Port of Vancouver Tesoro Savage Petroleum Terminal Project

HSSE Execution, Construction and Commissioning Plan

SAVAGE HSSE Overview

Health, Safety, Security and Environmental (HSSE) Plan

Since January 1998, Savage has maintained a partner company relationship in the American Chemistry Council's (formerly the Chemical Manufacturers Association) Responsible Care® initiative. Savage's interpretations of and commitment to the Responsible Care® Codes of Management Practices are:

Employee Health and Safety: We will protect and promote the health and safety of individuals working at or visiting the Facility. Our employees have the necessary training and resources to perform their work in a safe and prudent manner. Employees attend communication meetings and are given opportunities to participate in developing, implementing, and reviewing health and safety programs. All employees and visitors to the Facility follow safe and environmentally responsible work practices.

Process Safety Management: Procedures are in place to ensure that work is performed safely, effectively and productively. Employees are hired using Savage's comprehensive "Hire Right!" program and trained on applicable work procedures. Each facility has written, process specific operating procedures defining the scope of work, the required personal protective equipment, and the potential hazards. Customer service profiles are maintained on each customer, documenting proprietary and specific service requirements. Equipment is maintained both preventatively and progressively, and documented accordingly. In the event of an occurrence, Root Cause Analysis is performed and corrective actions are implemented.

Community Awareness and Emergency Response: We are committed to emergency preparedness through proper planning, risk assessment and training. We effectively communicate with the community and emergency responders regarding our facilities in an effort to promote emergency preparedness. Where available and practicable, we maintain communication with the Local Emergency Planning Committee (LEPC) and local emergency responders to foster knowledge of our operations and potential hazards. Public concerns about our facilities are addressed on a case by case basis.

Security: We are committed to provide for and promote the general security of our employees, our customers and their products, our facilities and equipment, facility visitors and the general public. Security becomes the responsibility of each employee. It is our intent, where possible, to detect, deter and delay anyone or anything from obtaining unauthorized access to our facilities that would pose a security risk. Security vulnerable assessments are conducted at our facilities to determine security risks and weaknesses. A site specific security plan is developed from the vulnerability assessment. Employees are trained in their responsibilities with regards to the security plan. Security plans are kept confidential and are only shared where necessary.

Pollution Prevention: We are committed to achieving ongoing reductions in the amount of contaminants and pollutants released to the air, water and land. Controls are in place at

facilities to prevent releases of contaminants. We value the communities and physical environments in which we operate. Annual emergency response drills are held in an attempt to reduce or eliminate potential releases into the environment. Work practices are routinely evaluated, through monthly inspections and observations, to ensure proper measures are taken to protect and preserve the environment. Possible waste streams are identified, tracked, recorded and evaluated to ensure proper disposal.

Product Stewardship: We take full responsibility and accountability for the products we handle for our customers, those products we use in providing our services, any by-products that may be generated in the course of our business and our employees are trained to appropriately respond in each instance. We maintain close contact with customers and vendors regarding specific handling instructions. We understand our obligation to protect the health, safety and environment of our employees, our customers and the communities in which we reside. All business is conducted in compliance with government regulations.

Distribution: We take full responsibility for reducing the risk of harm posed by the distribution of the products within our care, custody and control. Employees are trained in proper handling procedures and emergency preparedness and attend safety meetings to develop and maintain the integrity of our distribution practices. We constantly seek creative solutions to improve distribution safety. Inspections and observations are conducted in an effort to preempt distribution failures.

In an effort to maintain an atmosphere of continuous improvement, annual reviews of the above seven codes are performed to ensure that standards are being met. Each at Savage is committed to delivering safe, quality, and environmentally responsible "***Best Value –Worry Free***" service.

Safety Program

Safety is of paramount importance to us. Drawing upon Savage's extensive operational experience, and applying the Savage Hazard Analysis & Prevention System at every stage, Savage designs facilities that are safe, environmentally sensitive, efficient and highly productive. We will implement a strong safe operations plan, which will include:

- Safe operating procedures designed specifically for the Facility and rail operating partners, the product to be handled, and the Facility's operating objectives;
- Safety and emergency procedures that are integrated with the Facility's and the Port's own procedures;
- Implementation of Savage's Lead Safety

VPP
Voluntary Protection Programs
An OSHA Cooperative Program

Specialists and Safety Specialists systems on site, together with ongoing safe operations training; and

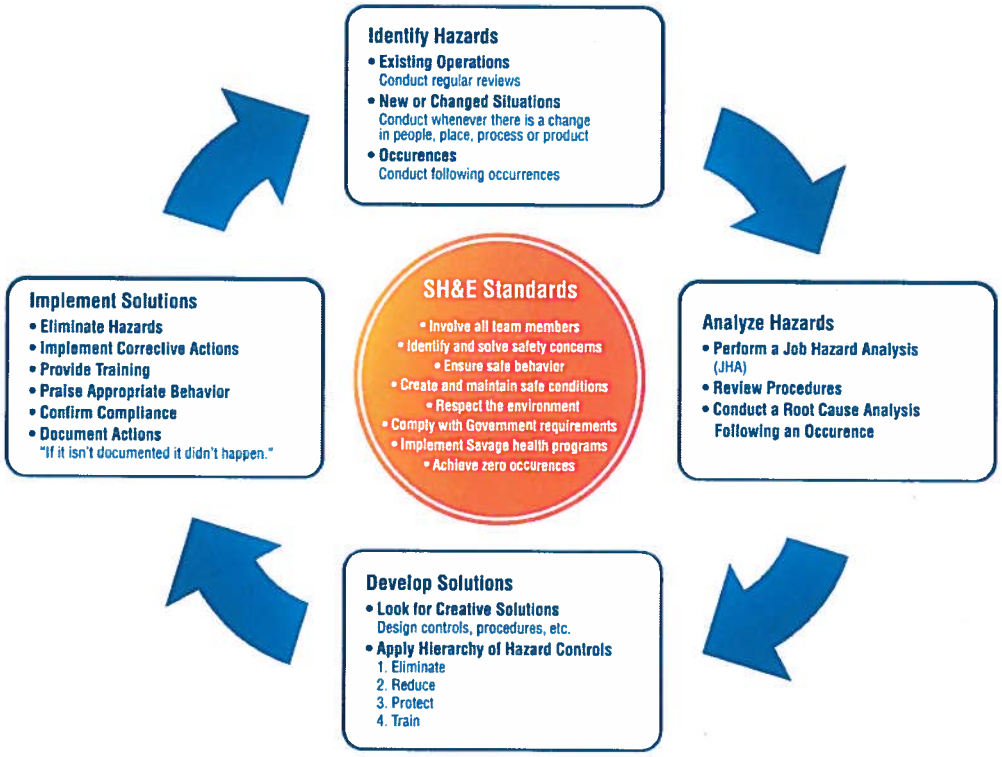
- Access to Savage's safe operations programs and industry training, including OSHA, FRA and HAZMAT training.

Safety Specialist Program:
The objectives of our Safety Specialist Program is to have the front line employees be active team members and actively involved in the safety program, instill Savage's safety standards and the Savage System into the hearts of our front line safety team, provide safety assistance with the manager at the operation level by implementing Savage's proprietary SHAPS program and S^7 operating system, create an environment where we have Safe Behaviors and Safe Conditions, and create a level of Zero Occurrences.

Savage trains operations managers and individual operators to be Lead Safety Specialists and Safety Specialists. Over 40 percent of our current work forces have been trained in these programs.

Savage Hazard Analysis and Prevention System (SHAPS)
SHAPS is Savage's proprietary system used to identify and mitigate hazards. A summary of our SHAPS model in visual form is included below.

SAVAGE Hazard Analysis & Prevention System (SHAPS)



Environment

We recognize and respect the beauty and uniqueness of the area in which the Port is located, and understand its part in the greater ecosystem. We bring to the Port the expertise and commitment of Savage to operate the Facility in an environmentally responsible manner.

Spill Prevention and Response

While we have active programs to test and improve our ability to effectively respond to a spill, our focus is on prevention.

Hydrogen Sulfide (H_2S)

Hydrogen Sulfide (H_2S) is ever present in many industrial processes as a by-product and also during the decomposition of organic matter containing sulfur. H_2S can be found in, but not limited to: refineries, drilling operations, blowouts, tank gauging, tank batteries and wells, recycled drilling mud, and water from sour crude wells. H_2S may also be found in most processes present at sulfur terminals. Savage has extensive experience with H_2S through our sulfur, refinery and crude oil transloading operations.

- All employees will be provided awareness training and testing through Savage's Hazard Analysis & Prevention System in order to be familiar with the potential hazards and proper safe work procedures to follow if exposed to this health hazard. The training will be provided prior to working in any job with potential exposure to H_2S operations;
- Savage will issue personal H_2S monitors to all employees.

Training Program

Savage employees are trained on safe work practices, processes, policies, rules, regulations and site specific operational items. The most important asset at all of our operations is our PEOPLE. We employ the highest quality people by way of Savage "Hire Right, Train Right, Treat Right" program. This program identifies the attributes that best fit the individual operation and incentivizes our people to ask the question; "How can we become better tomorrow than we are today?"

New and Existing Employees

All employees must complete all site specific hazard/customer specific training and site regulatory requirements training before receiving the following training: Employees must complete the New Hire Railroad Operations (RO) Training and pass the associated exams.

Employees in training must complete the following to the satisfaction of a qualified trainer:

- Baseline procedures,
- Site specific procedures,
- Job specific training,
- Pass the written exam(s),
- Pass proficiency exam(s)

Employees may complete the baseline training prior to completing the New Hire RO Training, in a non-production area or a safe location as long as the employee is under the direct and immediate supervision of a trained and qualified employee.

Employees must complete the Port specific training regarding On Track Safety (OTS) along with any additional Port required training.

NOTE:* Any employee **NOT having completed documentation of his/her training must be under the direct and immediate supervision of a trained and qualified employee while performing the new job or task.

HSSE Management

The Health, Safety, Security, and Environmental (HSSE) execution plan provides an overview of relevant HSSE topics and their application to the construction and commissioning of the Tesoro Savage Petroleum Terminal (the "Project"). Tesoro Savage Petroleum Terminal LLC, the Project owner, intends to contract with Savage to manage the construction and commissioning of the Facility.

The objectives of this HSSE Execution Plan are:

- To clearly state the Project HSSE objectives and expectations and provide a tool for the Project Team to use in achieving them;
- To detail the Project organization, responsibilities and methods of management control as they relate to HSSE; and
- To provide an overview of relevant HSSE topics and their application during the Project.

Savage Rules of Safety establish the minimum requirements for the safety procedures to be followed during the Project. Although embedded in each of these rules, it is important to emphasize that:

- Work will not be conducted without a pre-job risk assessment and a safety discussion appropriate for the level of risk.
- All persons must only undertake work for which they are trained and competent, medically fit and sufficiently rested and alert to carry out.
- Engineering controls, work practices and personal protection equipment will be used as per the risk assessment and minimum site requirements.
- Emergency response plans, including rescue plans, will be developed from a review of credible potential emergency scenarios, and will be established before commencement of work.
- Everyone has the right and obligation to stop work that is unsafe.

The Project Team will incorporate Savage Safety Rules through the use of policies for each of the elements.

Where contractor procedures are more rigorous than Savage procedures, the contractor procedure will take precedence and must be followed by the contractor.

Project Objective

The Tesoro Savage Petroleum Terminal (the "Facility") will include the capability to transload North American crude oil from railcar to storage and then to vessel for distribution to refineries on the North American west coast. The Facility will include rail car unloading stations, crude oil storage tanks, vessel loading infrastructure, and associated piping and equipment, and will be capable initially of handling up to two unit trains of crude oil per day, with the potential for near-term expansion to handle up to four unit trains per day. Benefits include:

- Economic benefits to Washington State
- Long-term supply chain benefit (North American vs. imported crudes)
- Reduce ANS dependency as ANS production declines
- Diversify the feedstock options (crude slate and intermediates)

General HSSE Requirements

The expectation is that all contractors will follow all of the Savage HSSE guidelines and procedures for the Project. This includes, but is not limited to:

- Contractors' HSSE Handbook
- Contractor Process Hazards Handbook
- Recycle program (including disposal of fabrication extras)
- Contractor Qualifications
- Savage Safety and Health Manual

Specific HSSE Requirements

Possible Chemical Exposure

- H_2S – MSDS
- Utility Water – MSDS
- Crude - MSDS
- Diesel - MSDS
- Crude Additive 1 - MSDS
- Crude Additive 2 - MSDS

Principles

The following principles will guide the collective Project Team in all Project activities:

- There is no task so important that the time cannot be taken to do it safely.
- People are our most important asset.
- Communication is the key to injury prevention.
- All injuries, property damage and environmental incidents are preventable.
- Everyone is expected to stop unsafe work.
- Near miss reports are a gift. Elimination of little things will prevent larger things from occurring.
- Addressing safety in the planning phase of a job saves time and prevents incidents
- Effective safety management and leadership are good business.

Project HSSE Policy

Everyone who works for Savage is responsible for getting HSSE right. Good HSSE performance and the health, safety and security of everyone who works for us are critical to the success of our business.

Our goal is simple - No accidents, No harm to people, and No damage to the environment.

We continue to drive down the environmental and health impact of our operations by pollution prevention, reducing waste, emissions and discharges, and using energy efficiently.

Culture

Savage has a well-established HSSE program and a history of best-in-class safety and environmental performance. Although nothing is being taken for granted, the Project Leadership Team expects to benefit from this tradition of safe work performance.

Workforce

The Project is located in Vancouver, WA. The area is home to a local contractor workforce. The duration of the Project and its timing in relation to other projects in the area should allow for a stable, well trained workforce. Each contractor will be responsible for screening its employees to determine their appropriateness for a role and for assuring their competency.

SAVAGE and Business Unit Alignment

The HSSE Execution Plan as outlined in this document was developed in alignment with Savage HSSE goals, expectations and standards as presented in the following:

- Savage Rules of Safety
- Group Defined Practice for Assessment, Prioritization & Management of Risk
- Reporting HSSE and Operational Issues
- Group Defined Practice for Incident Investigation
- Savage Control of Work Standard
- HSSE Review of Projects

Project HSSE Goals

We are convinced that, through a dedicated commitment to HSSE, a goal of ZERO incidents is achievable.

Project HSSE Targets

Output Metrics			Input Metrics	
Days Away From Work Cases	0		To be decided	
Recordable Injury Frequency Rate (RIF)	0.35		Joint Safety Observations Completed	
Loss of Primary Containment (LOPC)	0			
Environmental Reportable Incidents	0		Pre-Task Assessments Completed	

We are committed to completing this Project incident and injury free. Our commitment to safety is absolute and never ending. We care about the health, safety, and security of every worker, neighbor, and customer, and we will protect the environment in which we operate.

By following procedures and policies, performing risk assessments, upholding the responsibilities in Control of Work, and practicing and expecting safe work activities from others, we can make this Project incident and injury free.

HSSE Training Expectations

Training expectations include HSSE-related, project-specific training for the Project Team members and the construction contractors' supervisory personnel, as well as turnover and pre-commissioning training for the Construction Management and Commissioning personnel.

Orientation

All personnel are required to complete the Safety Orientation Training program before performing work on site.

- Training for individuals who are making deliveries, but not performing other work onsite, may be limited to the Driver's Site Safety Orientation video.
- Visitors will be escorted by a Project Team member or by suitably qualified contractor personnel at all times. The Visitor Orientation program is provided by the HSSE Team.
- The use of the Escort Policy must not be used to circumvent training requirements.
- Authorization for escort training and the authority to escort Project visitors is provided by the Project HSSE Manager.

Contractor Specific Safety Orientation

Prior to performing any work onsite, new contractor employees must receive all required contactor-specific safety training required for their role. In addition, the contractor-specific training must detail the Project specific risk assessment procedure.

Each contractor Safety Execution Plan must include a safety training matrix that identifies the training provided to each employee, by role, trade or other grouping.

Project Specific Safety Orientation

Completion of a Project Specific Safety Orientation is required for unescorted access to the Project site. The orientation will be facilitated by the Project HSSE Manager and the Project Manager, or their designees.

Specialized Training

Specialized HSSE Training (i.e. Safety Tech, HazOp, COW, etc.) may be required for certain roles within the Project Team. The Project HSSE Manager will coordinate this training as needs are identified.

Safety Committees

Safety committees are a recognized way to increase the effectiveness of the overall safety program. The Project recognizes the value of these committees and the empowerment they provide the contractors.

Petroleum Terminal Project Craft Safety Committee

The Project will maintain a cross functional safety team to provide a forum for addressing safety and health concerns related to field construction activities. The team will be comprised of hourly/craft employees with staff support. All contractors performing field construction activities on the Project must have representation on the Project Safety Team. Terms of Reference are included in Appendix 5.

Safety Meetings

Safety meetings differ from safety committees in their intent and format. The Project requires both safety committees and safety meetings.

Toolbox Talks

Daily toolbox talks are required for all groups prior performing field work. The talks should be specific to the work to be performed that day (Permits, PPE requirements, JSAs, PTAs, etc.). These should be led by a work crew member and be a *conversation about the topic, not a presentation*

Weekly All-Hands Safety Meetings

At the start of each work week, an all-hands meeting will be held. General safety information will be shared along with an update on the weeks planned scope. These informal meetings will be co-lead by the Construction Manager and HSSE Manager or their delegates.

Monthly Safety Meeting

Each contractor must have a monthly safety meeting with their onsite employees to provide a forum for an extended conversation about a project-specific training topic.

All-Hands Safety Meetings

The Project will present the content from the all-hands meetings. The content may be modified at the discretion of the Project HSSE Field Coordinator to ensure relevancy to the Project.

Communications

Effective communication is critical to the success of the Project. Communication occurs in many forms, including email, groups meetings, and individual face-to-face. When it comes to HSSE concerns, it is important that we communicate quickly and completely so that appropriate action can be taken to mitigate the concern.

Policies & Procedures

Relevant and Project policies & procedures will be available to all contractors through online access. Hard copies of the most relevant Health & Safety Procedures will be kept in the Permitting Trailer for easy reference.

Meetings

Meetings are effective for sharing consistent information with multiple people. They do not replace the need for individual face-to-face communication. Meeting participation should be broad enough to meet the objectives of the meeting, but attendance should also be consciously limited to only those who are required.

Radio Communication

The ability to effectively communicate has direct safety implications. Project radio traffic will occur on Savage's radio system. Radio channels on the radio system will be assigned and a chart will distributed.

Contractors may choose to operate on their own radio systems; however, select personnel for each contractor must also carry Savage radios. At a minimum, all Project safety personnel will be available on Savage radios.

HSSE Leadership

The Project Team will demonstrate HSSE leadership by incorporating HSSE elements into a variety of Project activities. This HSSE Execution Plan and its details must be supported by all team members.

Demonstration of HSSE Leadership

All team members will:

- Start each meeting with a relevant HSSE discussion topic.
- Share lessons learned to aid in raising HSSE awareness.
- Participate in all HSSE related training.
- Actively report, investigate and embed learning from safety opportunities and near misses.

Additionally, Project Leadership Team (PLT) members will:

- Review all new and outstanding HSSE issues and risks, their status and projected resolution date
- Actively engage workers in conversations about the risks of the work they are performing and to solicit ideas for minimizing these risks as well as ideas for improvements to the processes in place to control these risks.

HSSE Organization

The Project Leadership Team is committed to ensuring sufficient HSSE resources for the duration of the Project. Field roles will be filled by a combination of Savage and/or Savage trained contractor safety professionals. Staffing levels will be regularly reviewed and may be adjusted based on the quantity and risk of the work being performed. The Project HSSE Manager, in consultation with the Project Manager and the HSSE Manager, will determine the minimum HSSE staffing levels for each phase of the Project.

Project Safety Organization

The Project will include a dedicated HSSE Manager whose focus will be to lead the development and delivery of the HSSE Execution Plan requirements in a consistent and effective manner to achieve outstanding HSSE performance. The Construction Management Team (CMT) will include HSSE Manager who will work closely with the contractors to help them interpret the Project and safety requirements.

Each contractor will be required to develop a detailed Construction Execution Plan (CEP), with emphasis on safe execution of the work. The CEP must include safety staffing levels in addition to the other requirements outlined elsewhere in this document. The CEP will be reviewed and agreed during a pre-mobilization review with the contractor's leadership team and the PLT.

A contractor safety representative must be onsite at all times project work is being performed, regardless of the nature of work or crew size. Exceptions must be approved by the Project HSSE Manager.

HSSE Interface Requirements

The Project will maintain alignment with HSSE philosophy, performance expectations and culture. To ensure this, the Project will routinely interact with HSSE resources from the HSSE

team. The Team will aim for collaboration and transparency on design features and construction practices.

Savage's HSSE Team for the Project is interfacing and providing resources as follows:

- Coby Long, CSP is the Savage HSSE Director, and is considered a key stakeholder for HSSE related issues for this Project. The PLT will enroll him in relevant issues, successes, and staffing requests.
- Coby Long or approved designee is the Site Lift Authority. He will approve each critical lift plan as well as participate in the Day of Lift review

The Project HSSE Manager is the single point of contact for coordination of these resources.

HSSE Assurance Processes

The Project will use a variety of assurance processes to ensure good HSSE practices will be included in the design. These include;

- Ergonomics evaluation of the unloading rack work station duties using HITRA or other techniques.
- Evaluation of the personal exposures to hydrocarbons for the unloading work activities and determining PPE required.
- Fire Hazard Analysis of the process and the required fire protection systems.
- Hazard Operability (HazOp) studies of the final design.
- Constructability Review of safety issues.

These assurance processes will be identified in the Engineering Schedule to ensure they are completed at the appropriate time.

HSSE Roles and Responsibilities

It is expected that everyone on the Project, regardless of their role, be actively engaged in safety. Personal commitment to uphold the safety values of the Project will be sought from each individual on the Project team.

All Project Team Members

All Project Team Members must:

- Stop work that is unsafe
- Demonstrate HSSE commitment through their actions
- Actively participate in HSSE meetings and Risk Review meetings
- Share lessons learned
- Work in a manner which prevents accidents, eliminates harm to people and does not damage the environment.
- Participate actively in the Project's Risk Identification Meetings
- Understand the Environmental Policy and their role in its implementation.
- Be aware of the potential environmental aspects and impacts of the operation.

- Acquire training as outlined in this HSSE Management Plan.
- Align the Projects overall objectives with Savage's overall safety goals.
- Document field observations

Project Leadership Team

The Project Leadership Team must:

- Lead development of the site specific Project HSSE Execution Plan.
- Ensure that resources are in place to execute an effective HSSE program (i.e. HSSE organization, permitting, training, equipment, qualified personnel, finance and time).
- Develop and assign personnel performance objectives for implementing the HSSE Execution Plan.
- Ensure that Project contractors and suppliers are in alignment with the HSSE goals of the Project.
- Evaluate and select contractors who adhere to the high HSSE expectations of the Project.
- Engaging contractor leadership to ensure their full participation in the HSSE Management of their employees.

Commissioning Team

- Participate and encourage the successful implementation of the HSSE Execution Plan
- Ensure compliance with the Project HSSE Policies.
- Engage in conversations about hazard identification and mitigation.
- Participate in communication with stakeholders regarding Project activities as well as activities that may impact the Project.
- Lead preparation for and communication of the introduction of process hazards into the Project Brownfield site.

Construction Management Team

The Construction Management Team must:

- Schedule work in such a manner to minimize Simultaneous Operations (SIMOPS) risks.
- Document field observations,
- Ensure compliance with and Project HSSE Policies,
- Engage the workforce in conversations about the risk of the work being performed.
- Ensure that task performance remains consistent with the terms of the permit and risk assessments, and intervenes to stop work any time the conditions warrant.

HSSE Team

Project HSSE Team must:

- Listen to field workers concerns and suggestions, ensuring they are addressed appropriately.
- Ensures personal and process safety elements of the Project, from concept through design, construction & commissioning are given their due attention.
- Coordinate with the business unit on environmental permitting requirements.

- Maintain Project HSSE records and documentation.
- Compile Project HSSE scorecard data.
- Monitor and assign responsibility for completion of HSSE action items included in the Project Risk Register.
- Coordinate the input of data into Savage's system of record for tracking incidents.
- Maintain relevant environmental documentation and records.
- Conduct HSSE management and technical oversight for Project's contractors.
- Conduct Project Specific Safety Orientations.
- Daily validation of Brownfield and Non-Brownfield conditions and review of Brownfield and Non-Brownfield site safety conditions.
- Reinforce positive HSSE behaviors and actions of Project personnel.
- Provide HSSE assurance through field and recordkeeping audits.
- Participate in daily toolbox meetings.
- Review risk assessments to ensure they accurately recognize the tasks, hazards and controls.
- Verify implementation and execution of the HSSE Execution Plan, compliance with the Savage Rules of Safety and associated contractor HSSE plans and procedures

HSSE in the Execute Phase

The hazards of the Project are comprised of a combination of existing site hazards along with the hazards and safety risks created as a result of the work scope. The site hazards will vary depending on the exact *location* of the work while the Project hazards vary based on the *nature* of the work. When risk assessing the work, it is critical that both types of hazards are addressed and appropriate controls be put in place to minimize the likelihood on an incident.

Work on the Project has been broken into two categories; OSBL and ISBL. ISBL stands for Inside Battery limits and refers to work that will occur in a designated area in the immediate vicinity of the new Project being built (and outside of the existing perimeter fence). This includes extensive civil work. The vast majority of the ISBL work will occur within an area that has been defined as a "Brownfield" construction site. Although there are operating facilities surrounding the Project, the site itself is comprised of native soils and clean fills. The surrounding facilities are: Keyera, Clark County Public Utilities, Far West Steel, Subaru, BHP Billiton, Clark County Correctional Facility and Cal Portland.

OSBL stands for Outside Battery limits and refers to work that will occur outside the immediate area of the new Project (and inside of the existing perimeter fence). This includes much of the tie-in work that will occur throughout the Facility. This work is often within the battery limits of other operating facilities. It is especially important to discuss site hazards when risk assessing this work. All Port of Vancouver site work practices, policies & procedures must be adhered to for work.

Because of these differences, work rules and safety procedures may vary between OSBL and ISBL. The Control of Work process is one example where significant differences will exist. To

minimize confusion and drive consistency, separate teams will be utilized for execution of ISBL and OSBL work.

Brownfield Site Hazards

The following are recognized as the primary site hazards associated with the Project work location:

Proximity to operating facilities and live rail lines (Fire/Explosion/Spill/Toxic Release)

Project work is occurring directly east of operating facilities as named above. The hazard of operating facilities is a constant exposure. Constant awareness of the nearby facilities will be maintained, and communication plans will be in place to ensure the Project is notified in the event of an operational issue that could result in personnel exposures.

Traffic

The worker/vehicle interface is a recognized hazard. The Project logistics plan must address this exposure by identification of designated walk routes, cross walks and vehicle access points. Significant soils excavation and hauling will be required in this Project. An excavation and hauling safety plan will be developed in the Define Phase after contractor selection. Traffic flow and staging of materials will need to be coordinated to minimize impacts to the Project as well as activities (plot plan with lay down and traffic flow will be developed in Define). Any required closures will need to be coordinated with operations, maintenance and construction to minimize impacts to operations. Construction equipment cleanliness needs to be reviewed to minimize impacts to sewer systems and storm water. We will need to evaluate the need for a contained wash area to minimize mud tracking in the construction sites and on public roads.

Project Hazards

In addition to common construction hazards, the following are recognized as the primary hazards associated with the Project work scope:

Confined Space Entry

Confined space work may occur throughout the Project. Any work that requires personnel entry into drums, tanks, towers, vaults, and trenches deeper than 4 feet, must have a Confined Space Entry permit. Excavations may also require a Confined Space Entry Permit, based on configuration. The HSSE Manager will evaluate all excavations to determine if an entry permit is required. Contractors must ensure that the Attendants and Entrants are adequately trained. The Confined Space Entry Policy will be used for all Project confined spaces.

Each confined space will be equipped with a continuous gas monitor per the Continuous Monitoring policy. Exceptions will need to be approved in advance by the Project HSSE Lead. Also, as part of the Emergency Response and Rescue Plan, all confined space entries will be reported to the Shift Superintendent daily.

Cords & Hoses

Cords and hoses must be routed in a manner to minimize trip hazards and the potential for damage to the cords or hoses from passing equipment and vehicles. When overhead routing is not possible, controls must be in place to increase visibility and prevent damage. At no time must vehicles or equipment be permitted to pass over unprotected cords or hoses.

Elevated Work Platforms

Work from elevated work platforms is common in construction and can reduce the risks associated with building scaffolding or working from ladders for short duration work. At the same time, these tools introduce a variety of risks to the jobsite. Elevated work platforms may only be used for their intended purpose as specified by the manufacturer. They may not be rigged from or used as a crane. Workers must work with their feet on the floor of the basket and wear a full body harness and lanyard fixed to manufacturer provided and approved attachment points in both scissor and boom style lifts. An Elevated Risk Assessment or Risk Assessed Procedure is required for any transfers from work platforms at elevation.

Excavation/Ground Disturbance

The Project has significant scope around the excavation of a large volume of dirt. Extensive underground surveying will be conducted in the area to ensure it is safe to perform excavations in the area. Underground obstructions may exist within the Project boundaries so proper planning and execution of subsurface work is essential. For purposes of permitting any ground disturbance activities, the Project will follow the Excavations, Trenching, and Shoring and Pile-driving policy.

Falling/Dropped Objects

Falling objects pose a risk wherever work is performed at elevation. Control of objects at height via toe boards, netting, proper rigging and tool lanyards is our primary control measure. Secondary controls may include control of personnel working below elevated work. Flagging may only be used as the primary means of falling object protection when other controls have been determined to be infeasible. When flagging is used for falling object protection, the use of red "Entry Requires Special Permission" flagging is required. Each contractor's Safety Execution Plan must address how falling object protection will be achieved.

At a minimum, netting is required on all elevated platforms and scaffolding during construction.

Falls from Elevation

The Project will follow the Fall Protection Policy while working at heights. Contractors will be required to; provide their employees with approved fall protection equipment, ensure that employees are trained and, ensure that they follow this procedure. As part of the pre-task risk assessment, appropriate fall protection and restraint or arrest systems, including appropriate tie off points, must be defined. Fall Protection Policy includes scaffold and ladder specifications as it relates to fall protection and working at heights and must also be followed.

All elevated work, regardless of the height, must be performed from an appropriate ladder or work platform. At no time may work be performed while standing on piping, pumps, buckets, chairs, wooden boxes or other surfaces not designed as work platforms.

Flagging & Barricading

The Project will follow the Policy for flagging and barricading. Barricades and flagging must be removed by the group completing the work as soon as it is safe to do so. Each week, at a minimum, all flagging across the site must be removed and work zones re-established at the start of the next shift.

Hand/Portable Tools

Improper use of tools is a leading cause of injury. Tools may not be modified from their original design and may only be used for their intended purpose. All guards must remain in place while the tool is in use. If an acceptable tool is not commercially available and one needs to be modified or manufactured onsite, a risk assessment must be conducted and be approved by the HSSE Manager.

When equipped with a removable handle, the handle must remain in place unless it creates a physical obstruction. Prior to removal, the task must be documented on the Pre-Task Assessment (PTA) for the work and the PTA must be signed by a contractor safety representative. The handle must be replaced immediately following the task for which it was removed.

When using MAG drills, the power supply must be tagged where the extension cord is supplied power and the drill must be physically secured (chained or strapped) to prevent falling in the event of a power failure.

It is important to have the right tool for the job. The use of cheater bars or double wrenching is expressly prohibited.

Hot Work

The entire Project Non-Brownfield has been classified as a fabrication area. Hot work within the designated Non-Brownfield will not require a Safe Work Permit, continuous monitoring or a dedicated fire watch. However, work areas must still comply with the following;

- Work areas must be free of combustible materials,
- A fire extinguisher or water hose must be available at the work site,
- Sparks must be contained to the immediate work area, and
- Shielding must be adequate to prevent flash burns

Hot work that occurs outside the Non-Brownfield will be managed in accordance with the Safe Work Permits Policy.

Housekeeping

Everyone is responsible that their area is kept in a safe, clean condition at all times. This includes the removal and proper disposal of nails and other debris. Satisfactory working conditions and the safety of all depends upon your housekeeping habits. A deliberate roll back of each work areas must occur daily at the end of the shift. Tools and materials may remain staged, but all debris must be cleaned up and disposed of.

Knives

The improper use of utility and pocket knives is a common cause of injury on construction Projects. This is often the result of using the wrong tool for the task (i.e. stripping wire with razor knifes or knife cutting zip ties). Contractors must actively manage the use of knives and keep their use to a minimum. Wire strippers, side cutters, scissors and safety cutters are generally safer alternatives to knives. When physically possible, these safer options must be used.

When knives are determined to be the most appropriate tool for the task, they must be used with a cut resistant glove. At a minimum, a level 2 (ANSI/ISEA 105-2005) glove must be worn on the opposite hand.

Lifting (Crane)

The Project will follow the Lifting Policy for all lifts. The contractor will be required to fill out any Critical Lift Certificates needed, and provide the technical specifications of the lift. Savage HSSE will facilitate the required Elevated Risk Assessment. The Lift Authority will approve each critical lift prior to commencement as well as participate in the Elevated Risk Assessment.

As part of the Emergency Response and Rescue Plan, all critical lifts that should not be shut down in the case of an evacuation will be reported to the Shift Superintendent. This report must include the names of specific individuals authorized to remain behind to secure the load to a safe position in the event of an alarm.

Personnel under Loads

Personnel access must be restricted while lifting operations are underway. This may be achieved through the use of flagging or spotters. The only time personnel may be under a suspended load is while performing approved multi-lift rigging. At no other time may a person be positioned under a live load. Tag lines must be used to control the load to allow control while maximizing the distance between the handler and the load.

Lifting (Manual)

Improper manual handling of materials cause more injuries than any other work activity. Incorrect lifting is the number one cause of back injuries and also accounts for many hand and foot injuries. Each contractor's Safety Execution Plan must address manual material handling including weight limits for single person lifts.

Mobile Equipment Operations

Safe operation of heavy equipment requires supervision, adequate risk assessment/management, competent operators and proper maintenance of the equipment. Trucking and heavy equipment operations are one of the Projects greatest exposures and will require active oversight. Prior to the start of excavation activities, the contractor must provide a detailed Excavation Safety Plan that includes components to ensure oversight, adequate risk assessment/management, competent operators and proper maintenance of the equipment. At a minimum, yellow high visibility vests will be required for all ground personnel working in the vicinity of mobile equipment operations. Spotters are required for all vehicles and equipment backing. The only exceptions are passenger vehicles backing from designated parking spots.

Personnel Baskets

The use of a crane to hoist employees in a personnel basket is prohibited except when the use of conventional means is determined to pose a greater risk. All lifts using a personnel basket are considered critical lifts. No Personnel Basket lifts are anticipated on this Project.

Pile Driving

If the Project scope calls for the installation of piles will be done in compliance with the Excavations, Trenching, and Shoring and Pile-driving policy, the contractor must develop a Plan that specifically addresses the health & safety issues associated with the pile driving operations, including material handling methods, pile lifting, site logistics, SIMOPS, and PPE requirements.

Powered Work Platforms

All powered work platforms such as Scissors Lifts, JLG, or other must:

- Have a documented written inspection prior to being put into use on site.
- Have a daily pre-user (documented) inspection.
- Have all occupants in a fall protection harness and tied off at all times during lift operation.
- Only be operated by a trained/qualified operator.
  (In the event of an emergency situation anyone can operate ground controls to bring the platform to the ground to assist in exiting the area and or rescue)

Scaffold Requirements

All requirements outlined in the Scaffold Safety policy must be followed for Project scaffolding. In addition, within the Area, the following requirements apply:

- Swing gates must be used at all access points
- Fixed toe boards must be installed around each work platform.
- Netting must be installed to the top rail to provide falling object protection on all scaffold decks
- Green tags indicate a scaffold is complete and there are no identified hazards. Yellow tags must be used whenever hazards exist, such as head knockers, holes in deck, uneven decking, etc. The need for a harness will be determined by the competent

scaffold builder and contingent upon the nature of the hazard. Harness requirements must be noted on the yellow tag.

Slips, Trips & Falls

Slips, trips and falls associated with non-risk assessed activities remains a leading cause of injury within Savage. The construction site will be managed to minimize hazards associated with slips, trips and falls. Designated walk routes must be established and maintained in good condition. Hazardous ground conditions must be immediately corrected, flagged or barricaded. Employees will be prohibited from taking short-cuts through un-improved areas or areas of active construction.

Soil Disposal Plan

This Project may require large quantities of soil to be removed from project site and replaced with structural fill material. As much of this soil as possible will be re-used within the Facility while the balance will be transported offsite to an approved disposal facility. This activity would generate a significant amount of traffic, which must be managed by the selected hauling contractor. Trucking activity has the potential to cause community complaints if not properly managed. The contractor must provide a detailed Excavation, Transportation & Disposal Safety Plan that includes expectations related to onsite stockpile operations and management of issues likely to result in community complaints including truck routing, cleaning procedures and schedule. All soil disposal will be done in accordance to local, state and federal laws.

Safety Activities

A variety of proactive safety activities will occur through the duration of the Project that are intended to help deliver on our goal of no accidents, no harm to people, and no damage to the environment. Our objective is to identify and correct the little things before incidents occur.

Safety Observations

Documentation of field safety observations is expected of the Construction Management, Project Leadership and HSSE Teams. A schedule will be created that will pair Savage and contractor representatives for joint safety tours. The results of these observations will be reviewed and the data analyzed to identify trends or specific items needing attention. These results will be discussed with the Companies involved as well as shared with the Project Safety Team for Project-wide impact.

Compliance Assurance

A primary role of the HSSE Manager is compliance assurance. Their regular field presence and intimate knowledge of both the Project and site HSSE expectations allows for timely and constructive feedback to the workforce. As opportunities are identified, the HSSE Manager will provide coaching and guidance to help bridge any gaps between the Project's expectations and the performance observed.

The Project HSSE Manager will coordinate routine audits of key elements of the contractor's safety programs to assure they are being carried out as described. These audits will be both formal and informal and include reviews of both field activities and supporting documentation.

Investigations

All events requiring formal investigations, including injuries, incidents and near misses, will be entered into Savage's S7i System. All investigations will be coordinated by the Project HSSE Manager. The Project will use the classification system for determining the appropriate level of incident investigation based on the severity or potential severity of the event.

General Safety & Health

The following section outlines additional Project health and safety expectations not identified in the Site Hazards or Project Hazards sections above.

Complacency

Early success can often lead to complacency, where satisfaction is accompanied by a decrease in awareness of actual danger or deficiencies. A concerted effort to address complacency will continue for the duration of the Project. Variation of routine is important. This can include changing formats of meetings, safety stand-downs, etc.

Emergency Preparedness and Response

The Project will coordinate the Emergency Preparedness plans with the Port of Vancouver and Vancouver Fire Department. As such, all conditions of the EPP will apply to the Project.

Emergency preparedness drills will be conducted at the start of the Project to familiarize everyone with the appropriate parts of the emergency response plan.

Exceptions or deviation from Existing Safety Policies

Exceptions from established written Safety and Health procedures at the Project require a formal exception as will be outlined in the Safety Manual. Exception requests cannot be approved if it is in conflict with WISHA or other government laws or regulations. Exception requests related to the Project must be coordinated through the Project HSSE Manager. Recommendation for approval must include the relevant SME. The Project Manager is the approving Manager for all Project exception requests.

Hazard Communication & Access and Control of Exposures to Chemicals-

Contractors must have a written Hazard Communication Program and ensure that their employees and subcontractors have received the required training in accordance with WA DOSH requirements. Contractors will provide the Project HSSE Team with Material Safety Data Sheets (MSDSs) for review and approval for all new chemicals brought in to the. The Project HSSE Team will gain approval prior to the chemicals entering the site.

Contractors must ensure that all containers and properly labeled, secured, and that spill prevention measures are in place.

Industrial Hygiene Assurance and Monitoring

Health for the Project team will be managed by:

- Including health issues as a topic for HSSE review meetings
- Assuring that all Project team members follow site PPE requirements
- Providing training that reviews site specific health hazards (noise, toxic vapors, etc)
- Identifying, assessing, and mitigating health hazards as part of job task risk assessments
- Reviewing any new chemicals brought on site.
- Conducting Industrial Hygiene audits (Health Team)

Line of Fire

On nearly every job there is something which could hit, spray, pinch or crush. The first priority should be to eliminate these hazards. If this is not possible, we want people to focus on moving themselves out of the line of fire. Awareness training on "Line of Fire" recognition must be included in each contractor's Project specific safety training and covered in toolbox meetings.

Management of Change

Temporary and permanent changes to organization, personnel, systems, process, procedures, equipment, products, materials or substances cannot proceed unless a Management of Change (MOC) process is completed. This must include:

- a risk assessment conducted by all areas impacted by the change
- development of a work plan that clearly specifies the timescale for the change, and any control measures to be implemented regarding:
    - equipment, facilities and process
    - operations, maintenance, inspection procedures
    - training, personnel and communications
    - documentation
- authorization of the work plan by the responsible person(s) through completion

The Project will meet the requirements of major projects, including application of Management of Change from the Define Stage HAZOP through Execute and turnover to operations. All changes to equipment and facilities will follow the Project's Change Management Procedure. If the change is considered to impact safety, the existing Management of Change procedure must be used for the ISBL as well as the OSBL.

Personal Protective Equipment (PPE)

All Project employees must use approved safety equipment and maintain equipment in accordance with OSHA and Savage requirements. For contractor personnel, the PPE requirements for the Project will be reviewed at the new hire orientation. Personnel must be trained on the use of any required PPE before beginning work.

In addition to the requirements outlined in the procedures above, the Project has the following PPE requirements:

- High visibility vests will be worn by all personnel in the Brownfield and Non-Brownfield. Requirement to wear vests may be waived by the Project HSSE Manager as conditions warrant.
- Dust goggles are required under face shields when chipping or grinding concrete and are also required when working in dusty or dirty conditions.
- Face shields must be worn over safety glasses when using impact guns, grinders, or other particle producing tools or work.
- Workers full names must be visible on the front of their hard hats
- Fire Retardant Clothing (FRC) will not be required for the portion of the work until hydrocarbons are introduced.

Safety & Health Policies

Other Safety and Health Policies may be applicable to the Project. Prior to mobilization in the field, each contractor must perform a gap analysis to identify discrepancies between their policies and the policies or expectations. The gaps will be evaluated and the final decisions will be agreed and documented prior to commencing work in the field.

Simultaneous Operations

Because of the high density of work that will occur on the Project, management of Simultaneous Operations is an essential element of our safety program. Initial risk assessments often occur well before the day of work and various tasks in the same area may be risk assessed by different people. It is often hard to predict what other work may be occurring on the day work will be executed. For this reason, it is essential that a review of Simultaneous Operations occur as part of the Pre-Task Assessment (PTA) before each and every job task is started. Coordination and communication between adjacent crews is essential to the safe execution of the work. This coordination and communication is an essential element of the permit to work process.

Workers are expected to periodically review and update their PTA cards as needed throughout the day. Changes in hazards, including new SIMOPS, should be documented.

Smoking Policy

In accordance with the Smoking Policy, smoking is prohibited inside the fence line, and on Savage property except for specially marked areas located in the parking lots. The purpose of this policy is to control ignition sources within the Facility as well as reduce exposure of personnel to harmful second hand smoke. Smoking is permitted only is specially marked areas and smoking material must be left in vehicles or in the break facilities. Smokers are required to minimize the amount of time spent in smoking areas and are asked to keep the areas clean.

Transportation

As outlined in the Transportation and Traffic Safety Policy Savage standards and Federal security regulations require stringent processes for limiting the number of vehicles in the to

only those necessary for safe and efficient operations. If there is any means of transportation other than a personal vehicle that will allow you to do your job safely and effectively, you are expected to use it. This may include using a company vehicle, taking the shuttle, walking, or riding a bicycle.

Contractors bringing company vehicles inside the fence requires prior permission from the Senior Project Manager or Construction Manager. Drive-in access determinations will be based on an assessment of role, need and primary work location and controlled through the individual's Vancouver ID badge. The Security Superintendent has the authority to grant or deny the request for drive-in access.

Driving a vehicle on Savage property requires completion of the Safe Driving Training video. While driving on Savage property, all vehicle occupants must wear seat belts at all times. Additionally, the driver is not to use two-way radios or cell phones while driving. If the driver is to take a call or use a radio, he or she must pull over prior to doing so. Use of personal vehicles inside the fence is prohibited unless special permission is obtained from the Senior Project Manager.

If the Evacuation Alarm sounds, pull over the vehicle immediately, turn off the engine, and walk to the safest evacuation area. Do not to drive the vehicle until the All-Clear has sounded.

BNSF Track Operation

Contractors operating equipment near the BNSF Track should stay 150 feet from the nearest rail. Barricades should be put up off the BNSF right of way indicating where the contractors and their employees can work safely.

Prior to beginning work on live track the contractor-In-Charge must notify a BNSF representative of the need, and specifically the location where the work will be done. A job briefing must be conducted with the Railroad representative. Referenced in 49CFR214, Subpart C, which requires some form of On-Track Safety briefing prior to fouling any track.

If contractors have to work within the BNSF right of way contractor employees need to have the BNSF safety training.

- Rail Security Awareness Training
- Contractor Orientation Training

Contractors Working Around Live Tracks

Contractors must follow the following policy when working on or around live track:

- Green, Yellow/Red, and Red Flag Protection must be used on live tracks to warn train crews of men or equipment working on or around the track.

- Always be on alert to moving equipment. Contractor employees must always expect movement on any track, at any time, in either direction.
- Do not walk or step on the top of the rail or any other track components
- In passing around the ends of standing cars, engines, roadway machines or work equipment, leave a minimum of 25 feet between yourself and the end of the equipment. Do not go between equipment if opening is less than 50 feet.
- Before crossing over tracks, look in both directions.
- Do not sit on, lie under, cross over between cars.
- No tools or equipment are left close to any live track.
- All contractor employees must have and be wearing identification.
- All contractor employees must be wearing the proper Personal Protective Equipment.
- All Project employees will attend the Port of Vancouver's Rail Safety Training.

Contractor's equipment must be safe to operate if equipment is not safe to operate the equipment must be removed from the site.

Treatment of Injuries

Contractors must provide the means to provide first-aid and keep appropriate first aid supplies readily available. Savage employs a medical service PC365 to be used as well when dealing with non-critical injuries. Emergency Medical Technicians are also available around the clock to assist as needed through the Vancouver Fire Department, Station 1.
All injuries, regardless of the severity, must be reported to Savage per the guidelines outlined in the Incident Reporting section of this document.

Control of Work

The majority of the Project scope of work will be conducted within a defined and controlled area identified as the "Brownfield".

Brownfield Permit to Work

The majority of the Project scope of work will be conducted within a defined and controlled area identified as the "Brownfield". A risk assessment was conducted to identify the boundaries of the Brownfield. In general, this area contains no process hazards or non-construction energy sources. With the absence of these hazards, the risk profile of the work site changes, allowing the use of a specialized Permit to Work procedure more appropriately designed for managing construction risks. The Brownfield Permit to Work Procedure will be used as the basis for all ISBL work in the Petroleum Rail Project. It will be modified as needed to address the specific hazards and needs of the Project.

Non-Brownfield Work

Project work to be conducted outside of the defined boundaries of the Brownfield and within the fence line will be performed under the Port's standard Control of Work Policies.

The Project team will use the unit's existing Area Authority for permitting activities. The detailed permit issue process will be documented and communicated to the construction contractors prior to field activities commencing.

Energy Isolation

To maintain Brownfield condition, Lock Out Tag Out (LOTO) Policy requires that all hydrocarbon process piping to remain physically separated (air gapped) from the existing systems. It also requires that all other systems remain air gapped or, a detailed isolation strategy to be developed for the system.

The Project will follow the Electrical Safety Policy and Control of Hazardous Energy Procedure (LOTO). We will also adhere to the Blinding Policy. Energy isolation must be considered during the development of individual job packages, with consideration toward any source of electrical, hydraulic, mechanical, pneumatic, chemical, thermal, or any other energy connected to a source.

Connections to utilities (utility water, potable water, temporary electrical power, firewater, plant air & instrument air) can be made within the Brownfield for field checks and hydro testing without impacting the Brownfield status, provided approved procedures are in place to manage the energy source. These connections must be coordinated with the unit Operations Representatives. All other systems must remain isolated utilizing an air gap.

Operations will define isolation requirements for each system prior to turnover. Upon turnover, Operations will assume ownership of the master isolation and blind list.

Risk Assessments, ASAPs

All risk assessments will be developed by the contractor performing the work, with input from Savage. JSAs will be done as tasks are identified in the Execute Stage. Any Abnormal Safety Assessment Plan (ASAP) will be done using the Savage Vancouver ASAP procedure #150 (see references at the end of this document for location of current procedures).

Security

The Facility is a Maritime Transportation Security Act (MTSA) as well as a CFATS and DOT regulated facility. The Project will comply with all site security requirements.

Project Access

All workers will be issued a Savage ID badge for entry and access into the ISBL area, and are required to keep this badge on them at all times. In addition, a Project specific decal will be provided to individuals who have completed the Project specific orientation. This decal is required for unescorted access within the defined Project boundaries.

Transportation Workers Identification Credential (TWIC)

A valid TWIC card is required of all individuals entering the Facility. There are no exceptions to this requirement for Project workers. Individuals without a TWIC card require an approved escort. TWIC cards do not have to be carried on the workers person in the field. Access to the TWIC Zone must be done in accordance to the Port of Vancouver Facility Security Plan.

Project Escort Requirement

Individuals who have not received Project specific orientation must be accompanied by an individual who has had this training. This requirement is Project specific and in addition to the requirements outlined in the Escort Policy.

Traffic Control/Blockage of Roadways

If a roadway must be blocked or access restricted as a result of Project work, advanced planning and notification to stakeholders is required. The Project will follow the policy for Road Closures. All road closures and traffic control activities will be coordinated through the Project HSSE Lead or his delegate.

Tools & Materials

Any tools, materials or equipment being brought out of the Facility require an authorized Material Gate Pass. These passes may be obtained from the Project HSSE Lead. All items are subject to inspection prior to release.

Environmental Compliance

The Project is committed to socially and environmentally sound operations. We will undertake our activities in a manner that is environmentally responsible with the aspiration of "no harm to people and no damage to the environment."

Permitting Overview

Permitting will be handled by the Savage Environmental department and will include the appropriate EFSEC permitting as well as required Federal Permits

All permit conditions applicable to operation of the new equipment will be included in the training materials.

Soil

A detailed plan will be developed for the management of soil being excavated for this Project. Fill material will be segregated and managed separately from native soils. An environmental representative will be onsite as needed during excavation to help distinguish between these materials. Potholing will be conducted near the BNSF track, and at selected locations within the Brownfield area. Soils that are subject to Restricted Covenants must be separated from non-impacted soil, and disposed of according to the waste management plan.

Storm Water

A detailed plan will be developed for the management of storm water from the Project site. Prevention of contamination is crucial. Any hydrocarbon or chemical spills, regardless of the size, must be reported to the Project HSSE Lead. This includes fuel, engine and hydraulic leaks from equipment. Minimization of sediment entrainment is also a high priority. This is accomplished through the use of Best Management Practices (BMPs). Diversion of storm water from the site in a manner inconsistent with the plan is prohibited.

One of the specific BMPs required on the Project is the placement of secondary containment under all bulk chemicals and gasoline or diesel powered portable equipment in all areas that do not drain to the oily water sewer. Self-propelled mobile equipment is exempt from this requirement.

Recycling

A recycling center will be established within the Project site. It is important that any recyclable materials remain free from contaminants and be placed in designated containers. The recycling center will have containers for the collection of aerosol cans, aluminum cans, small metal, safety warehouse returns, plastic, glass and cardboard.

Portable Equipment

Notification to the Project HSSE Lead is required for temporary emission sources and any portable engines exceeding a prescribed limit that are used in the Project, to determine potential regulatory impacts.

Waste

The Project Management team will assure that all design and construction work for the Project considers the environmental compliance requirements of Federal, State, and local agency permits as well as all Savage Group Defined Practices.

Incident Management

All incidents are preventable. In order to achieve World Class HSSE performance, each incident that occurs must be reported, reviewed and the learnings shared. The process outlined in the Incident Investigation, Notification and Reporting Policy will be followed during the Project.

Any work-related safety incident, including first aid, must be reported immediately. The following notifications are required:

- Savage Shift Supervisor
- Project HSSE Lead, who will coordinate entry into S7i

A written incident report is required to be submitted by **the *end of the current shift*** for all injuries, including first aid incidents. Determination of OSHA record keeping requirements will be the responsibility of the Company incurring the injury.

Types of incidents where reporting is required include; workplace injuries and illnesses, vehicle accidents, spills, environmental releases, near hits, major incidents (MIAs) and high potential incidents (HIPOs).

A detailed investigation should be carried out for all serious or major incidents (injury, illness or damage) and any minor accident or near-miss that had a high potential of being a major one. Less serious incidents should be investigated with a degree of rigor appropriate to the potential for loss or injury. The principles employed are the same.

A Project team contact list and emergency contact information can be found in Appendix A of this plan.

Shared Learning

It is the intent of the Project to incorporate lessons learned from both internal and external sources. Specific effort will be made to capture lessons learned on our own project. Learning will be shared widely across the Project in a timely manner so they may be incorporated into pre-task planning, design and constructability and education and training materials.

HSSE Lessons Learned

The learning from safety performance reviews, audits, investigations, and verification activities must be documented and used in improving future performance.

- Learning will be systematically captured and subject to periodic formal review to identify system improvements for future activities.
- Contractors will be included in sharing of lessons learned and encouraged to share lessons from their activities.
- Specific effort must be made to solicit feedback from frontline employees on best practices observed along with ways to improve processes and reduce the risk associated with future work activities.

When a contractor's work has been completed, the Project Team will evaluate major contractors' HSSE initiatives and performance and provide feedback on effectiveness at the close of the contract.

The Project HSSE lead will document and implement the Project's safety lessons learned.

Monitoring Performance

HSSE performance metrics (leading and lagging) indicators are established and communicated throughout the Project organization. Project leadership regularly reviews the HSSE performance metrics to determine progress against objectives and targets and what management system changes are necessary.

Key Performance Indicators

Reporting will be consistent with requirements for the Vancouver reporting system already in place. The Project HSSE Lead will report this data on a weekly basis for incorporation with the overall statistics.

Inputs to be tracked and reported:

- Safety training provided for every employee working on the job site
- Observation audits / theme audits conducted and action items closed
- Joint field audits by Savage and contractors
- Incident investigations completed
- To be decided

Outputs to be reported:

- Hours Worked
- Major incidents and High Potential incidents
- Injuries/Illnesses
- Near Misses
- Environmental incidents

General Performance Monitoring of Contractors

HSSE performance and compliance must be measured and reviewed on a regular basis during execution.

- Regular performance reviews of each contractor should be established, with appropriate senior and line management attendance.
- Subcontractor performance and compliance should be visible and verified.
- Contractors are accountable for reporting of all incidents incurred by their subcontractors.
- Contractors delivering outstanding safety performance should be considered for positive recognition.
- Contractors that fail to deliver the required performance improvement, or experience further breaches of the safety boundary conditions, should be considered for reduced work share, suspension, or contract termination, depending on the severity of the breach.

HSSE Rewards and Recognition System

Working safely is a base expectation of everyone on the Project. Simply doing so will not be a basis for reward on the Project. Instead, the PLT is looking to recognize and reward individuals who go above and beyond this base expectation and become actively engaged in delivering an outstanding outcome.

The reward and recognition program for the Project will use a variety of methods to recognize individuals, including periodic giveaways at the discretion of PLT. Only individuals providing

direct support to the Project are eligible to receive Project Safety Rewards. In establishing reward criteria, the following guidelines must be used:

- Rewards should promote discretionary behaviors that are above and beyond base requirements.
- Preference is for individual recognition/employee participation. Although at times, team or small group recognition can also be appropriate.
- Specific action by the individual should be required for the individual to receive the reward.
- Rewards should be based on leading indicators, not results.

Safety Leadership Award

A "Safety Leader of the Week" program will be established to recognize the individual or crew that best demonstrated the Extraordinary Safety Leadership Behaviors. Individuals may be nominated by anyone using a simple nomination card available in the lunchroom and in the permit trailer.

Reporting Recognition

"Thank You" reward cards will be given to individuals who identify, address and report near misses, unsafe conditions or unsafe behaviors on Project Make a Difference cards. We will also reward individuals that recognize best practices, make H&S suggestions or share process safety or quality concerns. These reward cards can be redeemed for a variety of nominal gifts or collected towards higher valued items.

Great Catch Program

The quality of items submitted is more important than the quantity. To promote quality reports, a "Great Catch" program will be established. Special awards will be made to individuals who submit reports on items that were especially difficult to identify, provide high learning value or may have resulted in a significant impact if unidentified. Great Catch awards will be issued at the weekly all-hands meetings so the learning can be shared across the Project.

Milestone Recognition

Milestone recognition may include proactive measures of safety activities in addition to the traditional recognition of the results (i.e. hours worked without incident). In general, targets will not be promoted ahead of the milestone. In addition, associated recognition programs must be structured to ensure they do not discourage incident reporting.

Company Specific Recognition Programs

In addition to the general recognition program outlined above, each contractor, at its discretion, may operate company specific safety recognition programs. These programs are independent of Savage and should be managed exclusively by the contractor company. To comply with Savage Code of Conduct and IRS requirements, at no point may cash or cash equivalents (i.e. gift cards, gas cards, etc) be exchanged between Savage employees and contractors.

Commissioning

Commissioning consists of the period after System Turnover has been achieved, but before Start-Up. System Turnover is complete when; Pre-commissioning activities have been completed and documented, System turnover documentation (including Non-Destructive Examination (NDE) and other field Quality Control (QC) records) are delivered to the Quality Assurance Manager and Project Turnover Coordinator, "A & B" punch-list items have been completed, and the immediate respective work areas are left in an uncluttered clean condition with all combustible materials removed. Commissioning includes those activities connected with operating equipment or facilities to prepare them for a safe, reliable start-up. This can include steam blows, system purging, introduction of inert fluids and utilities, chemicals loading, trip and alarm testing and final checking of system tightness and cleanliness.

Operations and Maintenance Competency Assurance

The Project Team will interface with operations and maintenance to ensure that existing or new personnel are capable of performing the jobs and are adequately trained to do so. Operating and maintenance procedures and training requirements will be developed prior to commissioning.

Commissioning and Hand-over Requirements

During commissioning planning, environmental aspects and impacts of the commissioning activities should be evaluated.

Prior to the commencement of commissioning activities, training requirements for the commissioning team should be established and training completed. In addition, all work procedures should be evaluated for compliance with Savage HSSE expectations and any deficiencies corrected. A HITRA will be performed on the actual off-loading work activities to ensure that ergonomic and other safety exposures have been addressed. Personal exposure monitoring will also be conducted during the off-loading operation to document health exposures and the selection of proper PPE.

The Commissioning Team will incorporate HSSE into commissioning and handover planning, procedures and systems.

Pre-Startup Safety Review (PSSR)

Prior to start-up of a system, a pre-startup safety review of the system will be performed and documented, and all deficiencies will be corrected.

Pre-startup safety reviews (PSSR) are conducted to ensure construction of the Project is complete, and all training, procedures, documentation, and programs are in place and ready for safe startup and operation. All findings, recommendations and open actions from the PSSRs MUST be completed and closed out before equipment commissioning begins.

Process Safety Information

The Project Team will compile and supply the following process safety information to the Operating Team and the Document Control group:

- Safety Critical List of Equipment (Protective Devices Register)
- Process Flow Diagrams (PFDs)
- Piping and Instrumentation Diagrams (P&IDs)
- Electrical Area Classification Drawings
- Plot Plans
- Electrical One Line Drawings
- Shutdown and Interlock Drawings
- Cause and Effect Drawings (Alarm and Shutdown Drawings)
- Relief Valve Basis and calculations
- Process Equipment Data Sheets
- Other Data Sheets (Utilities, MSDSs, etc.)

Start-up, Operating & Maintenance, and Emergency Procedures

Practices and procedures must be documented to ensure operations are carried out under specified conditions and in a consistent manner. These instructions should be up to date, clear, concise and unambiguous.

The Commissioning Team will provide instructions for start-up, normal operation, planned and emergency shutdown and preparation for maintenance, as well as any other OSHA Process Safety Management (PSM) required operating procedures. The format and content will be consistent with Savage's PSM requirements and Vancouver operating and maintenance procedures.

Appendix 1: Emergency Contact List

Emergencies		**xxxx or xxx-xxxx**
Battalion Chief		**xxxx or Radio Channel xx**
Shift Super		**xxxx or Radio Channel xx**
Security		**xxxx or Radio Channel xx**

_____ Construction Team

_____	Construction Coordinator	xxx-xxx-xxxx
	Project Engineer	
_____	HSSE Field Coordinator	xxx-xxx-xxxx

_____ Construction Team

_____	Construction Coordinator	xxx-xxx-xxxx
	Project Engineer	
_____	HSSE Manager	xxx-xxx-xxxx

Project Leadership Team

Dave Corpron	Projects & Const Manager	801-944-6600
Boyd Draper	Sr. Project Manager	801-944-6600
Coby Long, CSP	Project HSSE Manager	801-944-6600
_____	Commissioning Manger	
_____	Tech Services Manager	
_____	QA/QC Lead	

List of contractors Below

_____		
	Sr. Project Manager	360-
	Asst. Project Manager	360
	Const Superintendent	360-
	Safety Manager	360-
_____		
	Project Manager	360-
	General Superintendent	360-
	Safety	360-
_____		
	Project Manager	360-
	General Superintendent	360-

	Safety Lead	360-
	Project Manager	360-
	Site Manager	360-
	Safety Manager	360-

Appendix 2: Project Site Map

Appendix 3: Brownfield Sign-In Expectations

The purpose of the sign-in / sign-out requirement is to provide the Project with documentation of who has permission to be onsite within the Tesoro Savage Petroleum Terminal Project Brownfield and to describe the requirements for controlling and recording access to the area.

These expectations apply to any person entering the Permit Trailer located _____.

NOTE: Project specific orientation is required for all individuals prior to entering the Brownfield area unescorted. Visitors without Project Specific Orientation must be escorted for the duration of their visit by an individual that has received the project specific orientation.

1. Sign in is required immediately upon arrival to the site. Once onsite, travel must be directly to the Project Permit Trailer to sign in prior to any work or site walks being performed.

2. Sign out is required at the end of the shift or when leaving the site for an extended period of time.

3. When the Project Permit Trailer is not staffed, individuals visiting the site that are not assigned to the project full-time must contact the HSSE Manager via radio to inform them that you will be entering their area. The HSSE Manager will provide an update of site conditions and/or restrictions.

4. Once signed in, short trips outside the Brownfield, including breaks and lunch, will not require sign out.

5. Work groups that are entering the area may be signed in by their Foreman or the Foreman's designee. Sign in will include foreman or designee's name and crew size. Example: Matrix, John Smith + 4.

6. There are no exceptions as to personnel required to sign in or out of the area.

Appendix 4: Incident Reporting Form

To be determined in conjunction with Tesoro Savage Petroleum Terminal LLC

Appendix 5: Safety Team Terms of Reference

I. Vision
A self-directed cross-functional safety team that is actively engaged in reducing the risks associated with field construction activities.

II. Objective
The objective of the Project Safety Team is to promote a proactive approach to safety and health on the Project and to improve the effectiveness of the Project's overall safety program.

To advise and consult Project leadership on safety and health issues related to the Project.

III. Scope
The team's scope includes health & safety concerns associated with field construction activities related to the Project that are performed onsite at the Vancouver. This includes both OSBL and ISBL work as defined in the Project HSSE Execution plan.

IV. Deliverables
a. Field Audit Reports will be used to document audit activities.
b. Minutes will be kept at each team meeting.
- Previous meeting minutes and audits will be reviewed at the team meeting to determine if any issues remain outstanding
- All reports, audits, evaluations and recommendations of the team will be made part of the minutes of the safety team meeting

c. An action item register will be maintained to ensure closure of issues identified
- A reasonable time will be established for Project management to respond in writing to all safety team recommendations

V. Safety Team Formation and Membership
a. The Team will be comprised of both craft and management representatives.
b. Team members will be volunteers Sub contractors with contract duration of ninety (90) days or longer will be represented on the Team.
c. Employee representatives must serve a continuous term of at least four (4) weeks on the team. At the end of the fourth week the employee representative must bring his/her replacement to the meeting to assume his/her duties.
d. Reasonable efforts must be made to ensure that team members are representative of the major subcontractors and/or major work activities in progress.

VI. Stakeholders
a. Project Workforce

Project employees will be given the opportunity to actively participate in safety team activities by:

- Volunteering to serve as a team member
- Participating in field auditing activities conducted by the team
- Completing Observation forms and turning them it in to any safety team member.
- Suggesting improvements to the safety program to their respective team representative for consideration.

b. Project Leadership Team

The PLT recognizes the value of these teams and the empowerment they provide the contractors. The PLT will support the efforts of the team and provide guidance when necessary to ensure the team is successful at meeting its objective.

VII. Safety Team Duties and Functions

a. The team will elect a Chairperson from within their ranks at their first meeting.
b. The team will develop a written agenda for conducting safety team meetings. The agenda will prescribe the order in which team business will be addressed during the meeting.
c. The team will hold regular meetings and perform job audits on a bi-weekly basis. The team will document site audits and transmit them to Project HSSE Lead with recommendations for changes.
d. The team will review all accidents and near misses and recommend corrective actions to prevent a reoccurrence.
e. The team will follow up on their recommendations to ensure corrective actions have been implemented.

VIII. Hazard Assessment and Control

Safety Team will:

a. Establish procedures for auditing field construction activities to locate and identify safety and health hazards.
b. Conduct field audits on a weekly basis.
c. Establish procedures for reviewing the Project HSSE Incident Log and informal reports of hazards from Project employees.
d. Make recommendations for improvement to Project Management, based on those reviews.

IX. Accident investigation

The safety Team will establish procedures for reviewing all safety related incidents including injury accidents or illnesses. At least one member of the Safety Team must participate in the investigation of near misses and/or incidents associated with field construction activities.

X. Safety and Health Training and Instruction

The following items must be discussed with all new safety team members:

a. Safety team purpose and operation
b. Methods of conducting safety team meetings
c. Safety team members must receive training in:
- Hazard identification in the workplace
- Principles regarding effective accident and incident investigation

XI. Delegation of Authority

The safety team has no fiscal or policy authority. For activities or initiatives requiring financial support, a request for funding will be submitted in writing to the Project HSSE Lead.

Recommendations for policy or procedure changes must be submitted in writing to the Project HSSE Lead for consideration.

Appendix 6: Gas Detection Overview

General Requirements
As outlined in the Hot Work Policy, within the Project Brownfield is exempt from the requirement for continuous LEL monitoring. In addition, the area is exempt from the use of personal H2S monitors. The Brownfield area maintains an electrical classification of General Purpose and there are no process hazards present within the Brownfield.

The most likely source of flammable or toxic gas within the Brownfield is an uncontrolled release from an existing operating unit. The potential for a release to reach dangerous levels within the Brownfield was assessed and determined to be very low, but plausible.

Controls in place to manage this risk include the formal communication plan in place between the Project and the Operations Shift Supervisor, existing LEL & H2S gas detection within the existing units & the area-wide alarm system.

The Project has no requirements or agreements to maintain general area or perimeter gas detection. Continuous gas monitoring remains required for all confined space work. There are no variances in place for confined space entry work within the Brownfield. Continuous monitoring is required for all confined space entries.