### JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE Blow P.O. BOX 507 **DULCE, NEW MEXICO 87528**

AND OIL & GAS ADMINISTRATION

# PIT REMEDIATION AND CLOSURE REPORT

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	চ্যাত্তীত তী Telephone: (505) 326-9200
Operator: AMOCO PRODUCTION COMPANY	many promotes and the second s
Farmington, N	M 87401
JICARILLA CON	TRACT # 141-1
Lacation: Unit or Otr/Otr Sec A Sec 8 T25	RSW County KIO PACKETON
D. Luduston Other	BLOW
Pit Type: Separator Denydrator Ones Land Type:	
Land Type: KHNGE	
PH LARALIVAL	46', width50', depth14'
(Attach diagram)  Reference: wellhead X,	other
Factors from reference: 37	~
Direction from reference: 6	Degrees least North
	West South
and a shorten	Less than 50 feet (20 points)
Depth To Groundwater: (Vertical distance from	50 feet to 99 feet (10 points) Greater than 100 feet (0 points)
contaminants to seasonal high water elevation of	
groundwater)  Distance to an Ephemeral Stream	Less than 100 feet (10 points)  Greater than 100 feet (0 points)
(Downgradient dry wash greater man	Greater than 100 feet (0 points)
ten feet in width)  Distance to Nearest Lake, Playa, or Watering Pond	Less than 100 feet (10 points) Greater than 100 feet (0 points)
(Downgradient lakes, playas and livestock or wildlife watering ponds)	Greater than 100 feet ( 5 1 - 7 )
Wellhead Protection Area:	Yes (20 points) No (0 points)
(Less than 200 feet from a private	
1000 feet from all other water sources)	Less than 100 feet (20 points)
Distance To SurfaceWater: (Horizontal distance to perennial	100 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)
lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	
	RANKING SCORE (TOTAL POINTS):

		BJGC7 DULL
		Date Completed:9/7/98
emediation Star emediation Method: heck all appropriate ections)	Excavation	Approx. cubic yards600
Remediation Location: i.e. landfarmed onsite, name and location of offsite facility) General Description of	Onsite X Offsite	ation. BEDROCK Bonom.
Groundwater Encount	ered: No <u>X</u> Ye	es Depth
Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)	Sample date9/7/98  Sample Results  Soil: Benzene (protal BTEX (protal Headspace (protal TPH (protal PTPH)))	Sample time   O830   O830
Groundwater Sample		ABOVE IS TRUE AND COMPLETE TO THE BEST OF M
KNOWLEGE AND I		ren NAME Buddy D. Shaw
AFTER REVIEW OF TO THE JICARILL	The pit closure inform A apache tribe pit closi	D TITLE Environmental Coordinator  MATION, PIT CLOSURE IS APPROVED IN ACCORDANG  URE ORDINANCE.
APPROVED: YES		DATE:

3003906/21 LOCATION NO: BJ674 BLAGG ENGINEERING, INC. CLIENT: AMOCO P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: \_\_\_\_\_ (505) 632-1199 FIELD REPORT: CLOSURE VERIFICATION PAGE No: \_\_\_\_ of \_\_\_\_ DATE STARTED: 9/7/98 LOCATION: NAMEJICA, COSTR. 147 WELL #: / PIT: BLOW DATE FINISHED: TWP: ZSN RNG: SW PMWM CNTY: RA ST: NM ENVIRONMENTAL QUAD/UNIT: A SEC: 8 SPECIALIST: \_\_\_NJ OTR/FOOTAGE: 870 FWL (790 FEL CONTRACTOR: P 4-5 EXCAVATION APPROX. 46 FT. x 50 FT. x 14 FT. DEEP. CUBIC YARDAGE: 600 DISPOSAL FACILITY: 0N-51TE REMEDIATION METHOD: LANDFARM FORMATION: OR LAND USE: RANGE LEASE: TIC 147 FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 372 FT. NOTE FROM WELLHEAD. DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >100 NEAREST SURFACE WATER CHECK DNE NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM ✓\_PIT ABANDONED \_\_\_\_ STEEL TANK INSTALLED SOIL AND EXCAVATION DESCRIPTION: \_\_ FIBERGLASS TANK INSTALLED TIDEWALLS - VERY PARE ORANGE TO DK. YELL, BROWN THAN PHASING INTO MOD, RED SHOLE NOW COHESIVE TO HARD, SLIGHTLY MOIST TO DRY NO APPARENT STAINING OR HC ODOR OBSERVED) DETECTED WIND EXCAUATION, NO APPARENT HE ODOR IN ANY OF THE DUM SAMPLES. BOTTOM - BEDROCK (SHINE), MOD RED IN COLOR, VERY HARD, NO APPARENT HO DOUR IN DUM SAMPLE. CLOSED BEDROCK FIELD 418.1 CALCULATIONS SAMPLE I.D. LAB No: WEIGHT (g) ml. FREON DILUTION READING CALC. ppm BOTTOM TIME 20 1:1 20 0e9' TPH - 2030 0830 SCALE FT PROFILE PIT PERIMETER IN A OVM 50° FLORE OIRECTION A RESULTS FIELD HEADSPACE PID (ppm) SAMPLE 0.0 0.0 0.0 0.0 0.0 らまひとうこく 3 501 (sh) HEAL WELL LAB SAMPLES TIME ANALYSIS 46' \_\_\_\_ ONSITE: 9/7/98-MORN.

TRAVEL NOTES:

CALLOUT: \_\_\_\_\_

### BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413 Phone: (505)632-1199 Fax: (505)632-3903

### FIELD MODIFIED EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:

Amoco

Sample ID:

1 @ 9'

Project Location: Laboratory Number:

Jicarilla Contract # 147 - 1

TPH-2030

Project #:

Date Analyzed: Date Reported: 09-07-98 09 - 07 - 98

Sample Matrix:

Soil

%

\*Diff.

\_\_\_\_ 7.02

Parameter	Result, mg/kg	Detection Limit, mg/kg 
Total Recoverable Petroleum Hydrocarbons	ND	20

ND = Not Detectable at stated detection limits.

OA/QC:

Duplicate QA/QC Sample TPH mg/kg TPH mg/kg 220 236

Method:

Modified Method 418.1, Petroleum Hydrocarbons, Total

Recoverable, Chemical Analysis of Water and Waste,

USEPA Storet No.4551, 1978

Comments:

Blow Pit - BJ624

<sup>\*</sup>Administrative Acceptance limits set at 30%.

### BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413 Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Client: Amoco Project #:

Sample ID: Date Analyzed: 09-07-98
Project Location: Jicarilla Contract # 147 - 1
Date Reported: 09-07-98
Soil

Laboratory Number: TPH-2030 Sample Matrix: Soil

Sample Weight: 5.00 grams Volume Freon: 20.00 mL

Dilution Factor:

TPH Reading:

1 (unitless)
4 mg/kg

TPH Result:

Reported TPH Result:

Actual Detection Limit:

Reported Detection Limit:

16.0 mg/kg

16 mg/kg

20.0 mg/kg

QA/QC: Original Duplicate %
TPH mg/kg TPH mg/kg Diff.
----- 236 220 7.02

Comments: Blow Pit - BJ624

# JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE P.O. BOX 507 DULCE, NEW MEXICO 87528

87624 SUBMIT 1 COPY TO

NATURAL RESOURCE DEPT

AND OIL & GAS ADMINISTRATION

# PIT REMEDIATION AND CLOSURE REPORT

		(505) 226 0200
Operator: AMOCO PRODUCTION COMPANY	Telephone:	(505)326-9200
Address: 200 Amoco Court, Farmington,	NM 87401	
Facility or Well Name: TICANILA CONTI	2ACT # 147-1	
Location: Unit or Qtr/Qtr Sec_A Sec_8 T3	25N R SW County R10	ARRIBA
N. D. Leston Other		
	•	
Danie Type.		
Pit Location: Pit dimensions: length	37', width_30'	, depth
	other	
Footage from reference:	83'	
Direction from reference:	33 Degrees X East	North <u>×</u>
	West	
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) ( 0 points)
proundwater)  Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet Greater than 100 feet	(10 points) (0 points)
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet Greater than 100 feet	(10 points) ( 0 points)
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources)	Yes No	(20 points) S
Distance To SurfaceWater: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) ( 0 points)
	RANKING SCORE (TOTAL	L POINTS):

		rt 624 Sef	P. PIT
Date Remediation State  'emediation Method:  'heck all appropriate sections)	Excavation X  Landfarmed X	Date Completed:Approx. cubic yards Insitu Bioremediation	9/10/98
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)  General Description	: Onsite X Offsit	ecavation, выпоск вото	
Groundwater Encoun	tered: No 🔀	Yes Depth	
Final Pit: Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)	Sample date 977  Sample Results  Soil: Benzene  Total BTEX	(ppm) 2.710 Water: Ber (ppm) 38.060 Tole (ppm) 539 Eth	nzene (ppb) uene (ppb) nylbenzene (ppb) al Xylenes (ppb)
Groundwater Sample		(If yes, attach sample re-	
DATE SIGNATURE SIGNATURE AFTER REVIEW OF THE JICARILLA	PI 10 98 PI PLY D. Shaw THE PIT CLOSURE INFO A APACHE TRIBE PIT CL	N)	aw al Coordinator PROVED IN ACCORDANCE
SIGNED:	1 Many	DATE: 10-1-98	

	<del></del>			·
CLIENT: AMOCO	PA ROX 87.	ENGINEERING, I BLOOMFIELD, N	INC. IM 87413	C.O.C. NO: 6/96
	(50	5) 632-1199		
FIELD REPOR	RT: CLOSU	RE VERIFIC	CATION	PAGE No: of
LOCATION: NAME THE	COTE 147 WELL	#:   PIT: 5	EP	DATE STARTED: 9/7/98 DATE FINISHED:
QUAD/UNIT: A SEC: 8	TWP: ZSA RNG: S	W PM: NM CNTY	:RA ST:NM	ENVIRONMENTAL SPECIALIST: NV
THE WARRION ADDROV 3	7 FT x 30 F	T. x/S FT. DE	EP. CUBIC	YARDAGE: 500
The state of the s	0 N- 5174	REMEDIAT	ION METHO	D. DINDIMOT
LAND USE: KANGE	E LEAS	E:		
FIELD NOTES & REMA	RKS: PIT LOCATEI	APPROXIMATELY,	183 FT1	FROM WELLHEAD
DEPTH TO GROUNDWATER: 3/0	NEAREST WATER S	DURCE:	VERKES! SURTE	CHECK ONE : PIT ABANDONED
NMOOD RANKING SCORE	NMOCU IPH CLUSON  ON DESCRIPTION:	4E 21D:		STEEL TANK INSTALLED
				_ FIBERGLASS TANK INSTALLED
SIDEURUS - (TOP HI	ty moist firm.	ROUSE TO DK. TO (ROTTOM HALF) DK.	erc. Brown Yeur. Depth	TOULD WAS CONTESIVE, TO MAD BROWN TO APPRICENT STRINING TO OPOR COULD GRAY SOUD)
CLAY	PLASTIC SLIGHTLY ODOR OBSERVED	MORST STIFF TO U	ery stiff.	no appricent stringe strong he odor
JETEC	JED IN LORTH SI	DÉWAL OUM SAI	mple only	(olive GRAY SAND).
070/	OCK (SHALE) in	ODERATE RED 11	ر جدیدے ر	VERY HARD, NO
ROMOM - BEDIO	UENT HC ODOR	IN DUM SAMI	E.	
BEN JER COSE	TIME SAMPLE I.D	FIELD 418.1 C	ALCULATIONS  ) ml. FREON I	DILUTION READING CALC. ppm
SCALE	TIME SAME			
O FT				
	METER AN		PIÌ	PROFILE
		OVM RESULTS		, l
5		APLE FIELD HEADSPACE PID (ppm)  10 539	A	30' A'
1 A	_ T 1 @	10'   537		
	20	9' 0.0	<u> </u>	·
	3 0 3 0 4 0	9' 0.0 8' 0.0 9' 3.4		Tis'
9 3	30 30	9' 0.0	7	BEDROCK [15'
9 3	3 0 3 0 4 0	9' 0.0 8' 0.0 9' 3.4	7	BEDROCK (sh)
Automation ARE	3 0 3 0 4 0	9' 0.0 8' 0.0 9' 3.4	7	BEDROCK (Sh)
Automatical 7 BE	30 3 @ 4 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 & 5 & 5 & 5 & 5	9' 0.0 8' 0.0 9' 3.4' 15' 0.0	7	BEDROCK (Sh)
Automatigod	30 3 @ 4 @ 5 @ 5 @ 5 @ 6 @ 6 @ 6 @ 6 @ 6 @ 6 @ 6	LAB SAMPLES  LE ANALYSIS TIME	777	BEDROCK (Sh)
ANTOMOTION TO BE	30 3 @ 4 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5	LAB SAMPLES  LE ANALYSIS TIME	7	BEDROCK (Sh)
ANTOMOTION TO BE	30 3 @ 4 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5 @ 5	LAB SAMPLES  LE AMALYSIS TIME  LD' THI STEX 1000	9/7/98	BEDROCK (Sh)



### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

		oncentration	Det. Limit (mg/Kg)
Chain of Custody No: Sample Matrix: Preservative: Condition:	6196 Soil Cool Cool and Intact	Date Received: Date Extracted: Date Analyzed: Analysis Requested:	09-08-98 09-10-98 09-10-98 8015 TPH
Client: Sample ID: Laboratory Number:	Blagg / AMOCO 1 @ 10' D907	Project #: Date Reported: Date Sampled:	04034-10 09-10-98 09-07-98

Parameter	oncentration (mg/Kg)	Limit (mg/Kg)
Gasoline Range (C5 - C10)	1,770	0.2
Diesel Range (C10 - C28)	351	0.1
Total Petroleum Hydrocarbons	2,120	0.2

ND - Parameter not detected at the stated detection limit.

References:

Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments:

Jicarilla Contract #147 - 1 Separator Pit.

Analyst

Stacy W Sendler



## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client: Sample ID: Laboratory Number: Chain of Custody: Sample Matrix: Preservative: Condition:	Blagg / AMOCO 1 @ 10' D907 6196 Soil Cool Cool & Intact	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Date Extracted: Analysis Requested:	04034-10 09-10-98 09-07-98 09-08-98 09-10-98 09-10-98 BTEX
---	---	---	--

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene	2,710 7,300 6,880 13,610 7,560	8.8 8.4 7.6 10.8 5.2
Total BTEX	38,060	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recov	rery
	Trifluorotoluene	99	%
	Bromofluorobenzene	99	%

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846,

USEPA, December 1996.

Comments:

Jicarilla Contract #147 - 1 Separator Pit.

Dece R. Gercen

Stacy W Sendler
Review

# CHAIN OF CUSTODY RECORD

	<u> </u>	Cool - Ice/Blue Ice	0615	Farmington, New Mexico (505) 632-0615				
	J	Received Intact		5796 U.S. Highway 64				
N NA	~							
	eceipt	Sample Receipt		FOVIDOTFCH		620	- 9619	5000
			Received by: (Signature)	Recei			nature)	Relinquished by: (Signature)
			Received by: (Signature)				nature)	Relinquished by: (Signature)
Date Time 9.β.9β 1455	Date . ρ. 9ρ	5.6	Received by: (Signature)	Date Time Receive			nature)	Relinquished by (Signature)
								-
2001	1	PRESERV.	\ < <	2012	4064	1000	9/7/98	0 & 10'
				Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./
			ntained of the state of the sta	-10	45020			REN
	Remarks	Ren	<u>)</u>		Client No.			Sampler:
				CONTRACT #147-1	JICARI LUA CO		Amoco	BAGG/
		METERS	ANALYSIS / PARAMETERS	SEPARATOR PIT	Project Location			Client / Project Name

# JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE P.O. BOX 507 DULCE, NEW MEXICO 87528

SUBMIT 1 COPY TO

NATURAL RESOURCE DEP1

AND OIL & GAS ADMINISTRATION

### **ON-SITE SOIL REMEDIATION REPORT**

Operator: AMOCO PRODUCTION	COMPANY	Telephone: (505) 326-9200									
Address: 200 Amoco Court,	Farmington,	NM 87401									
Facility or Well Name: SICABILLA	CONTRACT 14	47 - 1									
Location: Unit or Qtr/Qtr Sec A	Sec T_2	EN REW County PIO ARRIBA									
Land Type: RANGE											
Date Remediation Started: 9798 Date Completed: 5/12/99											
Remediation Method: Landfarmed		Approx. cubic yards /100									
Composted											
Other											
epth To Groundwater:	(pts.)	Final Closure Sampling:									
Distance to an Ephemeral Stream	(pts.)	Sampling Date: <u>5.11.99</u> Time: <u>0930</u>									
Distance to Nearest Lake, Playa, or Watering Pond	(pts.)	Sample Results:  Field Headspace (ppm) 4.3									
Wellhead Protection Area:	(pts.)	TPH (ppm) Z.4 Method (8015)									
Distance To SurfaceWater:	(pts.)	Other									
RANKING SCORE (TOTAL POIN											
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEGE AND BELIEF											
DATE 5/12/99 , PRINTED NAME Buddy D. Shaw											
SIGNATURE Bully J. Show AND TITLE Environmental Coordinator											
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.											
APPROVED: YES NO (REASON)											
SIGNED:	DATE										

BLAGG ENGINEERING, INC. CLIENT AMOCO LOCATION NO B5624 P.O. BOX 87, BLOOMFIELD, NM 87413 C.O.C. NO: 6916 (505) 632-1199FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION DATE STARTED: 5-11-99 DIATION: NAME JICARILLA CONTRACT 147 WELL #: 1 PITS: SEP., RION! DATE FINISHED: QUAD/UNIT: A SEC: 8 TWP: 25N RNG: 5N PM: NM CNTY: RA ST: NM ENVIRONMENTAL SPECIALIST: PEP STRYFOSTAGE NE/4 NE/4 CONTRACTOR: PS ELL REMEDIATION: APPROX. CUBIC YARDAGE: 1100 REMEDIATION SYSTEM: LANDFARM LAND USE: RANGE LIFT DEPTH (ft): 1-1.5 FLELD NOTES & REMARKS: DEFTH TO GROUNDWATER: 2/00 NEAREST WATER SOURCE: 2/000 NEAREST SURFACE WATER: 2/000 MMSTI PANKING SCORE O NMOCD THE CLOSURE STD: 5000 PPM PALE YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST FIEM NO PITAEENT STAWING, HE OOOR DETECTED IN SAMPLING PT. @ SAMPLING DEPTHE RANGE FROM 6" - 10" COLLECTED A SPT. COMPOSITE SAMPLE FOR LAB ANACUSIS FIELD 418.1 CALCULATIONS SAMP. TIME SAMPLE I.D. LAB No: WEIGHT (g) mL. FREON DILUTION READING CALC. ppm. SKETCH/SAMPLE LOCATIONS LAB SAMPLES OVM RESULTS FIELD HEADSPACE RESULTS SAMPLE ID ANALYSIS (8015) 0930 24 4.3 LF-1 100 SCALE TRAVEL NOTES \_ ONSITE: 5.11.99 CALLOUT: \_ N/A



### EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client: Sample ID: Laboratory Number: Chain of Custody No: Sample Matrix: Preservative: Condition:	Blagg / AMOCO LF - 1 F202 6916 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 05-12-99 05-11-99 05-12-99 05-12-99 05-12-99 8015 TPH
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	0	Det. Limit
Parameter	Concentration (mg/Kg)	(mg/Kg)
Gasoline Range (C5 - C10)	2.1	0.2
Diesel Range (C10 - C28)	0.3	0.1
Total Petroleum Hydrocarbons	2.4	0.2

ND - Parameter not detected at the stated detection limit.

References:

Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments:

Jicarilla Contract 147 - 1 Landfarm. 5 Pt. Composite.

Ablem L. Gener

Stacy W Sendler

# CHAIN OF CUSTODY RECORD

Farmington, New Mexico 87401 (505) 632-0615	5796 U.S. Highway 64		FOVIDOTECH INC	Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)  S.12 Ph 7:10  Receiped by: (Signature)	Time					15-1 5-1199 0980 F202 SOIL 1 V	Cor	Sampler: 403410 of examples of examples of the state of t		
ton, New Mexico 87401 (505) 632-0615	6 U.S. Highway 64		OTECH INC	Received by: (Signature)	Received by: (Signature)							7	N Cor	tainers		ANALYSIS / PARAMETERS
Cool - Ice/Blue Ice	Received Intact	۲ 2	Sample Receipt			9	Date Time			COL	SWARE PRESENTE	SM. COMPOSITE			Remarks	AMETERS