKED - EXCAVATE OVERBURDEN IN THE AREA CONTAINING NO. 6 & WELL H, NEARER TO WELL H

PILES CONTAINING ECE. DUST WERE SPREAD OUT TO [illegible] ALSO, SPREAD OUT & DRY OVERBURDEN CONTAINING ECE. DUST WERE [illegible] THRU SEPARATING STATION.

4. Samples Collected and Deposition

- N/A -

5. Problems Encountered and Resolution

THE VIBRATORY FEEDER ECCENTRIC MOUNTON DRIVE WAS COLLAPSED. A NEW RUBBER BUSHING (4 TOTAL) WERE INSTALLED. THE BACKHOE WAS USED FOR 4 1/2 HRS. LEE DUDEK LATER USED HIS TIME TO FIX RUBBER BUSHING ON THE VIBRATORY FEEDER.

6. General Comments:

- N/A -

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny, 89°F

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 4-20-'85

1. Personnel/Equipment On Site

LEE DUDEK MITSUBISHI MODEL 280 (8 HRS)

GILDARDO SALCIDO FIAT-ALLIS FR645 (2 HRS)

FRED POLLOCK FIAT-ALLIS FR35 (8 HRS)

BENNY MITCHELL SEPARATING STATION (2 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished TRENCH EXCAVATION IN THE AREA CONTAINING WELL NO. 6 AND WELL H. THE CROSS SECTION SHOWS SCATTERED TRACES OF FURNACE DUST. AN ATTEMPT WAS MADE TO SPOT IT & PILE IT SEPARATE WHEN SPOTTED.

FRONT END LOADER WAS USED TO EXCAVATE UNDERBURDEN.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

AN ATTEMPT WAS MADE TO USE REPLACEMENT FOR BLOWER. THE UNIT RAN FOR A WHILE AND GAVE UP ON IT. NEW BLOWERS WERE ORDERED.

6. General Comments:

—

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 59°F, CLOUDY, COOL

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9/19/85

1. Personnel/Equipment On Site

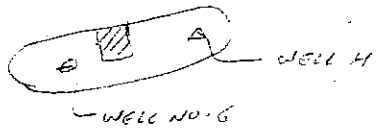
LEE DUDEK - MINNEAPOLIS MODEL MS280

FRED POLLOCK - FIAT-ALLIS FR 35

BURT CELSTO - 1 TRUCK

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished FURTHER EXCAVATION IN THE AREA CONTAINING WELL NO. 6 AND WELL H, MORE ELECTRIC FURNACE BAGS WERE FOUND IN THIS AREA ALSO.

FRONT END LOADER WAS USED TO EXCAVATE UNDERBURDEN IN THIS AREA.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE OLD MOTOR ON FEEDER WAS REPLACED WITH NEW MOTOR. IT WAS FELT THAT THE VIBRATORY FEEDER PAN WAS RUNNING EARTH. THE ECCENTRIC SHAFT BUSHING & COLLAR WERE BROKEN.

6. General Comments:

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny, High 82°F

Windy

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9/18/85

1. Personnel/Equipment On Site

Les Dudek Mitshubishi Model MS280

Fred Pollock Fiat-Allis FR35

Gildardo Salcido Seperating Unit

2. Visitors (Name/Affiliation/Nature)

Ed Baer - NUS

George Gardener - NUS

Jerry Jezlich - Rooks, Pitts & Poust

Clifton A. Lake - Rooks, Pitts & Poust

Nancy Wise - Ceco Corp.

Lawrence W. Eacker - EPA (Springfield office)

Charles Beal - EPA (Springfield office)

3. Work Accomplished REPRESENTATIVES FROM EPA, NUS, SECO, POWER, [illegible] & POUS VISITED THE SITE FOR INSPECTING MODE OF ACTIVITIES & OPERATIONS FOR THE SITE CLOSURE PLAN.

4. Samples Collected and Deposition

DRY SPREAD OUT FCE. DUST SAMPLE & THE FINEST 1/4" SCREEN DUST SAMPLES WERE COLLECTED FOR BILL [illegible].

5. Problems Encountered and Resolution

THE MOTOR FOR VIBRATORY FEEDER WAS BURNED OUT. THE REPLACEMENT WAS NECESSARY.

6. General Comments: EPA QUESTIONS ABOUT [illegible] OF DIRT BEING REMOVED. THE CLOSURE PLAN MENTIONED BLACK DIRT, BUT THE FCE. DUST ACTUALLY LOOK BROWN (EVEN IN THE GROUND - UNDER BURDEN -). THIS DESCREPANCY WAS POINTED OUT.

[signature]
NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny Cloudy [illegible]

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-17-'85

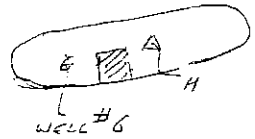
1. Personnel/Equipment On Site

Les Dutra ~~3H~~ Koehring Backhoe (5 hrs.)

Fred Pollock Gay Polk FR35 (5 hrs.)

2. Visitors (Name/Affiliation/Nature)

N/A



3. Work Accomplished Lee DUDEK/W KOEHRING BACKHOE EXCAVATED IN THE AREA CONTAINING WELL NO. 6 AND WELL H, OVERBURDEN CONTAINED BUNDLES OF ELECTRIC FURNACE DUST COLLECTOR BAGS. THE DENSED OVERBURDEN CONTAINING BUNDLES OF FURNACE DUST BAGS WAS ALSO RAN THR' SEPARATION PROCESS AREA.

FRED POLLOCK/W FRONT END LOADER WAS USED TO SPREAD THE BAD MATERIAL CONTAINING FURNACE DUST TO HAVE IT DRIER AND WELL AIRY.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BACKHOE MALFUNCTION PREVENTED BACKHOE FROM ROTATING FOR MATERIAL DIGGING AND SWINGING.

6. General Comments:

NUS, CECO, EPA & ROOKS PITTS & POUST WOULD BE HERE ON SITE TO-MORROW FOR FIELD VISIT.

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny, cloudy 75°F CECO PO NO. 75-5-G0006

Light wind NUS PROJECT NO. U495

Date: 7-16-85

1. Personnel/Equipment On Site

Les Dudek - [illegible] (8 hrs.)

Fred Pollock - Fiat-Allis FR[illegible] (8 hrs.)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished AREA CONTAINING NO. 6 & WELL H, OVERBURDEN EXCAVATION NEAR V TRENCH CUT TO FACILITATE UNDERGROUND EXCAVATION.

FRONT END LOADER WAS USED TO EXCAVATE UNDERGROUND, MOVE BIG ROCKS AWAY FROM THE IT FEED HOPPER.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

N/A

6. General Comments:

—

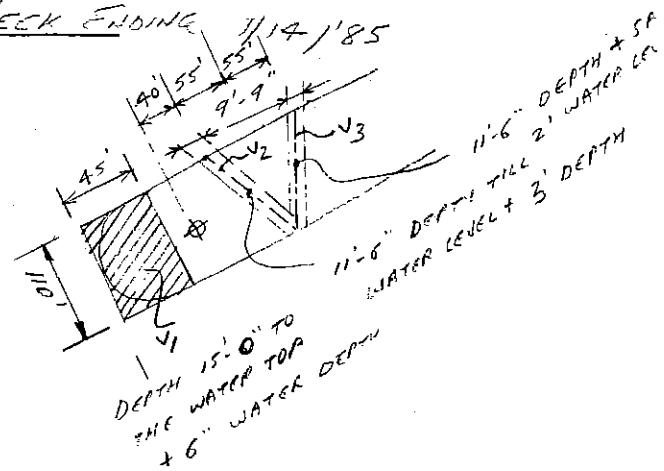
NUS Field Representative

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: WEEK ENDING 7/14/85

1. Work Accomplished



Estimated volume of excavation:

$V_1 = 110 \times 45 \times 15.5/27 = 2841$ CU. YDS.

$V_2 = 125 \times 9.75 \times 14.5/27 = 654$ CU. YDS.

$V_3 = 125 \times 9.75 \times 13.5/27 = 609$ CU. YDS.

TOTAL $= V_1 + V_2 + V_3 = 4104$ CU. YDS.

Estimated volume of excavated material placed in separation process:

— (1100 CU. YDS. BAD MATERIAL WAS PILED AND SPREAD OUT IN OPEN AREA TO GET IT DRIED. THIS MATERIAL WAS SPREAD OUT THREE TIMES TO SPEED UP DRYING).

Estimated volume of processed material resulting in disposable waste:

—

Volume of resultant waste material transported offsite for disposal: (from manifests)

—

Other:

—

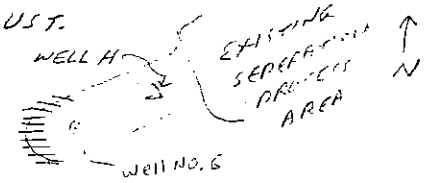
Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOMATSU BACKHOE	37 1/2 HRS.
FIAT ALLIS FR35	2 HRS.
TRUCKS	17 HRS.
SEPARATION PROCESS PLANT	— NIL —

7/19/85

2. Problems Encountered and Resolution

THE OVERBURDEN WAS EXCAVATED AND IT WAS FOUND THAT THE NORTHWEST CORNER OF THE PROPOSED EXCAVATION AREA CONTAINING B.M. FOR WELL NO. 6 AND WELL H, CONTAINED LAYERS OF FURNACE DUST.



USE OF BACKHOE PERMITTED QUICKER EXCAVATION, BUT WHEN THE FCE. DUST WAS EXCAVATED, IT GETS MIXED WITH OTHER MATERIALS LIKE MILL SCALE, DEBRIS, LIME STONE, ETC. THE EXCAVATED MIXED FURNACE DUST WAS PILED & THEN WAS LAID OUT IN THIN LAYERS OF ABOUT 6" TO 8". THIS WOULD HELP IT TO DRY IT & TO EVENTUALLY COULD BE RUN DRY THROUGH THE SEPERATION PROCESS AREA.

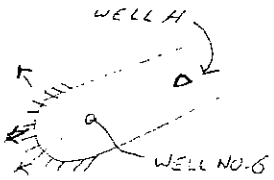
3. Projected Work Next Week (Describe briefly)

CONTINUATION TO NORTHEAST AREA

4. Anticipated Problems & Resolution Options

THE EXCAVATED MATERIAL THAT CONTAINS FURNACE DUST MIXED WITH OTHER DEBRIS LEFT EXPOSED IN PILE & WAS LATER SPREAD OUT TO HAVE MORE EXPOSURE FOR DRYING. TEST RUNS WILL BE MADE NEXT WEEK TO SEE THE RESULTS OF THE DRY RUN. IF THAT DOES NOT GIVE SATISFACTORY RESULTS, THEN MAY BE SOME DRYING MATERIAL MAY BE MIXED WITH IT.

5. Significant Deviations from Closure Plan



FURTHER EXCAVATION IS ANTICIPATED IN THE DIRECTION OF ARROWS A. THE EXCAVATION AT THE PROPOSED BOUNDRY AS SHOWN IN THE GENERAL SITE PLAN STILL SHOWS & INDICATES PRESENCE OF FURNACE DUST. C. AN ATTEMPT HAS TO BE MADE TO EXCAVATE FURTHER TILL ALL FURNACE DUST IS OUT.

3. Work Accomplished

WELL NO. 3, 4 WERE BACKFILLED. V- TRENCH DIGGING CONTINUED. WELL 6 AREA WIDENED & A ROADWAY WAS MADE TO HAVE ACCESS FOR FRONT END LOADER TO SCOOP THE VOLUME OF DIRT CONTAINING FURNACE DUST OUT IN PILES.

4. Samples Collected and Deposition

SAMPLES - WET FOUNDRY DUST WAS COLLECTED.

5. Problems Encountered and Resolution

THE COVER PLATE HOLDING THE WHEEL WAS TORN OUT, WHICH WAS FIXED BY THE SERVICE DEPARTMENT

6. General Comments:

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY 75°F

LIGHT WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 7-13-85

1. Personnel/Equipment On Site

[illegible] [illegible] [illegible]

[illegible] [illegible] [illegible]

2. Visitors (Name/Affiliation/Nature)

—

3. Work Accomplished

FURTHER EXCAVATION OF NO. 6, WELL H AREA. [illegible] TRENCH WAS EXCAVATED TO FURTHER INVESTIGATE THE SPREAD OF FURNACE DUST.

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny & Cool, High [illegible] 48°F in [illegible]. 50 % Humidity, Wind NE @ 5

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-11-85

1. Personnel/Equipment On Site

Les Dudek Backhoe

G. Dardo Salerno Fiat-Allis FR35

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

WORKED ON [illegible] ARTIFICIAL EXCAVATION.

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 74°F CLOUDY

[illegible] WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-10-'85

1. Personnel/Equipment On Site

[illegible] DUDEK KOCHKING [illegible]

GILDARDO SALCIDO [illegible]

[illegible]

2. Visitors (Name/Affiliation/Nature)

—

3. Work Accomplished

MOVED PILES OF SCRAP [illegible] CONTAINING WELL NO. 6 [illegible] OUT OF THE WAY TO [illegible] AREA. MOVE TO WAT N IN THE CORNER OF NORTHWEST [illegible] LOT NEXT TO SEPARATION PROCESS AREA. [illegible] PILES SPREAD AROUND IN [illegible]

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

—

6. General Comments:

—

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: 76°F, CLOUDY

[illegible] HUMIDITY - [illegible] WIND @ 9 MPH

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-9-85

1. Personnel/Equipment On Site

[illegible] DUDEK [illegible]

2. Visitors (Name/Affiliation/Nature)

BILL ALBRECHT - CECO

3. Work Accomplished

STARTED & WORKED @ NW EXCAVATION AREA HAVING WELL NO. 6 & WELL H.

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

A TRENCH WAS EXCAVATED @ SOUTH CORNER ABOUT 15' LONG ALL THE WAY TILL HITTING THE TOP OF BED ROCK. ALSO, A TRENCH @ NORTH END OF THIS CORNER WAS TRENCHED OUT & FOUND THAT THERE WAS FURNACE DUST PRESENT IN LAYERS.

6. General Comments:

[signature]
NUS Field Representative

WEEKLY PROGRESS REPORT
NUS CORPORATION
DUDEK SITE CLOSURE

CECO PO NO. 75-5-G0006 NUS PROJECT NO. U495

REPORTING PERIOD: WEEK ENDING 9/7/85

1. Work Accomplished

Estimated volume of excavation:

WELL NO. 4, 3, 9, 14 & 7 WERE ALL EXCAVATED. NO VISIBLE TRACE OF FURNACE DUST.

1,550 CU. YDS (541.14 + 541.14 + 156 + 156 + 156)
#4 WELL #3 WELL NO. 9 WELL NO. 14 WELL NO. 7 WELL

Estimated volume of excavated material placed in separation process:

— (NIL, THE MATERIAL EXVATED DOES NOT CONTAIN ANY VISIBLE TRACE SIGNS OF FURNACE DUST)

Estimated volume of processed material resulting in disposable waste:

— (N/A)

Volume of resultant waste material transported offsite for disposal: (from manifests)

— (N/A)

Other:

THE EXCAVATED MATERIAL WILL BE BACKFILLED FOR WELL #1, 4, 9, 7 & 1 LATER.

Subcontractor equipment hours in operation, by equipment type:

Equipment	Operational Hours
KOEHRING BACKHOE	29 1/2 HRS.
FIAT-ALLIS FR35	32 HRS.
TRUCKS (5 TRUCKS)	10 HRS. (TOTAL)
SEPARATION PROCESS PLANT	— NIL —

2. Problems Encountered and Resolution

THE TEETH ON BACK-HOE KEPT COMING OUT. THE BACK-HOE BUCKET STARTED GETTING SHEARED. THE ACTUATING CYLINDER FOR BUCKET STARTED LEAKING BADLY. THE BUCKET AND ACTUATING CYLINDER BOTH WERE REPLACED.

FRONT END LOADER - HYDRAULIC LINE BROKE AND WAS REPLACED.

3. Projected Work Next Week (Describe briefly)

THE NORTHWEST SEGMENT OF AREA CONTAINING WELL NO. 6 & WELL H WILL BE EXCAVATED.

4. Anticipated Problems & Resolution Options

WELL NO. 4 AND WELL NO. 3 - THIS AREA FOR EXCAVATION WAS VERY HARD TO EXCAVATED AS IT CONTAINED PRIMARILY CLAY.

5. Significant Deviations from Closure Plan

MONITORING WELLS NO. 4 & NO. 3 WERE EXCAVATED HAVING 70'X70' OPENING ON TOP AT THE GROUND ELEVATION AND 10' SQ. SECTION WAS EXCAVATED AT THE TOP OF THE BED ROCK. USING BACKHOE FOR ENTIRE OPERATION OF EXCAVATION - THE DUG MATERIAL GETS MIXED. THERE WAS NO TRACE OF FURNACE DUST FOR NO. 4 & NO. 3 MONITORING WELL. THE ATTEMPT WAS MADE TO TRENCH OUT THE AREA FOR WELL NO. 1, 2 & 7 TILL IT IS EXCAVATED TO THE TOP OF THE BEDROCK. THE TRENCHING EXCAVATION YIELDS IN CLEAR CUT CROSS SECTION OF SOILS UNDERNEATH THE GROUND LEVEL.

7/7/85

6. Manhours

Personnel	Hours This Period	Projected Hours Next Week
LES DUDEK	29 1/2	40
FRED POLLOCK	32	40
Totals	64	80

Other Direct Costs: (please specify)-	Ref. Monthly Expense Sht.	Total Cost This Period
o Travel, Meals		
o Miscellaneous Equipment		
o Other		
Total		

7. General Comments A THROUGHOUT THE WEEK, THE WEATHER WAS VERY NICE, ON WARM SIDE.

B WELLS WERE CHOSEN FOR BEGINING OF THE EXPLORATION FOR THE CONVINIENCE OF THE ESTABLISHMENT OF THE FEEL OF THE JOB.

C THE FRONT END PRIMARILY WAS USED TO CLEAN UP THE AREA SHOWN ON MAP & TO MOVE THINGS IN THE WAY TO BE OUT.

[signature]
NUS Field Representative

9-7-85
(Date)

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: [illegible] CECO PO NO. 75-5-G0006

[illegible] NUS PROJECT NO. U495

Date: [illegible]

1. Personnel/Equipment On Site

Les Dudek Roofing Foreman (8 HRS)

Fred [illegible] Fire Alls [illegible] (8 HRS)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished NO. 14 & NO. 7 WELL WERE BOTH TRENCHED OUT.

Volume Trenched @ WELL NO. 7, Assuming Cone w/45° SIDES.

P=100' D=31.8' (MEASURED) Vol. of cone = $0.2618(31.8)^2(31.8/2) \times \frac{1}{27}$

≈ 156 CU. YDS.

4. Samples Collected and Deposition

NONE

5. Problems Encountered and Resolution

THERE WAS NO VISIBLE BENCH MARK PT. FOR WELL NO. 14. THE MEASUREMENTS WERE TAKEN USING OTHER REFERENCE POINT WELL NO. 4 AND WELL NO. 6 TO SPOT THE LOCATION OF WELL NO. 14. THE PVC PIPE WAS NOT FOUND WHILE EXCAVATING BUT THE EXISTING BORED HOLE WAS MATCHING THE LOCATION OF THE WELL NO. 14.

6. General Comments:

THE EXCAVATION WAS SOFT COMPARED TO THE EXCAVATION DONE FOR WELL NO. 4 & WELL NO. 3. THE WELL NO. 7 EXCAVATION PRIMARILY CONSISTED OF RUBBISH, DIRT, STONES, ETC. THE WATER LEVEL HIT WHILE DIGGING AT ABOUT 10' ELEVATION DIFF. FROM THAT OF GROUND LEVEL.

NUS Field Representative

WATER LEVEL HIT @ 12' DEPTH FOR NO. 14 WELL (FROM GROUND ELEVATION.).

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY 80°F

[illegible] WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-5-85

1. Personnel/Equipment On Site

LES DUDEK [illegible] (5½ HR.)

FRED POLLOCK [illegible]

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

WELL NO. 9 WAS TRENCHED OUT. ALL THE WAY TILL 10'x10' [illegible] FOR [illegible] TOP WAS HIT. THE GROUND [illegible] WAS SOFT [illegible] TO THE WELL NO. 3 & WELL NO. 4

4. Samples Collected and Deposition

—

5. Problems Encountered and Resolution

THE BUCKET & ASTURTING CYLINDER WAS [illegible].

6. General Comments:

WATER LEVEL HIT @ 12'-6' DEPTH FROM LEVEL GROUND FOR NO. 9 WELL.

[signature]
NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: Sunny [illegible]

Light Wind

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: [illegible]

1. Personnel/Equipment On Site

Les Dudek Kochanek Backhoe (8 hrs)

Fred Pollock Fiat-Allis [illegible] (8 hrs)

2. Visitors (Name/Affiliation/Nature)

N/A

3. Work Accomplished

WELL NO. 3 WAS EXCAVATED. MOSTLY COMPACT FILLED WITH SLAG.

4. Samples Collected and Deposition

N/A

5. Problems Encountered and Resolution

THE BUCKET STARTED GETTING SHEARED. THE ROTATING CYLINDER FOR BACKHOE STARTED LEAKING.

6. General Comments:

FOR WELL #3:
7' DRY DEPTH + 5' STAGNANT WATER DEPTH = 12' TOTAL DEPTH FROM TOP OF BEDROCK TO GROUND LEVEL

NUS Field Representative

DAILY FIELD LOG
NUS CORPORATION
DUDEK SITE CLOSURE

WEATHER: SUNNY. 78°F.
LIGHT WIND

CECO PO NO. 75-5-G0006

NUS PROJECT NO. U495

Date: 9-3-'85

1. Personnel/Equipment On Site

LES DUDEK — KICKING BACKHOE (8 HRS)
FRED POLLOCK — FIAT ALLIS FR15 (8 HRS.)

2. Visitors (Name/Affiliation/Nature)

BILL ALBRECHT — CECO CORP.