



REFINERY TURNAROUND READINESS CHECKLIST

Planning • Execution • Industrial Housekeeping • HEPA Vacuum Readiness • Handover

Purpose

A detailed, field-ready framework for planning, verifying and documenting refinery shutdown, turnaround and outage readiness. It is intended for owner/operators, primary contractors, specialty contractors and industrial service providers. Every item must be adapted to the facility's approved procedures, process hazards, permit system, legal requirements and scope of work.

Document Control

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Revision: V2

Status: Controlled Template

Owner: HireAVac / User Facility

Review cycle: Before each use

IMPORTANT LIMITATION

This checklist is a planning and verification aid. It is not a substitute for the facility's process safety management system, engineering standards, operating procedures, permits, job safety analyses, emergency plans, competent-person decisions, manufacturer instructions or applicable law. A checked box does not by itself demonstrate compliance.



1 DOCUMENT CONTROL, PROJECT PROFILE AND USE INSTRUCTIONS

How to use this checklist

Assign an accountable owner and due date for each item. Mark each item Complete, Open, N/A or Hold. Record objective evidence such as approved procedures, permits, drawings, certificates, inspection reports, photographs, vendor documents or meeting minutes. Escalate unresolved red items through the turnaround governance process.

Facility / Refinery	Business unit / Area	Turnaround name
Unit / Process area	Planned shutdown date	Planned startup date
Checklist owner	Turnaround manager	Operations lead
Maintenance lead	EHS lead	Primary contractor
Revision date	Readiness gate	Overall status

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Document has a unique number, revision, approval status and controlled distribution list.			
☐	Facility-specific procedures and forms take precedence where more stringent.			
☐	Applicable legal and corporate requirements have been identified for this site and scope.			
☐	Checklist scope, exclusions and interfaces are documented.			
☐	Readiness review dates and decision gates are approved.			
☐	Accountable owner is assigned to every open action.			
☐	Objective evidence is referenced for every completed critical item.			
☐	Changes made after approval are tracked and communicated.			
☐	Obsolete copies are removed from use.			
☐	Final completed checklist will be retained according to the facility record-retention policy.			



2 TURNAROUND GOVERNANCE, SCOPE AND READINESS GATES

Objective

Establish clear authority, scope boundaries, decision rights, escalation routes and readiness criteria before mobilization.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Turnaround charter, objectives, success criteria and business constraints are approved.			
☐	Scope freeze date and scope-change approval process are defined.			
☐	Unit battery limits, tie-ins, interfaces and excluded systems are documented.			
☐	Critical-path work, safety-critical work and regulatory inspection work are identified.			
☐	Owner/operator, primary contractor and specialist-contractor responsibilities are mapped in a RACI.			
☐	Single-point accountability is assigned for operations, maintenance, inspection, engineering, EHS, planning, procurement and logistics.			
☐	Daily governance rhythm, shift meetings and escalation thresholds are defined.			
☐	Readiness gates have objective entry and exit criteria.			
☐	Stop-work authority and restart authority are clearly communicated.			
☐	Decision log and action register are established.			
☐	Scope growth, emergent work and discovery work have approved review pathways.			
☐	Cost, schedule, quality, safety and environmental KPIs are established.			
☐	Interface with capital projects, routine maintenance and neighboring units is defined.			
☐	Leadership field-presence expectations are set.			
☐	Lessons learned from previous turnarounds have been reviewed and incorporated.			



3 INTEGRATED PLANNING, SCHEDULING AND WORK-PACK READINESS

Objective

Confirm that work is technically defined, logically sequenced, resourced, permitted and ready for safe execution.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Integrated Level 1-4 schedule is approved and reflects operations, maintenance, inspection and project work.			
☐	Critical path, near-critical paths and schedule float are identified.			
☐	Every work order has a complete work pack with scope, drawings, procedures, permits, hazards, resources and acceptance criteria.			
☐	Job steps are sequenced to prevent conflicting work and rework.			
☐	Work packs identify isolation, decontamination, access, scaffolding, lifting, inspection and housekeeping needs.			
☐	Planned labor hours, crew sizes, shifts and productivity assumptions are validated.			
☐	Specialist vendors and OEM representatives are confirmed.			
☐	Materials, tools, consumables, gaskets, fasteners and spares are kitted and quality checked.			
☐	Hold points and witness points are identified.			
☐	Inspection and NDE windows are integrated into the schedule.			
☐	Contingency plans exist for weather, delayed materials, discovery work and equipment failure.			
☐	Schedule includes cleaning, waste removal, mechanical completion, leak testing and startup support.			
☐	Permit demand has been forecast by shift and area.			
☐	Crane, scaffold, vacuum, lighting, ventilation and temporary-power demand are leveled.			
☐	Shift handover periods and fatigue controls are built into the schedule.			
☐	Planning assumptions are documented and challenged before freeze.			



4 PROCESS SAFETY MANAGEMENT, PHA, MOC AND PSSR READINESS

Objective

Ensure turnaround work remains integrated with process safety information, hazard analysis, mechanical integrity, management of change and pre-startup safety review requirements.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Covered processes and PSM applicability are confirmed.			
☐	Current process safety information, P&IDs, electrical classification drawings and relief-system information are available.			
☐	Relevant PHA recommendations and safeguards are reviewed for turnaround impact.			
☐	Temporary configurations, bypasses, hoses, blinds, spades, jumpers and temporary equipment are controlled.			
☐	MOC requirements are identified for permanent and temporary changes.			
☐	Each MOC defines technical basis, safety impacts, procedure changes, training and authorization.			
☐	Mechanical integrity scope includes safety-critical vessels, piping, relief systems, controls and emergency systems.			
☐	Deferrals and temporary repairs are formally risk assessed and approved.			
☐	Quality assurance requirements for materials, welding, bolting and replacement equipment are defined.			
☐	Process safety critical equipment has inspection and acceptance criteria.			
☐	Operating procedures are updated before startup where required.			
☐	PSSR scope and checklist are approved before execution begins.			
☐	PSSR verifies construction, procedures, training and action closure before introducing hazardous chemicals.			
☐	Open PHA, audit, incident or MOC actions that affect startup are identified.			
☐	Process safety information changes are incorporated into controlled documents.			
☐	Startup authorization is independent, documented and traceable.			



5 CONTRACTOR QUALIFICATION, ONBOARDING AND WORKFORCE CONTROL

Objective

Select competent contractors and ensure every worker understands the process hazards, rules, emergency arrangements and task-specific controls.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Contractors are screened using safety performance, competency, experience and scope-specific capability.			
☐	Contractor roles that can influence process safety are identified.			
☐	Contractor safety programs and training records are reviewed.			
☐	Facility process hazards and emergency actions are communicated before work begins.			
☐	Site orientation, area orientation and task-specific training are complete.			
☐	Competency verification is complete for operators, electricians, welders, riggers, scaffolders, confined-space teams and vacuum operators.			
☐	Contractor supervisors understand permit, LOTO, SIMOPS and stop-work requirements.			
☐	Employee roster, badge control and access permissions are current.			
☐	Fitness-for-duty, drug/alcohol, fatigue and work-hour requirements are communicated.			
☐	Language and literacy needs are addressed in training and work instructions.			
☐	Contractor injury and illness logs are maintained as required.			
☐	Contractor performance will be monitored through field observations, audits and corrective actions.			
☐	Subcontractors are subject to the same qualification and control requirements.			
☐	Visitor, delivery-driver and short-duration specialist access is controlled.			
☐	Demobilization includes badge return, tool accountability, waste removal and performance review.			



6 PROCUREMENT, LOGISTICS, TEMPORARY FACILITIES AND MATERIAL CONTROL

Objective

Prevent lost time and unsafe improvisation by ensuring the right people, equipment, materials and facilities are available at the right place and time.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Long-lead equipment and materials are received, inspected and released.			
☐	Critical spares and contingency quantities are identified.			
☐	Material receiving, quarantine, preservation and issue processes are established.			
☐	Certificates of conformance, material test reports and traceability documents are available where required.			
☐	Temporary offices, break areas, sanitation, potable water and welfare facilities are ready.			
☐	Parking, shuttle, gate and pedestrian routes are established.			
☐	Laydown areas, tool rooms, welding areas and waste staging areas are marked.			
☐	Traffic management separates pedestrians, mobile equipment and deliveries.			
☐	Crane locations, access roads and ground-bearing capacity are confirmed.			
☐	Temporary lighting, power, ventilation and compressed-air systems are inspected.			
☐	Firewater, hydrants, access lanes and emergency egress remain unobstructed.			
☐	Industrial vacuum locations and hose routes are planned to avoid trip hazards and classified-area conflicts.			
☐	Communication radios, channels, charging and backup systems are available.			
☐	Weather monitoring, lightning alerts, heat-stress shelters and severe-weather plans are active.			
☐	Fuel, cylinder and chemical storage arrangements meet facility requirements.			
☐	Security and after-hours access arrangements are confirmed.			



7 PERMIT-TO-WORK, SIMOPS AND FIELD-LEVEL RISK CONTROL

Objective

Coordinate concurrent activities and ensure every task is authorized, understood and controlled at the work front.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Permit types and approval authorities are defined.			
☐	Permit office staffing and peak permit demand are adequate.			
☐	Permit boundaries, duration, suspension and revalidation rules are understood.			
☐	Job safety analysis / job hazard analysis is complete and task specific.			
☐	Pre-job briefing includes scope, hazards, controls, roles, emergency actions and stop-work triggers.			
☐	SIMOPS matrix identifies incompatible and restricted combinations of work.			
☐	Area coordination meetings review simultaneous work by shift.			
☐	Gas-testing requirements, frequency and instrument type are defined.			
☐	Conditions requiring permit suspension are clear.			
☐	Changes in scope, weather, process condition or crew trigger reassessment.			
☐	Barricades, signs, exclusion zones and access controls are installed.			
☐	Line-of-fire, dropped-object and stored-energy hazards are addressed.			
☐	Housekeeping and waste-removal expectations are included in permits and work packs.			
☐	End-of-shift permit handover and closeout are controlled.			
☐	Completed permits and supporting records are retained as required.			



8 ENERGY ISOLATION, LOCKOUT/TAGOUT AND LINE-OPENING READINESS

Objective

Prevent unexpected energization, startup, pressure release, chemical release or movement during servicing and maintenance.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Equipment-specific isolation plans are developed from current drawings and field verification.			
☐	All energy sources are identified: electrical, mechanical, hydraulic, pneumatic, thermal, chemical, gravity and stored energy.			
☐	Isolation boundaries and zero-energy verification methods are documented.			
☐	Group lockout process, lock boxes and authorized-person responsibilities are defined.			
☐	Operations and maintenance jointly verify isolations before work.			
☐	Double block and bleed, blinding or physical disconnection requirements are identified.			
☐	Blind/spade list is controlled, uniquely numbered and field verified.			
☐	Bleeds, vents, drains and low points are routed to approved locations.			
☐	Residual pressure, temperature and chemical inventory are verified before opening.			
☐	Tagout-only situations receive equivalent protection and authorization where permitted.			
☐	Shift-change and contractor-change lock transfer processes are defined.			
☐	Lost-key, absent-person and emergency lock-removal procedures are controlled.			
☐	Try-start or other verification is completed before work begins.			
☐	Re-energization steps ensure personnel, tools and temporary devices are clear.			
☐	Blind removal and restoration are independently verified before startup.			
☐	Isolation records are reconciled at mechanical completion.			



9 PERMIT-REQUIRED CONFINED SPACES AND VESSEL-ENTRY READINESS

Objective

Ensure entries are planned, isolated, monitored, ventilated, supervised and supported by effective rescue capability.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	All spaces are classified and entry requirements identified.			
☐	Specific entry procedure and permit are prepared for each space and task.			
☐	Space is isolated from process, electrical and mechanical hazards.			
☐	Cleaning, purging, ventilation and cooling requirements are complete.			
☐	Atmospheric testing sequence, locations, frequency and acceptable limits are defined.			
☐	Gas detectors are suitable, calibrated, bump tested and assigned to trained users.			
☐	Continuous monitoring is used where required by risk assessment or permit.			
☐	Entrant, attendant and entry-supervisor roles are assigned and competent.			
☐	Entry roster and accountability method are established.			
☐	Rescue plan is space specific and rescue team availability is verified before entry.			
☐	Retrieval systems, harnesses, tripods, communications and rescue equipment are inspected.			
☐	Lighting and electrical equipment are suitable for the atmosphere and location.			
☐	Industrial vacuum use inside or near the space is technically reviewed for material and area classification.			
☐	Hoses, cords and ducting do not obstruct egress.			
☐	Hot work, coating, cleaning chemicals or inert-gas use triggers additional controls.			
☐	Entry is stopped when conditions deviate from the permit.			
☐	Canceled permits and entry records are retained according to the applicable program.			



10 HOT WORK, IGNITION CONTROL AND FIRE-WATCH READINESS

Objective

Control ignition sources and protect personnel, equipment and adjacent process areas during welding, cutting, grinding and other spark- or heat-producing work.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Hot-work permit and area classification requirements are confirmed.			
☐	Combustible and flammable materials are removed, isolated or protected.			
☐	Gas testing is completed at required locations and intervals.			
☐	Nearby drains, sewers, vents, openings and lower levels are assessed.			
☐	Fire watch is trained, dedicated and equipped.			
☐	Fire extinguishers and hose lines are positioned and inspected.			
☐	Welding leads, grounds, machines and cables are inspected.			
☐	Ground connection is positioned to prevent stray current through bearings or process equipment.			
☐	Gas cylinders are secured, separated, capped and moved correctly.			
☐	Hoses, regulators and flashback arrestors are inspected.			
☐	Sparks, slag and hot metal are contained using suitable screens and blankets.			
☐	Adjacent operations and SIMOPS conflicts are reviewed.			
☐	Post-work fire watch duration and area inspection are defined.			
☐	Industrial vacuum equipment is not used to collect hot material, sparks or smoldering debris.			
☐	Hot-work permits are closed only after required monitoring is complete.			



11 LIFTING, RIGGING, SCAFFOLDING AND WORK-AT-HEIGHT READINESS

Objective

Verify engineered lift planning, competent personnel, certified equipment, controlled access and fall protection.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Lifts are categorized and critical-lift criteria are applied.			
☐	Lift plans identify load weight, center of gravity, radius, crane capacity, rigging and travel path.			
☐	Ground conditions, underground services and outrigger support are verified.			
☐	Crane and rigging inspections and certifications are current.			
☐	Operators, riggers, signal persons and lift directors are competent and assigned.			
☐	Exclusion zones and tag-line requirements are defined.			
☐	Weather and wind limits are established and monitored.			
☐	Overhead power lines and energized equipment are addressed.			
☐	Dropped-object controls are in place for elevated work.			
☐	Scaffolds are designed, tagged, inspected and modified only by authorized personnel.			
☐	Access ladders, platforms, guardrails and toe boards are complete.			
☐	Fall-protection systems and rescue arrangements are suitable for the task.			
☐	Vacuum hoses, cords and tools at elevation are secured against falling.			
☐	Vacuum hose routing does not overload scaffold components or create trip hazards.			
☐	Housekeeping keeps platforms and access routes free of debris.			
☐	Lift and scaffold conflicts with process access and emergency routes are resolved.			



12 ELECTRICAL SAFETY, TEMPORARY POWER, LIGHTING AND EQUIPMENT SUITABILITY

Objective

Ensure temporary and portable electrical systems are correctly selected, protected, inspected and located for the work environment.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Electrical area classification drawings are current and available at the work front.			
☐	Portable equipment is suitable for the location and atmosphere.			
☐	Temporary distribution boards, transformers and panels are inspected and protected.			
☐	Ground-fault protection and grounding requirements are implemented.			
☐	Cords, plugs, connectors and strain relief are inspected before use.			
☐	Damaged or makeshift electrical equipment is removed from service.			
☐	Extension cords are sized for load and distance and protected from traffic and sharp edges.			
☐	Voltage, phase, frequency and available circuit capacity are verified.			
☐	Lighting provides adequate illumination without creating glare or ignition risk.			
☐	Electrical isolation boundaries and qualified-person requirements are defined.			
☐	Arc-flash and shock hazards are assessed where applicable.			
☐	Industrial vacuum electrical rating is verified for the exact work location.			
☐	Standard HEPA filtration is not treated as evidence of hazardous-location electrical suitability.			
☐	Vacuum cords and hoses are routed to avoid process heat, traffic, water and egress routes.			
☐	Portable equipment inspection tags are current.			
☐	Emergency shutdown and power-disconnection methods are known to operators.			



13 INDUSTRIAL HYGIENE, HAZCOM, PPE AND EXPOSURE CONTROL

Objective

Identify chemical and physical exposures, communicate hazards and implement the hierarchy of controls before relying on PPE.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Chemical inventory and current SDSs are available for materials used or encountered.			
☐	Expected process residues and contaminants are identified before opening equipment.			
☐	Exposure assessments cover dust, fibers, metals, hydrocarbons, H ₂ S, benzene, noise, heat and other relevant hazards.			
☐	Engineering controls such as isolation, ventilation, wet methods or source capture are specified.			
☐	HEPA vacuuming is selected only after material and equipment suitability review.			
☐	Respiratory protection requirements are based on exposure assessment and program requirements.			
☐	Medical evaluation, fit testing, training and cartridge-change schedules are current.			
☐	PPE matrix is task and area specific.			
☐	Chemical-resistant clothing and gloves are compatible with the material.			
☐	Hearing protection and noise-zone controls are implemented.			
☐	Heat-stress plan covers hydration, acclimatization, work/rest and medical response.			
☐	Hygiene facilities and contamination-control zones are established where needed.			
☐	Decontamination requirements for personnel, tools and rental equipment are defined.			
☐	Air monitoring strategy, sampling ownership and action limits are documented.			
☐	Labels, secondary containers and waste containers meet site HazCom requirements.			
☐	Exposure records and medical-surveillance requirements are identified.			



14 EMERGENCY RESPONSE, SEVERE WEATHER AND INCIDENT READINESS

Objective

Ensure the expanded turnaround workforce can rapidly recognize, report and respond to credible emergencies.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Emergency action plan reflects turnaround staffing, temporary facilities and blocked routes.			
☐	Alarm types, notification methods and worker actions are communicated.			
☐	Muster points have sufficient capacity and accountability methods.			
☐	Emergency contact numbers and radio channels are posted.			
☐	Fire, medical, rescue, spill and security resources are available for all shifts.			
☐	Ambulance access and hospital arrangements are confirmed.			
☐	Confined-space rescue coverage is verified before each entry.			
☐	Incident command roles and interfaces with public responders are defined.			
☐	Weather monitoring covers lightning, hurricanes, severe storms, heat and cold.			
☐	Shelter-in-place and evacuation criteria are understood.			
☐	Temporary structures and loose materials are included in severe-weather planning.			
☐	Emergency shutdown and safe work suspension procedures are defined.			
☐	Spills from temporary equipment, fuels and waste storage are included in response planning.			
☐	Headcounts include contractors, visitors and night shift.			
☐	Drills or tabletop exercises are completed before peak execution.			
☐	Incident, near-miss and high-potential event reporting is immediate and standardized.			

**15 ENVIRONMENTAL PROTECTION, WASTE, DRAINAGE AND SPILL CONTROL****Objective**

Prevent releases, control waste streams and ensure recovered material is characterized, contained, transported and disposed of correctly.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Environmental permits and turnaround-specific restrictions are identified.			
☐	Drain, sewer and stormwater protection plan is implemented.			
☐	Waste streams are characterized and compatible containers selected.			
☐	Labels, accumulation dates and container-closure requirements are defined.			
☐	Hazardous and nonhazardous wastes are segregated.			
☐	Vacuum-collected material is not assumed nonhazardous without characterization.			
☐	Bag, drum, tote or liquid-transfer method is approved before collection begins.			
☐	Waste staging areas have secondary containment and weather protection.			
☐	Spill kits are matched to credible materials and located near work.			
☐	Vacuum liquid recovery does not discharge to drains without authorization.			
☐	Decanting, transfer and container changes are controlled.			
☐	Waste manifests and disposal documentation are retained.			
☐	Air-emission controls and open-equipment restrictions are addressed.			
☐	Noise, light and odor impacts are considered for nearby communities.			
☐	Equipment decontamination wastewater is captured and managed.			
☐	Final walkdown verifies no waste, hoses, bags or temporary materials remain.			



16 INDUSTRIAL HEPA VACUUM APPLICATION ASSESSMENT

Critical rule

HEPA filtration describes particulate filtration performance. It does not by itself make a vacuum explosion-proof, intrinsically safe or suitable for flammable vapor, combustible dust, pyrophoric material, hot material, reactive chemicals or electrically classified locations.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Material name and source are identified.			
☐	Current SDS, laboratory data or process knowledge is available where applicable.			
☐	Material state is defined: dry dust, chips, fibers, granules, wet debris, liquid, slurry or mixed.			
☐	Potential flammability, combustibility, explosibility, reactivity and pyrophoricity are assessed.			
☐	Temperature of collected material is within equipment limits.			
☐	Chemical compatibility with hose, seals, filters, tank and collection system is confirmed.			
☐	Electrical area classification is identified for the vacuum location and hose pickup point.			
☐	Required equipment certification or listing is documented.			
☐	Exposure-control objective is defined: housekeeping, source capture, bulk recovery or spill recovery.			
☐	Expected loading rate and total material volume are estimated.			
☐	Maximum particle size and presence of sharp objects are assessed.			
☐	Required hose length, diameter, bends and vertical lift are documented.			
☐	Pickup tools and restricted-access needs are identified.			
☐	Wet and dry materials will not be mixed unless specifically approved.			
☐	Collection and disposal method is approved before use.			
☐	Decontamination and return condition for rental equipment are agreed.			
☐	Application has been approved by facility EHS/engineering and HireAVac technical representative where required.			



17 VACUUM CONFIGURATION AND EQUIPMENT-SELECTION CHECKLIST

Selection principle

Evaluate the complete system: airflow, vacuum pressure, hose length and diameter, tool restriction, filter loading, collection capacity, electrical supply, mobility and disposal method.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Vacuum model and unique asset number are recorded.			
☐	Manufacturer specifications match the intended material and duty.			
☐	Final filter type and classification are verified for the exact unit.			
☐	Filter integrity or test documentation is available where contractually required.			
☐	Cyclonic separation or pre-separation is selected where beneficial.			
☐	Prefilter type, quantity and change method are suitable for the dust loading.			
☐	Hose diameter balances pickup velocity, material size and resistance.			
☐	Hose length and vertical lift have been reviewed for expected performance.			
☐	Floor, crevice, brush, pipe, ledge or custom tools are available.			
☐	Collection capacity and change frequency are suitable for the shift workload.			
☐	Bag, container or liquid collection arrangement meets disposal needs.			
☐	Wet-pickup configuration is confirmed where applicable.			
☐	Power supply, plug, circuit, voltage and extension requirements are compatible.			
☐	Noise and operator-handling considerations are addressed.			
☐	Backup vacuum or critical spare filters are available where downtime is unacceptable.			
☐	Number of units matches simultaneous work fronts and shift pattern.			
☐	Placement keeps the vacuum in an approved location while allowing effective hose reach.			



18 VACUUM MOBILIZATION, DELIVERY AND SITE-ACCEPTANCE INSPECTION

Objective

Verify that rental equipment arrives complete, undamaged, documented and suitable for the approved application before it enters service.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Purchase order, rental agreement, insurance and vendor onboarding are complete.			
☐	Delivery date, gate requirements, unloading method and site contact are confirmed.			
☐	Vacuum asset number, model and serial number match the delivery documents.			
☐	Equipment is clean and free from unexplained residue or odor.			
☐	Tank, frame, wheels, handles and latches are undamaged.			
☐	Power cord, plug, switches, controls and emergency stop are intact.			
☐	Hoses, cuffs, clamps, gaskets and tools are complete and undamaged.			
☐	Filters are correctly installed and access covers are secured.			
☐	HEPA or filter documentation matches the exact unit where required.			
☐	Collection bags, liners, containers and consumables are included.			
☐	Operating manual and application limitations are available.			
☐	Electrical inspection and site portable-appliance requirements are complete.			
☐	Functional test confirms normal startup, airflow and absence of abnormal noise.			
☐	Operator training and site-specific briefing are complete.			
☐	Approved vacuum location and hose route are identified.			
☐	Delivery condition is photographed and discrepancies recorded before use.			
☐	Equipment has an acceptance tag showing approved application and restrictions.			

**19 DAILY / SHIFT INDUSTRIAL VACUUM PRE-USE CHECKLIST****Operator rule**

Stop work if the material, work area, atmosphere or equipment condition differs from the approved application.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Operator is trained and authorized for this equipment and application.			
☐	Approved material and work area are confirmed before starting.			
☐	Area classification and ignition-source restrictions remain unchanged.			
☐	Vacuum exterior is clean enough for inspection.			
☐	Power cord, plug, controls and grounding features are undamaged.			
☐	Hoses, fittings and tools are free of holes, crushing, blockage and loose connections.			
☐	Filters, covers, seals and latches are correctly fitted.			
☐	Collection bag or container is installed and has sufficient capacity.			
☐	Vacuum location is stable, dry, protected and does not obstruct egress.			
☐	Hose and cord routing avoids traffic, hot surfaces, sharp edges and trip hazards.			
☐	Pre-use functional test shows normal sound, airflow and suction.			
☐	No abnormal vibration, heat, odor, arcing or leakage is present.			
☐	Filter-loading indicator or performance is checked where equipped.			
☐	Wet pickup and dry pickup configurations are not mixed without approval.			
☐	Collected material is not hot, smoking, reactive, flammable or unknown.			
☐	Bag/container change area and disposal route are ready.			
☐	Spill response and emergency shutdown method are known.			
☐	Inspection result and defects are recorded; defective equipment is tagged out.			



20 WORK-FRONT HOUSEKEEPING AND PRODUCTIVITY AUDIT

Objective

Maintain safe access, reduce repeated cleanup delays and prevent collected material from becoming a secondary hazard.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Housekeeping responsibility is assigned to each contractor and work front.			
☐	Cleanup frequency is defined by hazard and work activity, not only end of shift.			
☐	Access, ladders, platforms, exits and emergency equipment remain clear.			
☐	Hoses and cords are routed, ramped, suspended or barricaded as appropriate.			
☐	Debris does not accumulate on scaffolds, gratings, ledges or elevated structures.			
☐	Sharp objects are separated from vacuumable material.			
☐	Hot work debris is cooled and verified before collection.			
☐	Unknown residue is not vacuumed until identified and approved.			
☐	Vacuum remains in its approved area and is not moved into a classified location without review.			
☐	Pickup performance remains adequate at the tool.			
☐	Filter loading and collection capacity are managed before severe performance loss.			
☐	Bag/container changes prevent uncontrolled dust or liquid release.			
☐	Waste containers are closed and labeled promptly.			
☐	Wet floors, leaks and spill residues receive appropriate controls.			
☐	Completed areas are inspected before release to the next trade.			
☐	Housekeeping deficiencies are recorded and corrected before shift handover.			
☐	Vacuum downtime, filter changes and recurring access issues are tracked for improvement.			



21 SHIFT HANDOVER, PROGRESS CONTROL AND EMERGENT-WORK MANAGEMENT

Objective

Transfer accurate information across shifts and prevent incomplete work, changing conditions or hidden hazards from being overlooked.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Shift progress is updated against the integrated schedule.			
☐	Open permits, suspended permits and active isolations are reviewed.			
☐	Work-front condition and housekeeping status are communicated.			
☐	Incomplete bolting, open lines, removed guards and temporary supports are identified.			
☐	Confined spaces, gas tests and rescue status are handed over.			
☐	Hot-work status and post-work fire watch are communicated.			
☐	Crane, scaffold and access restrictions are reviewed.			
☐	Vacuum asset location, approved application and equipment condition are recorded.			
☐	Collection containers, waste status and pending disposal are communicated.			
☐	Equipment defects and tagged-out tools are listed.			
☐	Emergent work is risk assessed, scoped, planned and authorized before execution.			
☐	Schedule impact and resource needs for discovery work are assessed.			
☐	Open safety observations, near misses and corrective actions are reviewed.			
☐	Weather, alarms, process conditions and adjacent work changes are communicated.			
☐	Incoming supervisors acknowledge and accept the handover.			
☐	Critical handover information is recorded, not communicated only verbally.			



22 MECHANICAL COMPLETION, RESTORATION, PSSR AND STARTUP READINESS

Objective

Verify that equipment, safeguards, documentation and operating readiness are complete before hazardous chemicals or energy are reintroduced.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Work packs are closed with inspection, test and quality records complete.			
☐	Punch items are categorized by startup criticality and approved.			
☐	Pressure tests, leak tests, NDE and functional tests meet acceptance criteria.			
☐	Temporary supports, jumpers, hoses, blinds and bypasses are reconciled.			
☐	Guards, insulation, fireproofing, labels and access components are restored.			
☐	Valves, instruments, trips, alarms and safety systems are in the correct configuration.			
☐	Relief devices and protective systems are installed and documented.			
☐	LOTO removal and energy restoration follow approved procedures.			
☐	Blind/spade and isolation registers are fully reconciled.			
☐	Vessels, piping and equipment are clean and free of tools, debris and foreign material.			
☐	Final industrial vacuum cleanup and waste removal are complete.			
☐	MOC actions, procedure updates and training are complete.			
☐	PSSR verifies construction, procedures, safety systems and employee readiness.			
☐	Open items that do not prevent startup have approved risk controls and due dates.			
☐	Operations accepts custody of the equipment or system.			
☐	Startup sequence, communication and emergency support are ready.			
☐	Formal startup authorization is signed before introducing hazardous chemicals.			



23 DEMOBILIZATION, EQUIPMENT RETURN AND TURNAROUND CLOSEOUT

Objective

Close the turnaround in a controlled way, return equipment in agreed condition and capture lessons while information is current.

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	All contractor work fronts are inspected and released.			
☐	Temporary facilities, utilities, scaffolds, barricades and access systems are removed or transferred.			
☐	Waste, scrap, surplus material and abandoned tools are removed.			
☐	Vacuum collection tanks, bags and hoses are emptied using the approved waste route.			
☐	Rental vacuum decontamination requirements are completed and documented.			
☐	Vacuum exterior, hose, tools and accessories are inspected before return.			
☐	Damage, missing components and abnormal contamination are reported.			
☐	Return photographs and equipment condition report are completed.			
☐	Rental stop date, collection date and final charges are reconciled.			
☐	Contractor badges, keys, radios and permits are returned.			
☐	Temporary MOCs and bypasses are closed or converted to controlled permanent status.			
☐	Final cost, schedule, safety, quality and environmental performance is reviewed.			
☐	Contractor performance reviews are completed.			
☐	Lessons learned include planning, permits, logistics, vacuum performance and housekeeping.			
☐	Action owners and due dates are assigned for post-turnaround improvements.			
☐	Records are archived according to facility requirements.			



24 OPEN-ACTION REGISTER AND READINESS DECISION

Use

Record every unresolved item that could affect safety, compliance, quality, cost, schedule or startup. High-risk items must not be accepted informally.

ID	Action / Gap	Risk	Owner	Due	Evidence required	Status	Approval
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							



24A READINESS APPROVAL SIGNATURES

Decision statement

By signing, each approver confirms that the readiness evidence within their area has been reviewed, unresolved risks have been escalated, and the stated readiness decision is accurate as of the date and time signed.

Role	Name / Company	Signature	Date / Time
Turnaround Manager			
Operations Manager			
Maintenance Manager			
EHS Manager			
Inspection / Reliability Lead			
Primary Contractor Manager			

**25 HIREAVAC ONSITE DEMONSTRATION AND SEVEN-DAY TRIAL READINESS FORM****Offer framework**

A no-cost onsite demonstration and qualifying seven-day equipment-hire trial may be considered after application review. Availability, site access, application approval, rental documentation and written terms apply. Delivery, collection, consumables, cleaning, damage, loss and other charges may apply unless confirmed in writing.

Customer / Facility _____	Project / Turnaround _____	Site address _____
Requested demo date _____	Turnaround date _____	Primary contact _____
Phone _____	Email _____	Material _____
SDS reference _____	Work-area classification _____	Hose distance _____
Vertical lift _____	Power supply _____	Number of work fronts _____

Status	Verification item	Responsible	Due / Date	Evidence / Comments
☐	Customer has provided material identity and relevant SDS/process information.			
☐	Work area is confirmed general purpose or required certification has been identified.			
☐	HireAVac has reviewed the application limitations.			
☐	Site access, induction, insurance and vendor requirements are understood.			
☐	Demonstration location and safe test material are approved.			
☐	Required hose, tools, filters, collection system and power are available.			
☐	Customer representative and vacuum operator will attend the demonstration.			
☐	Demonstration success criteria are agreed before testing.			
☐	Trial start/end dates and equipment availability are confirmed.			
☐	Written trial terms, damage responsibility and return condition are accepted.			
☐	Waste disposal and decontamination responsibilities are agreed.			
☐	Demonstration and trial results will be documented.			



26 REGULATORY ANCHORS AND REFERENCE FRAMEWORK

Reference note

This list provides common U.S. regulatory anchors for refinery turnaround planning. It is not exhaustive. State-plan requirements, EPA requirements, fire codes, electrical codes, consensus standards, corporate standards and facility procedures may add or exceed these controls.

Reference	Application to turnaround	Official source
29 CFR 1910.119	Process Safety Management of Highly Hazardous Chemicals - includes contractor requirements for turnaround and maintenance work on or adjacent to covered processes.	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.119
29 CFR 1910.147	Control of Hazardous Energy (Lockout/Tagout).	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.147
29 CFR 1910.146	Permit-Required Confined Spaces.	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.146
29 CFR 1910.1200	Hazard Communication - chemical classification, labels, SDS and employee information.	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200
29 CFR 1910.134	Respiratory Protection.	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134
29 CFR 1910.252	General requirements for welding, cutting and brazing.	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.252
29 CFR 1910 Subpart S	Electrical safety requirements.	https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910SubpartS
OSHA Process Safety Management	Overview, standards and enforcement resources.	https://www.osha.gov/process-safety-management

HireAVac technical contact

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