SAUDI ARABIAN OIL COMPANY (Saudi Aramco) GENERAL INSTRUCTION MANUAL		G. I. NUMBER Approved 7.026	
ISSUING ORG.	LOSS PREVENTION DEPARTMENT	ISSUE DATE 03/30/2009	REPLACES 11/28/1993
SUBJECT	CRANE AND HEAVY EQUIPMENT INCIDENT REPORTING PROCEDURES	APPROVAL HJK	PAGE NO. 1 OF 9

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1.0 PURPOSE

To specify crane and heavy equipment incident notification, investigation, and reporting requirements.

2.0 DEFINITIONS

** 2.1 Company Representative: Saudi Aramco employee who has direct responsibility for the activities of a contractor (e.g., Saudi Aramco project engineer, drilling foreman, maintenance engineer).

2.2 Equipment: Any or all types of equipment specified in Section 4.0.

* 2.3 Incident: Event where unintentional contact is made by equipment, or its load, with personnel, structures, or other equipment causing injury or property damage.

** 2.4 Proponent Manager: Saudi Aramco department head who is responsible for the area where the incident occurred.

3.0 REFERENCES

GI 6.001 Notification Requirements for Incidents (Including Fires)
GI 6.003 Guide for Committees Investigating Major Incidents or Engineering Reviews of Other Incidents
GI 6.005 Reporting, Investigation and Recording of Injuries/Occupational Illnesses
GI 6.007 Reporting of Contractor On-Job Injuries/Occupational Illnesses
GI 6.029 Reporting and Recording of Motor Vehicle Accidents
GI 7.025 Heavy Equipment Operator Testing and Certification

4.0 SCOPE

** 4.1 The requirements of this General Instruction (GI) apply to incidents involving cranes and heavy equipment operated within Saudi Aramco (SA) facilities, SA jobsites outside of operating facilities,

and off SA property under a SA contract. Both Saudi Aramco and contractor crane and heavy equipment incidents are included in the scope of this GI.

* 4.2 The requirements of this GI shall apply to incidents involving all types of cranes and heavy equipment including, but not limited to, the following:

- Earth moving and compacting equipment: bulldozers, graders, backhoes, front end loaders, skid loaders ("bobcats"), earthmovers, tractor-scrapers, rollers, excavators, traxcavators, gradalls, dump trucks, draglines, etc.
- Hoisting equipment: mobile cranes, tower cranes, overhead cranes, gantry cranes, pedestal cranes, jib cranes, winches, hoists/tuggers, come-a-longs, jacks, jack-and-slide equipment, sideboom pipe layers, boom trucks (articulating, telescoping), etc.
- Personnel lifting equipment: manlifts (hydraulic, scissor, telescoping), elevators, aerial baskets (bucket trucks), crane suspended personnel platforms (manbaskets), offshore personnel carriers ("Billy Pughs"), etc.
- Material handling equipment: forklifts, telehandlers, pipe loaders, etc.
- Construction support equipment: asphalt pavers, concrete pump trucks, skid-mounted support equipment (e.g., generators, air conditioning units), etc.

** 4.3 Heavy equipment being driven as a vehicle (e.g. on a road or in the desert) that is involved in a Motor Vehicle Accident (MVA) is not included in the scope of this GI and the incident shall be reported in accordance with GI 6.029.

5.0 NOTIFICATION, INVESTIGATION, AND REPORTING PROCEDURES

(See Supplement 7.026-1 for the crane and heavy equipment incident notification and reporting flowchart)

* 5.1 Immediate Notifications

5.1.1 If emergency response (e.g., fire, medical) is needed, the equipment operator shall immediately call 110 or the appropriate number if calling from a mobile or outside phone (see the Saudi Aramco Safety Handbook) to report any crane or heavy equipment incident. He shall then report the incident to his supervisor. However, if the equipment operator is physically unable to report the incident (e.g., because he is injured), a co-worker shall immediately call 110 and also report the incident to the operator's supervisor or Company Representative.

5.1.2 If the equipment operator is a Saudi Aramco employee, his supervisor shall immediately notify his division head. However, if the equipment operator is a contractor employee, his supervisor shall immediately notify his Saudi Aramco Company Representative. The Company Representative shall immediately notify his division head.

5.1.3 The division head shall notify the proponent manager responsible for the area where the incident occurred and the area Loss Prevention division superintendent within one hour of being informed of the incident.

5.1.4 For an incident involving a crane or other heavy equipment owned or leased by the Saudi Aramco Roads and Heavy Equipment Department (R&HED), the division head shall notify the R&HED area heavy equipment division superintendent within one hour of being informed of the incident.

5.1.5 Refer to GI 6.001 for additional incident notification requirements.

5.1.6 Equipment involved in an incident shall only be moved if it presents a hazard to personnel and/or property and only with prior approval of the proponent manager. Action shall be taken by the proponent to limit hazardous conditions when they exist.

* 5.2 Initial Incident Reporting

5.2.1 The division head shall electronically create and submit an initial “crane or heavy equipment” incident report using the SAP EH&S system within 24 hours of the incident.

5.2.2 Additional incident reporting shall be as specified in GI 6.001, GI 6.005, GI 6.007, and GI 6.029, as applicable.

* 5.3 Investigating Procedures

5.3.1 Upon receiving notification of a crane or heavy equipment incident, the area Loss Prevention division and the R&HED area heavy equipment division shall if warranted dispatch personnel to review the incident and provide advice on securing the incident scene and preserving evidence for later investigation.

5.3.2 The division head shall obtain written witness statements from the equipment operator, his supervisor, and any other witnesses within 24 hours of the incident.

5.3.3 Major incidents shall be investigated as per GI 6.003 (see GI 6.001 for definitions of incident categories). Moderate heavy equipment incidents and minor incidents that have the potential for serious loss or injury (as determined by the proponent manager) shall be investigated by an incident investigation committee. This committee is to be appointed by the proponent manager within 24 hours after the incident. Representatives shall be requested from the following, as appropriate:

- Chairman, from a neutral department, with relevant technical expertise
- Roads and Heavy Equipment Department (R&HED)
- Loss Prevention Department (LPD)

- Inspection Department (ID) – Crane Inspection Group (CIG)
- Training and Career Development (T&CD)
- The department(s) with direct responsibility for the operation where the incident occurred. This department shall also provide the committee secretary and other needed resources (e.g., conference room, computer, flip-chart).

5.3.4 The proponent manager shall provide the chairman of the incident investigation committee with all witness statements, a printout of the initial "crane or heavy equipment" incident report from the SAP EH&S system, and any other information that has been obtained regarding the incident.

5.3.5 GI 6.003 provides guidance for the investigating committee and the conduct of the investigation, including determining immediate and root causes.

5.3.6 In order to prevent recurrence of similar incidents, recommendations shall be specific, achievable, realistic, closed-ended, and time-bound tasks that focus on improving management processes, operating procedures, accountability, training, etc.

5.3.7 The following forms may be used to assist in the incident notifications and/or investigation (refer to Supplements 7.026-2 and 7.026-3).

- Form SA-7522 for heavy mobile equipment incidents. This includes cranes, bulldozers, traxcavators, tractor-scrapers, graders, wheel loaders, side booms, backhoes, gradalls, forklifts, and draglines.
- Form SA-7522-1 for mobile aerial baskets (bucket trucks).

5.3.8 For cranes and heavy equipment owned by R&HED, form SA-9094 (refer to Supplement 7.026-4) shall be completed and submitted by the area heavy equipment division if the incident was not previously reported using SAP EH&S or using SA-7522 or 7522-1.

* 5.4 Final Incident Reporting

5.4.1 Incident investigation reports for moderate and minor incidents shall be submitted by the investigation committee chairman to the proponent manager who convened the incident investigation and to LPD. If the incident involved a crane or other heavy equipment owned or leased by R&HED, distribution shall also include R&HED, ID's CIG, and T&CD.

5.4.2 Major incident investigation reports shall be submitted by the investigation committee chairman in accordance with GI 6.003. The chairman is responsible for the final report and those members concurring shall sign the report.

5.4.3 If the incident investigation committee determines that any information submitted in the initial SAP EH&S incident report needs to be updated, the committee chairman shall make a request

to LPD to re-open the incident report so the needed changes can be made (e.g., email request to: *LPD-TSU-SG). The division head shall then update and re-submit the incident report in the SAP EH&S system.

6.0 CORRECTIVE ACTIONS

* 6.1 The operator involved in a crane or heavy equipment incident shall immediately surrender his Saudi Aramco Heavy Equipment Certificate to his supervisor (if a Saudi Aramco operator) or to the Company Representative (if a contractor operator) until the investigation is completed (see GI 7.025). The heavy equipment operator shall not operate any heavy equipment for which he may be certified unless his heavy equipment certificate is returned to him.

* 6.2 The operator involved in a crane or heavy equipment incident shall be required to pass the Porto-Clinic Test, heavy equipment operator's physical (per Saudi Aramco Medical Services Organization [SAMSO] Medical Services Policy MSP-98, Attachment E, “Initial and Periodic Medical Examination of Saudi Aramco and Contractor Mobile Heavy Equipment Operators”), heavy equipment operator testing and certification (see GI 7.025), or any Saudi Aramco test covering the category or class of equipment he is to operate.

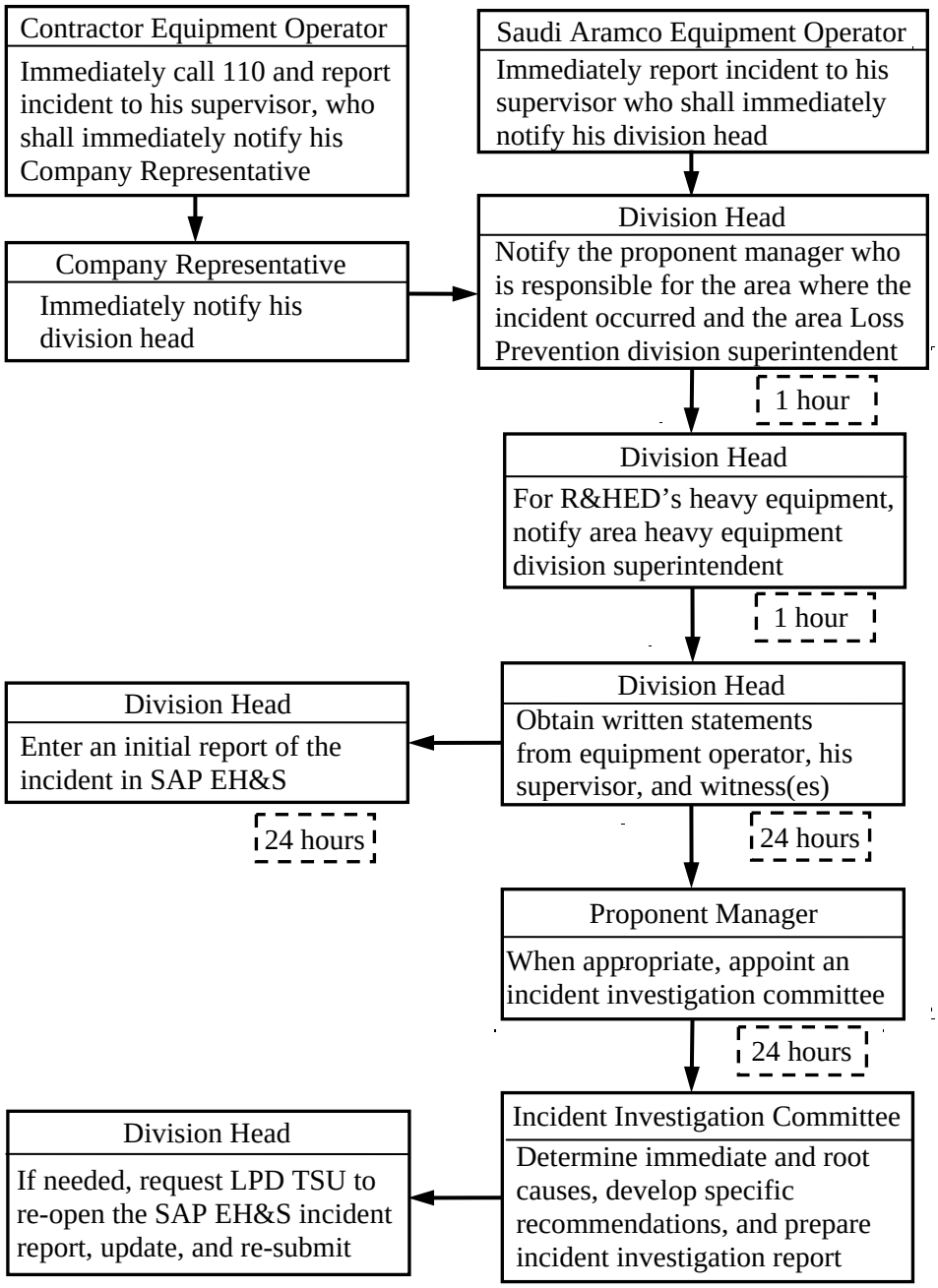
CONCUR: _____ DATE: _____
MANAGER
Inspection Department

CONCUR: _____ DATE: _____
MANAGER
Roads & Heavy Equipment Department

CONCUR: _____ DATE: _____
GENERAL MANAGER
Training and Career Development

APPROVED: _____ DATE: _____
MANAGER
Loss Prevention Department

SUPPLEMENT 7.026-1
CRANE AND HEAVY EQUIPMENT INCIDENT NOTIFICATION AND REPORTING FLOWCHART



SUPPLEMENT 7.026-2, REFER TO SAUDI ARAMCO FORM 7522

HEAVY MOBILE EQUIPMENT ACCIDENT REPORT

Saudi Aramco 7522 (04/05)

G.I. 7.026
Supplement - 7.026-2

Date & Time of Accident	Type of Machine	Location of Accident	Report No. by Loss Prevention
Operator's Name	Badge No.	Conractor/Saudi Aramco Dept.	
Proponent Dept.	Org. Code	Job No. or BI No.	Saudi Aramco Owned/Leased
Investigated By	Badge No.	Department	Estimated Cost of Repair or Replacement
Investigator's Signature	Date	Phone No.	Estimated Cost of Third Party Damage
Signature of Operator's Superintendent	Date	Phone No.	Total $0

Any contributing factors must be explained below

Checklist

☐ O. K. ☐ Contributing Factor

		NUMBER	CRANE	BULLDOZER	TRAX-CAVATOR	TRACTOR SCRAPER	GRADER	WHEEL LOADER	SIDE BOOM TRACTOR	BACKHOE	GRADEALL	FORKLIFT	DRAGLINE
PERMITS	VALID SAG LICENSE	1											
	WORK PERMIT	2											
	SAUDI ARAMCO OPERATOR CERTIFICATE	3											
	VALID STICKER	4											
TYPE	OVERTURN	5											
	STRUCTURAL/MECHANICAL FAILURE	6											
	OVERLOAD	7											
	PROCEDURAL ERROR	8											
	CONTACT-PHYSICAL/ELECTRICAL	9											
CAUSES	SAFETY EQUIPMENT	10											
	SUPERVISOR AT SITE	11											
	LOAD CHART FOLLOWED CORRECTLY	12											
	LOAD MOMENT INDICATOR	13											
	SLINGS/HOOKS/SPREADER BARS	14											
	TWO BLOCKING	15											
	BANKSMAN/SIGNALMAN/RIGGER	16											
	CABLE/REEVING/SHEAVE BLOCKS	17											
	BOOM OR COMPONENTS	18											
	ATTACHMENTS	19											
	OUTRIGGERS/STABILIZERS	20											
	GROUND CONDITIONS	21											
	VISIBILITY/VISION	22											
	CONTROLS	23											
	BRAKES	24											
	TIRES/TRACKS	25											
	HYDRAULICS	26											
	UNSTABLE LOAD	27											
	MAST/CHAINS/SPROCKETS	28											
	MANUEVER/TRAVEL	29											
	SWINGING LOAD	30											
	TRAFFIC VIOLATION (FORM 1193)	31											
	UNCORRECTED INSPECTION DEFICIENCY	32											
	OTHER (EXPLAIN BELOW)	33											
	EXPLANATION:												
RESULTS	OPERATIONAL DISRUPTION	34											
	PROPERTY DAMAGE	35											
	SERIOUS INJURIES	36											
	FATALITIES	37											

DISTRIBUTION:

1. Proponent Department Head
2. L.P. Area Office
3. L.P. Plng. & Tech. Svcs. Div.
4. Manager, Roads & Heavy Equip. Dept.
5. Personnel Department
6. Inspection Department

Attach copies of Forms SA 3208 for personal Injury, SA 1193 for vehicle accident, SA 9094 for equipment damage and other supporting documents

SUPPLEMENT 7.026-3, REFER TO SAUDI ARAMCO FORM 7522-1

MOBILE AERIAL BASKETS, ACCIDENT REPORT

Saudi Aramco 7522-1 (04/05)

G.I. 7.026
Supplement - 7.026-3

Date & Time of Accident	Type of Machine	Location of Accident	Report No. by Loss Prevention
Operator's Name	Badge No.	Contractor/Saudi Aramco Dept.	
Proponent Dept.	Org. Code	Job No. or BI No.	Saudi Aramco Owned/Leased
Investigated By	Badge No.	Department	Estimated Cost of Repair or Replacement
Investigator's Signature	Date	Phone No.	Estimated Cost of Third Party Damage
Signature of Operator's Superintendent	Date	Phone No.	Total $0

Checklist

☐ O. K. ☐ Contributing Factor

BRIEF DESCRIPTION OF INCIDENT AND RECOMMENDATIONS TO PREVENT RECURRENCE

OPERATIONAL	VALID SAG LICENSE	
	SAUDI ARAMCO CERTIFICATE	
	EXPERIENCE/TRAINING	
	WORK PERMIT	
TYPE	OVERTURN	
	POWERLINE CONTACT	
	MANUEVER/TRAVEL	
	OVERLOAD	
	MECHANICAL/ELECTRICAL	
CAUSES	OUTRIGGERS	
	BRAKES	
	CONTROLS (BOTH ENDS)	
	SAFETY BELTS FASTENINGS	
	BASKET PIVOTS	
	BOOM FLANGE CASTING	
	BOOM SPLIT BEARING CAP	
	BOOM STRUCTURE	
	DIELECTRIC TEST (BOOM & BASKET)	
	ROTATING STOP	
	PYLON BASE SCREWS	
	U-BOLTS - UNIT TO CHASSIS	
	FLANGE BOLTS - BOOM ELBOW	
	CABLE SHEAVES	
	HOSE LEAKS	
	MAINTENANCE	
	DIRTY CAB WINDOWS	
	LOOSE EQUIPMENT IN CAB	
	OPERATING ON SOFT GROUND	
	LEVELING	
	SIGNALS	
	TRAVELING WITH BOOM UP	
	OPERATOR ERROR - EXPLAIN	
	PUBLIC HIGHWAY PRECAUTIONS	
	BOOM ANGLE CLINOMETER	
	OTHER	
RESULTS	OPERATIONAL DISRUPTION	
	PROPERTY DAMAGE	
	SERIOUS INJURIES	
	FATALITIES	

DISTRIBUTION:

1. Proponent Department Head
2. L.P. Area Office
3. L.P. Plng. & Tech. Svcs. Div.
4. Manager, Transportation
5. Personnel Department
6. Inspection Department

PLEASE ATTACH COPIES OF FORMS SA 3208 FOR PERSONAL INJURY, SA 1193 FOR VEHICLE ACCIDENT, SA 9094 FOR EQUIPMENT DAMAGE AND OTHER SUPPORTING DOCUMENTS.

SUPPLEMENT 7.026-4, REFER TO SAUDI ARAMCO FORM 9094

NOTIFICATION OF EQUIPMENT ACCIDENT, NON-COLLISION OR ABUSES DAMAGE

Saudi Aramco 9094 (12/2000) 797-600 (Roads & Heavy Equipment Department)

TO	**Manager**	**Date**
	Address	

THIS IS TO ADVISE THAT THE EQUIPMENT IDENTIFIED HEREIN HAS INCURRED DAMAGE AS DESCRIBED BELOW, AT THE TIME, DATE AND LOCATION IDENTIFIED.

PLEASE INVESTIGATE THE ACCIDENT AND ADVISE CAUSES AND STEPS TAKEN TO PREVENT RECURRENCES

Eqpt. No.	**User Div./Unit**	**Org. Code**	**Location**	**Telephone No.**

Date of Accident	**Time of Accident**	**Location of Accident**

BRIEF DESCRIPTION OF DAMAGE (By RHED Line Division CHED/SHED/NHED)

RHED Inspector Name	**Signature & Date**	**Supt's. Signature**	**Date**

BRIEF DESCRIPTION OF ACCIDENT CAUSES (By User)

CORRECTIVE ACTION IMPLEMENTED (By User)

User Rep. Name	**Signature & Date**	**Manager's Signature**	**Date**

NOTE TO ARAMCO LOSS PREV. DEPT.:

☐ THE ACCIDENT HAS BEEN REPORTED AND FORM 7522 COMPLETED; NO FURTHER ACTION REQUIRED.

☐ FORM 7522 REPORT NOT RECEIVED; PLEASE FOLLOW-UP WITH EQUIPMENT USER DEPARTMENT TO SUBMIT REPORT.

DISTRIBUTION:
Original - User Dept. Head
1st Copy - Manager, RHED
2nd Copy - User Div. Head
3rd Copy - Loss Prevention
4th Copy - Line Div. (RHED)