ICON GmbH

Integrated Environmental Protection

Scope of Capability

Part 2: Technical Review

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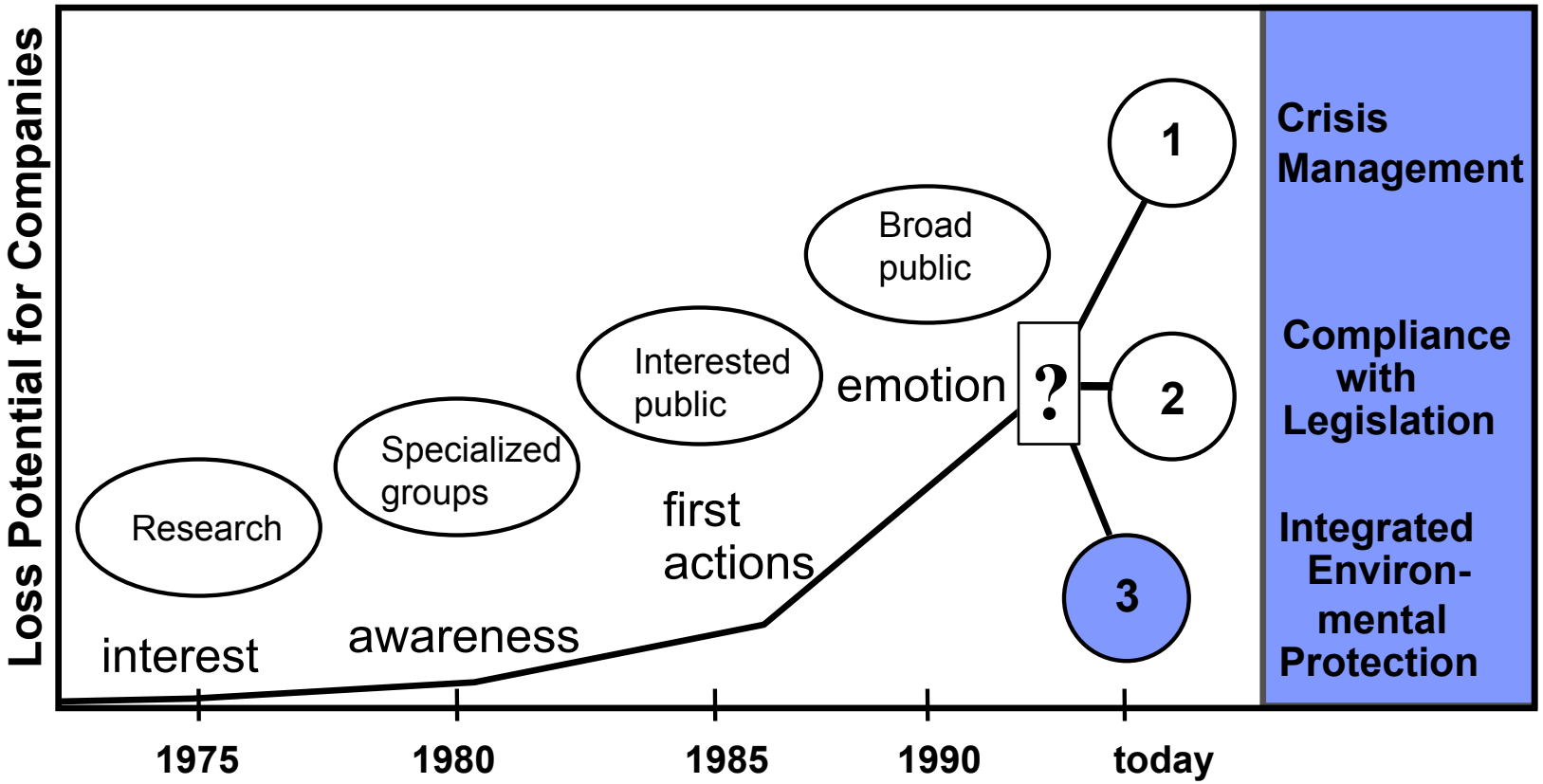
Environmental issues are getting more important



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Environmental Services

- Environmental Risk Analysis and regular Services
- Remediation Services (phase I and II audits)
- Due Diligence
- Special Services

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General Approach

- Characterize site and associated areas
- Assess potential risks to human and ecological receptors
- Develop array of engineering and management solutions
- Implementation
- Monitor performance and correct if needed

Environmental Risk Analysis and regular Services

- Site inspections and analysis of key processes, risk assessment
- Development and implementation of environmental programs
- Definition and control of internal (company) and external standards (legislation)
- Training of employees
- Recommendations and preventive action
- Negotiations with authorities

Remediation Services

- Phase I investigations (site history), identify past and current areas of environmental significance and potential liabilities associated with the site
- Assessment of overall risk exposure
- Management of phase II audits and cleanup activities
- Negotiations with authorities

Due Diligence

- Passive and active due diligence
- Site inspections and analysis of key processes
- Assess compliance with local and national legislation
- Provide initial cost estimates to bring facilities into compliance
- Identify past and current areas of environmental significance and potential liabilities associated with the site
- Impact analysis, cost estimations for cleanup of soil and groundwater
- Post-merger negotiations
- Follow-up activities according to transaction agreement

Special Services

- Planning, modification or expansion of storage areas for hazardous materials
- Development and introduction of management systems
- Protection of management from claims and liabilities

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Environmental Risk Analysis

A complete and professional investigation and consequence analysis of industrial sites covers the following items:

- Location, geology and hydrogeology
- Storage arrangement (materials and quantities)
- Production and operation hazards
- Transport facilities (pipelines, filling stations)
- Supply facilities (transformers, air-conditioning)
- Waste-water and drainage
- Waste and waste disposal
- Emissions and air pollution control
- Organisation (structure, procedures)
- Contaminated areas

Example 1: Production
Emission source identification
Emission control equipment
Maintenance and inspecting programs
Reporting and record-keeping
Training

Example 2: Control
Clearly defined responsibilities
Adequate system of authorization
Trained and experienced personnel
Delegation procedures
Internal verification

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Environmental Risk Analysis, Key Questions

- Size of facility (main production sites), site setting (drinking-water area)
- Environmental organization, identification and control of hazards
- Liabilites expected from asbestos, asbestos inventory
- Important/significant accidents (e.g. leakage) in the past
- Underground storage facilities
- Main processes (environmental sensitive) and site history,
- Chemicals/materials used (amount, type, time)
- Use of chlorinated hydrocarbons (CHC)
- Leakages of sewage system
- Current non-compliance issues, costs anticipated for corrective action, required investments to meet legislation
- Known or suspected contaminations of soil and/or groundwater, probability that the current or past use of the site caused contaminations

Report Writing Structure

- Main Elements
  - Management summary
  - Site description (storage, processes, hazardous materials)
  - Soil and groundwater protection
  - Emissions to air
  - Waste-water
  - Waste
  - Organisation (structure, procedures)

- Minimise and/or control Risks
- Enhance communication between departments/sites
- Controlled budgeting during implementation

Report Writing, Matrix of Findings (Example)

	Site	1	2	3	4	5	6	7	8	9	10
	A	X	X	X	X	X	X	X	X		
	B					X		X	X		
	C			X				X			
	D			X			X	X			
	E										

1. Soil and groundwater contamination at site
2. Soil and groundwater contamination at adjacent property
3. Other areas of potential concern
4 Waste-water facility and sewage system
5. Degreasing units, paint/plating shop upgrade of equipment
6. Upgrade of storage facilities
7. Asbestos
8. Phase-out of ODS (halon)

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Collection of Site relevant Data														Evaluation
Location	size area m_	size buildings m_	employees	begin of operation	production technologies (large scale) plating	painting	degreasing	metal working	others	storage areas	underground storage / pipelines	outer areas	potential soil groundwater contamination	legal non compliance investments
A	87000	62000	all sites	1845	**XX**	X	X	X	X	X		**XX**	X	**XX**
B	125000	71000	9000	1839	X	**XX**	**XX**	**XX**	X	**XX**	**XX**	**XX**	**XX**	**XX**
C	17800	6200		> 50		X	**XX**	X		X		?	**XX**	X
D	31200	5500		> 100	X	X	X		X			?	**XX**	X
E	80600	40300		< 10		X	**XX**	X		**XX**	**XX**	**XX**	X	X
F		13700	2000	1923	**XX**	X	**XX**	X		X		?	**XX**	**XX**
G	37200	16200	1700	1936	**XX**	X	**XX**	**XX**	X	**XX**	**XX**	?	**XX**	**XX**
H	40600	33000	900	1924	X	X	X	X		X		?	X	X
I	37000	35000	1200	1929	**X**	X	X	X		XX		**XX**	X	**X**
J	90000	50000	650	> 50	**X**	?	?	X		X		?	?	**?**
K	?	?	800	> 50	**X**	XX	X	X		X		X	XX	**?**
L	92000		?	?									?	**?**

XX areas which may require capital expenditures related to soil and/or groundwater contamination as well as to environmental legislation

? further investigation required to allow final evaluation

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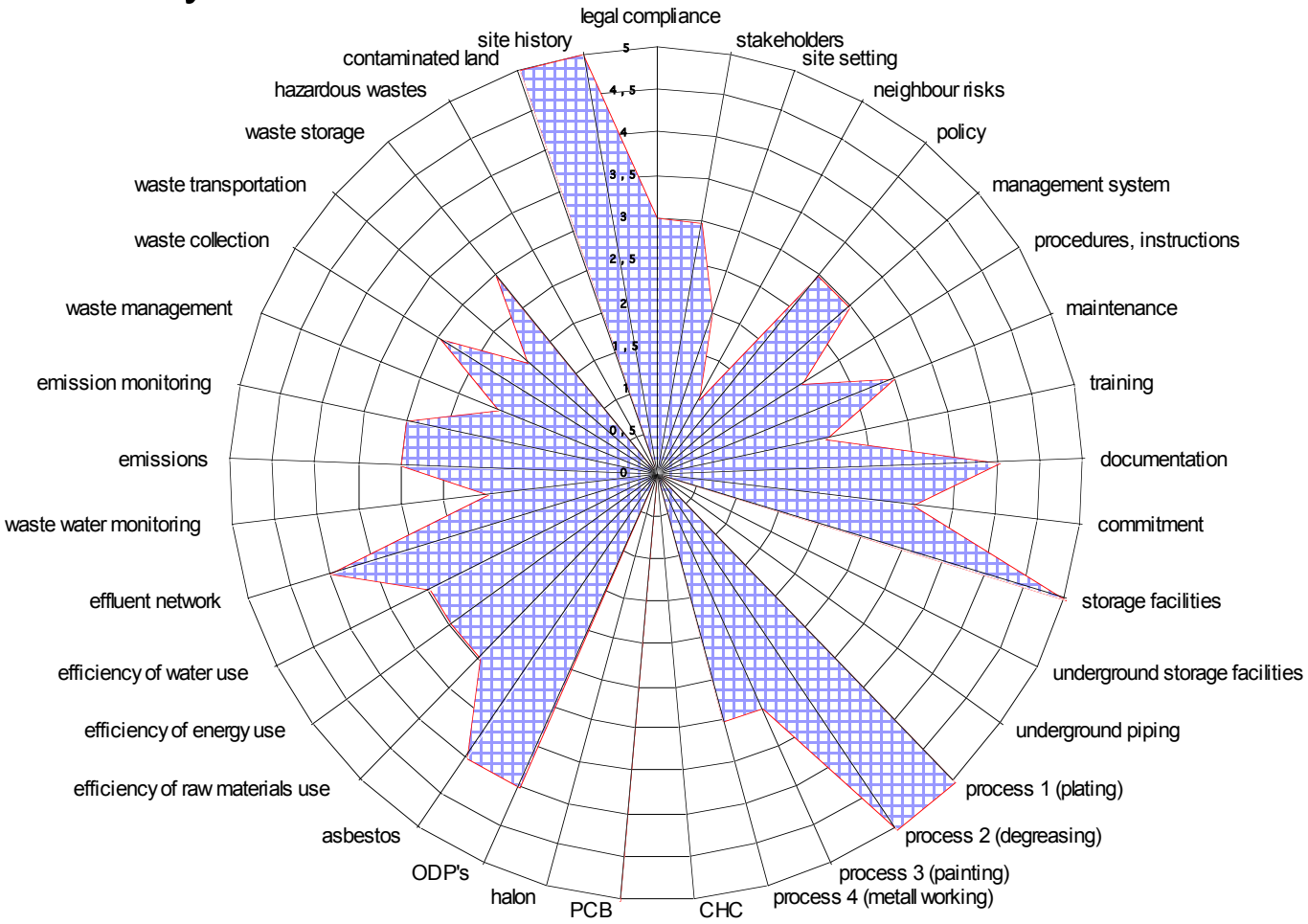
Environmental Risk Analysis Evaluation Circle

legal compliance	3
stakeholders	3
site setting	2
neighbour risks	1
policy	3
management system	3
procedures, instructions	2
maintenance	3
training	2
documentation	4
commitment	3
storage facilities	5
underground storage facilities	0
underground piping	0
process 1 (plating)	5
process 2 (degreasing)	5
process 3 (painting)	3
process 4 (metall working)	3
CHC	0
PCB	5
halon	0
ODP's	4
asbestos	4
efficiency of raw materials use	3
efficiency of energy use	3
efficiency of water use	3
effluent network	4
waste water monitoring	2
emissions	3
emission monitoring	3
waste management	2
waste collection	3
waste transportation	2
waste storage	3
hazardous wastes	0
contaminated land	5
site history	5



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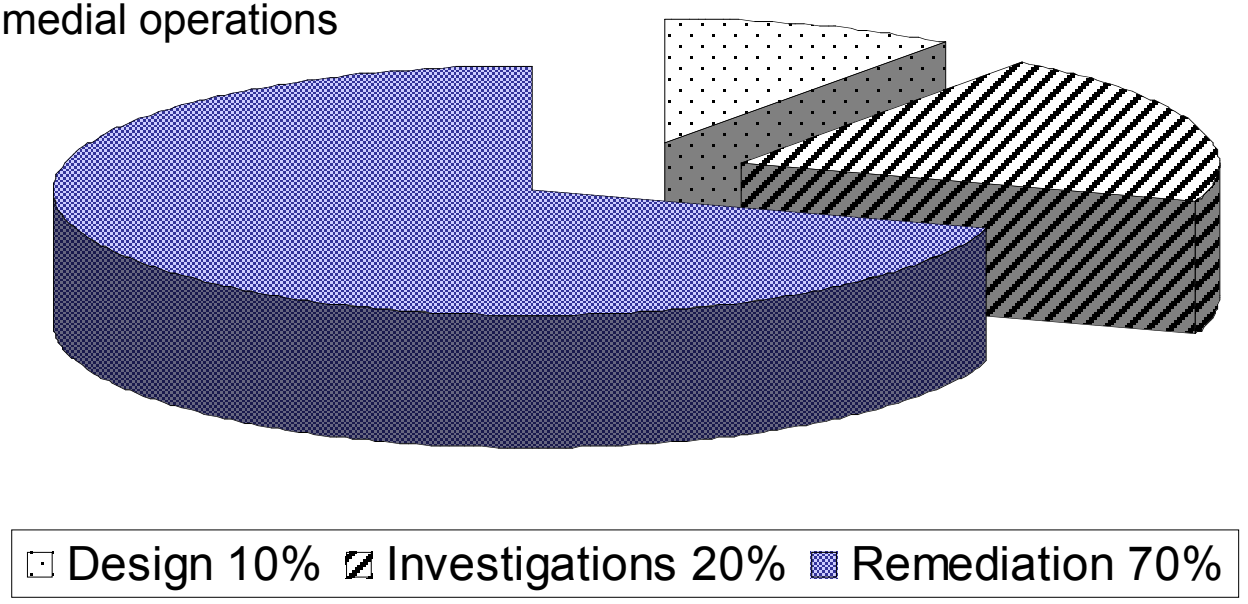
Site Remediation

- analysis of site history, processes and overall risk exposure
- definition of areas of potential concern, development and coordination of investigations necessary
- risk-based approach in terms of water flow and concentration, impact to groundwater, address exposure pathways
- remediation management, supervision of clean-up activities, design and implementation of monitoring programs, negotiations with authorities

Steps and Costs of Remediation Projects:

- Site investigations
- Feasibility study and design
- Remedial operations



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In early stages, costs are relatively low but decisions made here do have a significant impact on further remedial operations. An adequate assessment of contaminated areas is vital and provides the basis for an efficient site remediation (US $, rough figures for overview only).

Drilling	50 - 100 US $/m
Taking samples	20 US $/Sample

Chem. Analysis	**20 - 150 US$/Analysis**

Expert	120 US $/h
Support Staff	80 US $/h
Report	approx. 10.000 US $

metals	**20.00**
chloride/fluoride	**20.00**
cyanide	**50.00**
aromatic hydrocarb.	**70.00**
chlorinated hydroc.	**70.00**
pesticides	**150.00**
PCB	**150.00**
PAH	**100.00**
hydrocarbons	**50.00**

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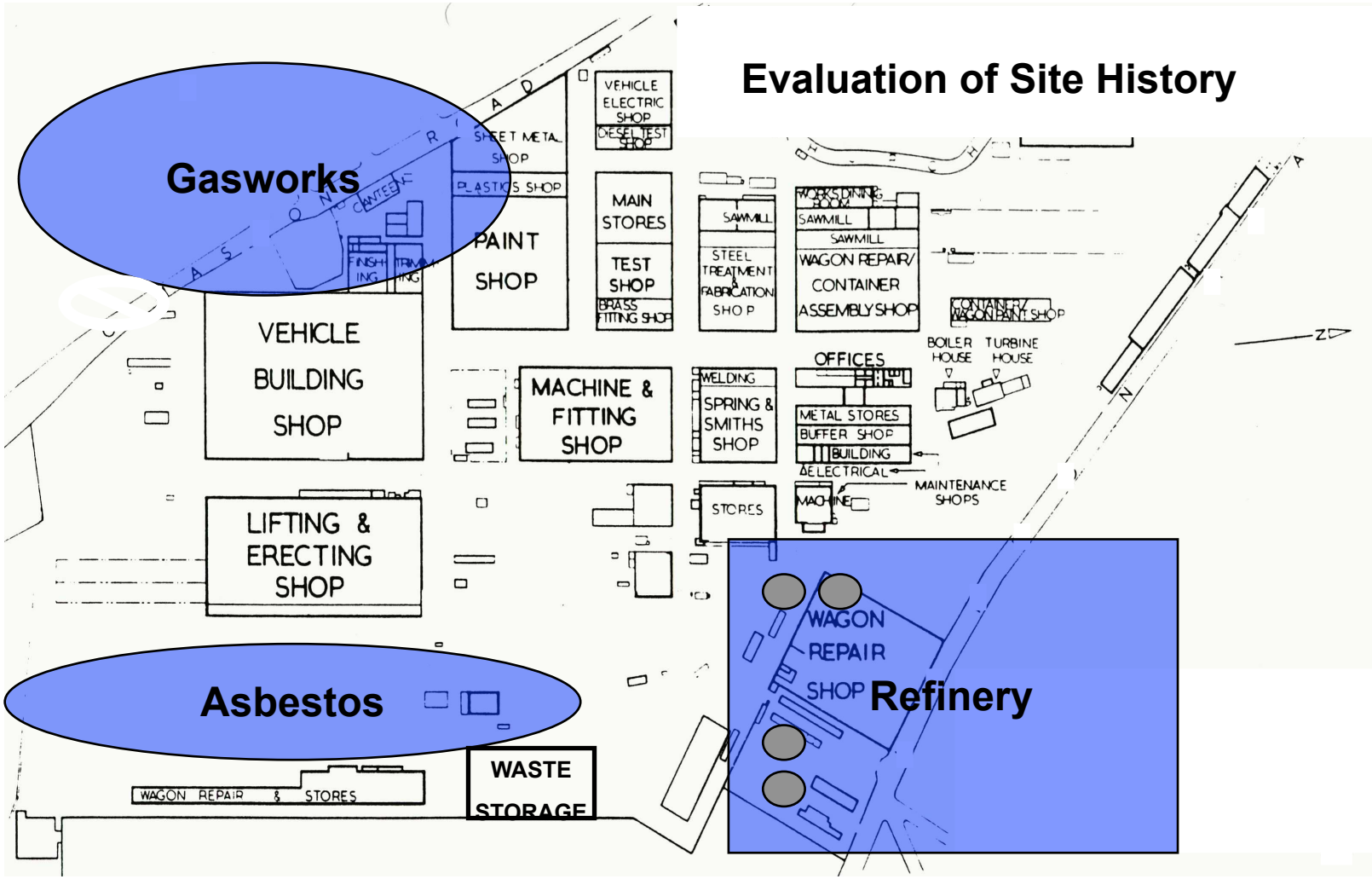
Evaluation of Site History



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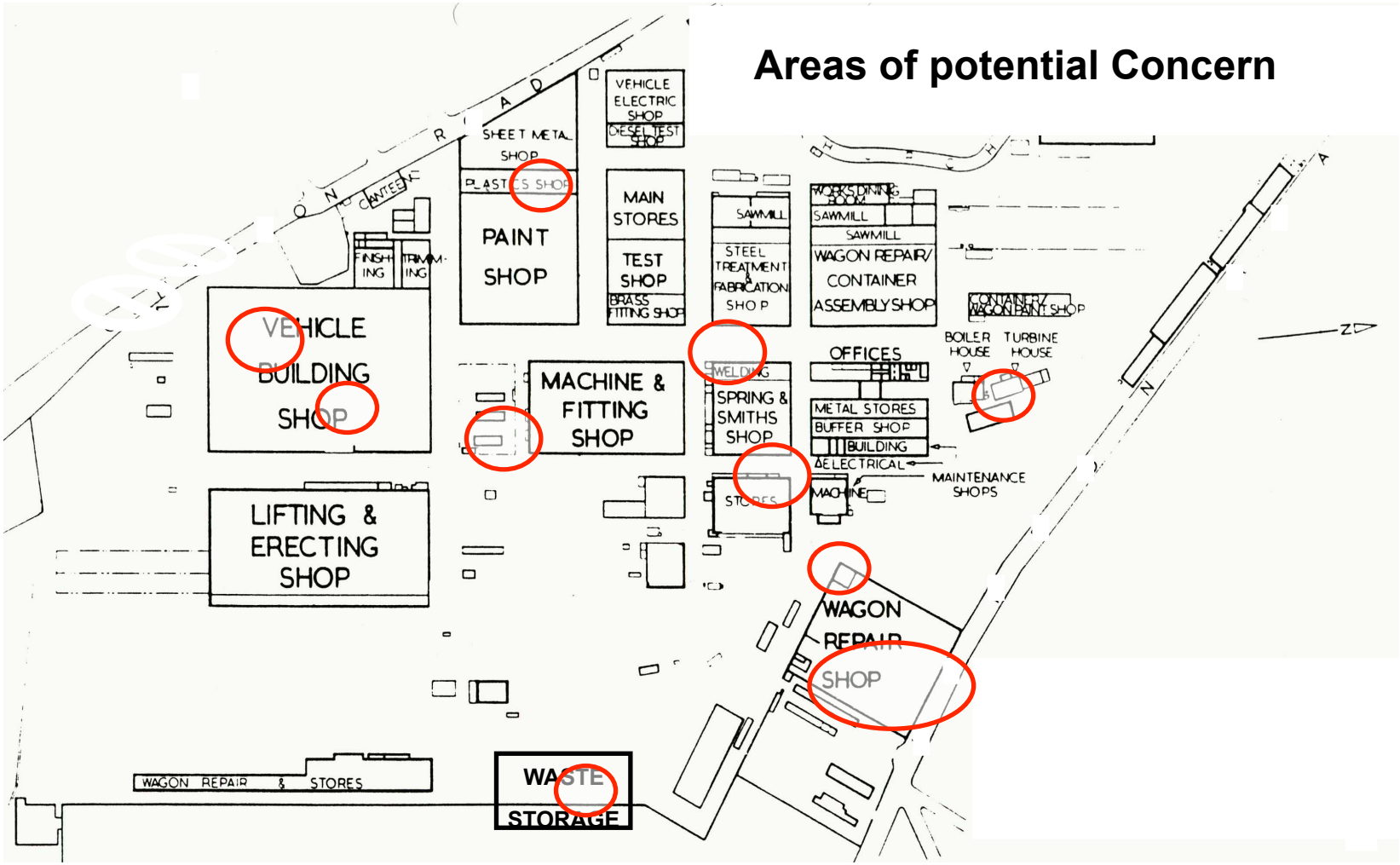
Areas of potential Concern



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Environmental Due Diligence

Technical adjustment of contracts and/or documents (e.g. further activities, scope of investigation, remediation limits, etc.)

Preparation

Specific risks of branches adjusted to experience and background of ICON

Questionnaire

Due diligence issue paper

Management presentations
Data-room
interviews
site visit

Evaluation of data quality

Assessment of potential risks and capital expenditures

Action needed recommendations

Follow-up activities

Remediation modernization or upgrade investments

Negotiations (buyer/seller authorities)

Coordination reporting

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Scope of Investigation

- The environmental due diligence focused on significant future investments related to:
  - **(a)** Contaminations of soil and/or groundwater
  - **(b)** Upgrade/ modernization of existing facilities to comply with environmental legislation.
  - **(c)** Industry standards, state of the art
- Documentation provided (Data Room) regarding capital expenditures which may be necessary for clean-up activities, the upgrade of existing facilities or other environmental relevant issues.
- Confirmatory informations during interviews.
- Site visits (if applicable during this part of the environmental due diligence).

Liabilities related to Contamination

- Have the sites obtained by the business been examined for soil and/or groundwater contamination?
- Are there any clean-up activities?
- In absence of soil and/or groundwater investigations: are there indications that the current or past use of the sites has caused any contamination?
- Are there any information due to site inspections by officials that may suggest that any requirements may be imposed by public authorities (e.g. soil and/or groundwater investigations, clean-up work)?
- Has the company already been held liable for any such contamination?
- Is there any site located within a water catchment and/or drinking water area?
- Are there any informations about the sites history that raise concern for for soil and/or groundwater contamination?
- Have there any waste disposal activities been carried out on any of the sites?
- How great is the risk that pipes of the sewage system are obsolete and waste water has leaked?

Liabilities related to Production Facilities

- Do production/storage activities cause any pollution of air, water or adverse effects on the environment? Significant storage facilities > 100m³
- Did these adverse effects lead to any action by the public authorities?
- Are these adverse effects to air/water likely to trigger any damage claims of third parties?
- Have limits /requirements been tightened or are there any indications that will impose stricter limits or requirements?, are therefore major changes of relevant equipment expected?
- During routine control or test measurements done internally or by the authorities, were there any elevated concentrations (eg. emissions, waste water) discovered? And, if applicable, will this lead to substantial investments to ensure compliance with legal requirements and conditions?
- Have any accidents/incidents occured that may require substantial investments ensuring legal compliance?
- Are there pending or anticipated legal disputes concerning environmental issues?

Major Documents required

- Internal reports on soil and/or groundwater investigation
- Documentation on phase-I audits, investigations of the site‘s history
- Reports on recent/current clean-up activities
- Cost estimations for potential clean-up activities anticipated
- Investment plans, internal studies etc. which allow a reliable assessment of potential capital expenditure related to the upgrade of existing facilities and/or other environmental relevant issues
- Correpondence with authorities

Conclusions and Recommendations

- Financial expenditures anticipated (amount adjusted for reduction of value of enterprise) and activities recommended
- Clarify if there are:
  - Known or suspected contaminations of soil and/or groundwater
  - Major investments anticipated to fulfill legal requirements
  - Non-compliance issues, no pending claims or litigation
  - Major investments anticipated due to asbestos or any other hazardous materials
- Specify and cover the potential risks identified in the representations and warranties and/or indemnifications

Thank you for your Attention

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