SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN

United States Steel Corporation,
Minnesota Ore Operations - Keetac

Last Revised: January 2023

Keetac SPCC Plan Table of Contents

Tables

Figures

Appendixes

1.0 Applicability and Facility Information [40 CFR 112.1]

This spill prevention, control, and countermeasure (SPCC) Plan (Plan) has been prepared for United States Steel Corporation – Minnesota Ore Operations for its facility located in Keewatin, Minnesota (Keetac). The Plan describes:

- Site Description and History
- Spill History and Reporting Requirements
- Description of Storage Units
- Description of Containment Structures
- Site Drainage
- Bulk Storage
- Transfer Operations
- Loading/Unloading Rack Procedures
- Inspections
- Facility Security Measures
- Personnel Training

Information presented in this Plan was derived from on-site file review, site inspections, and interviews with facility personnel. A copy of the Plan shall be maintained at the facility at all times. The Plan has been reviewed, certified, and signed by a Registered Professional Engineer (see certification page in Section 2.1).

A SPCC Plan is required under 40 U.S. Code of Federal Regulations (CFR) Part 112 for all facilities at which certain quantities of oil are managed and at which, if a release of petroleum occurred, it would reasonably be expected to reach the navigable waters of the United States. Navigable waters are described in 40 CFR 112 as the "waters of the United States." The regulations list the many kinds of waters covered under this term, including any type of surface water body that could be used for interstate or international commerce, and all tributaries of these waters. Tributaries have been determined to include intermittent streams, drainage ditches, and storm sewer systems which eventually feed a river, lake, or wetland, which could be adversely affected by a release of petroleum.

Also, pursuant to State legislative requirements enforced by the Minnesota Pollution Control Agency (MPCA), facilities handling oil and other hazardous substances are required to prevent spills and

maintain a level of preparedness that ensures an effective response to spill incidents, in accordance with MN Statute Chapter 115E (Minnesota Spill Bill). The Minnesota Spill Bill applies to facilities with oil and/or hazardous substance storage at or exceeding one million gallons at any time. The SPCC and Minnesota Spill Bill requirements include the development of a plan which documents facility operations, spill control measures and a contingency plan outlining emergency spill response measures.

Pertinent requirements of the Minnesota Spill Bill, regarding aboveground storage tank (AST) storage and handling of petroleum products, have been incorporated into the facility SPCC Plan. The prevention and response components of this SPCC Plan are consistent with the requirements under national or area contingency plans developed under the Oil Pollution Act of 1990.

The SPCC Plan shall be amended whenever a change in design, construction, operation, or maintenance affects the potential for a spill incident. The Plan shall be maintained at the facility at all times. All amendments to the SPCC Plan shall be recorded as part of the Plan.

Minnesota Spill Bill provisions regarding the storage and handling of hazardous substances utilized at the facility that are not stored in ASTs have been addressed in other Keetac contingency plans.
This SPCC Plan shall be reviewed and revised as necessary at least every five years. A record of reviews and revisions shall be included in Section 3.0 of the Plan. Future reviews and, if necessary, revisions of this plan shall be noted in Section 3.0 and shall become a permanent part of the Plan.

General Facility Information

Facility Name:

United States Steel, Minnesota Ore Operations – Keetac
P.O. Box 217
Keewatin, Minnesota 55753-0217
(218) 778-8700

Facility Location:

Keetac property is located at 1 Mine Road in Keewatin, Minnesota within Itasca and St. Louis Counties. The plant areas of the facility lie within the SW¼ of the SE¼ of Section 18, T57N, R12W, approximately one and one-half miles northeast of Keewatin. Figures 3-1 and 4-1 depict the layout of the facility.

Owner:

United States Steel Corporation
600 Grant Street
Pittsburgh, PA 15219-2749

Operator:

Keetac
P.O. Box 217
Keewatin, Minnesota 55753-0217 (218) 778-8700

General Facility Description:

The principal activity at Keetac has been the open pit mining of taconite for processing into iron ore pellets. The facility consists of the Keetac plant area, all mine excavations, mining waste disposal areas, materials and equipment storage areas, and wastewater treatment and disposal systems.

Geology

The native soils on the property are deposits of dense brown and gray silty tills. The native sediments are deposits of the glacial till from the Nashwauk Moraine Association, which is composed of deposits representing both stagnation and ground moraines. The fine textures of the tills suggest the incorporation of lacustrine sediments during advancement of the ice (Hobbs and Goebel, 1982). The glacial deposits overlie members of the Biwabik Iron Formation. The bedrock is approximately 1.7 billion years old.

Hydrogeology

The property is located in the Mississippi River watershed. The main plant areas are approximately 3,000

feet from Welcome Creek, which eventually flows into the Swan River. The Swan River is a tributary of the Mississippi River. The regional groundwater flow direction is to the west and southwest, towards the Swan and Mississippi Rivers.

Most surface drainage from mining waste disposal and excavation areas on the property is collected in mine pit sumps and then pumped to Carlz Pit, which serves as the primary source of process makeup water for the taconite beneficiation facility. Carlz Pit does not have a natural outlet and the water inventory of the pit is regulated by a pump station that discharges to the Wolf Hill Head Tank. The Wolf Hill Head Tank supplies process water to the plant, but can overflow to a series of ten sedimentation basins and a conveyance channel, which eventually discharge to Welcome Creek at the property boundary. General surface drainage from the majority of the processing plants also discharges to the ten sedimentation basins described above. Surface drainage from the southwestern area of the plant is collected in a settling pond before discharging into Welcome Lake. Welcome Lake is considered a water of the state and has no surface discharge point. Figure 4-1 indicates the direction of flow for drainage and surface runoff for the Keetac facility.

Process Water

In the crusher, internal process water and groundwater is collected in the crusher sumps and eventually discharged to the Section 18 mine pit, some via Sump #1, which is subsequently pumped to Carlz Pit. The combined floor drain overflow from the Concentrator and the Pellet Plant is routed through a 48-inch storm drain to Bennett Pit. This overflow may include emergency overflow process water from the Concentrator during a plant shut down. All steam cleaning and floor drain water from the Truck Shop area is treated by a sedimentation tank with an underflow outlet. Water from the sedimentation tank is mixed with the effluent from the WWTP and is pumped to two mine pits which eventually flow discharge to Carlz Pit, all of which are part of the facility property. The Process Water flow is depicted in Figure 4-2.

Date of Initial Operation:

The Keetac facility commenced operation in 1967.

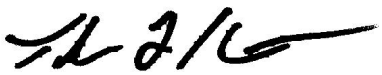
2.0 Certification

2.1 Professional Engineer Certification [40 CFR 112.3(d)]

As a Professional Engineer, I hereby attest that: (1) I am familiar with the requirements of 40 CFR Part 112; (2) I or my agent(s) have visited and examined the facility; (3) this Spill Prevention, Control, and Countermeasures (SPCC) Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of 40 CFR Part 112; (4) procedures for required inspections and testing have been established; and (5) this SPCC Plan is adequate for the Keetac facility.

Name of Registered Engineer: Thomas L. Hostrom

License Number: 23358 State of Registration: MN
Expires 6/30/2024



Signature

January 6, 2023
Date

2.2 Management Commitment [40 CFR 112.3(e)]

It is the intent of Keetac, to implement the procedures outlined in this SPCC Plan and to take the necessary steps to minimize the potential for releases to navigable waters of the United States. This Plan has the full approval of management at a level with authority to commit the necessary resources to fully implement this Plan. A copy of this Plan shall be maintained at the facility at all times and will be made available to the Regional Administrator for on-site review during normal working hours.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name of Management Person: Travis Kolari

Title: Plant Manager

Signature Date

2.3 Certification of Substantial Harm Determination [40 CFR 112.20]

The facility manager shall complete the attached Certification of Substantial Harm Determination form (Appendix A) and include it as a part of this SPCC Plan. The Certification of Substantial Harm Determination form shall be completed during the 5-year review and the new form shall be added to Appendix A. Old forms shall remain a permanent part of the SPCC Plan.

3.0 Review and Amendment [40 CFR 112.5]

3.1 Plan Amendment [40 CFR 112.5(a)]

This SPCC Plan shall be amended as soon as possible, but no later than six months following the change, whenever there is a change in facility design, construction, operation, or maintenance practices which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore lines or into or upon the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the U.S. Such amendments shall be fully implemented as soon as possible, but not later than six months of the amendment to the Plan.

3.2 Plan Review [40 CFR 112.5(b)]

The SPCC Plan shall be reviewed and evaluated at least once every five years. An entry shall be made in the Review and Amendment Log included as Table 2-1 after each review. An entry shall be made in the Review and Amendment Log noting date of change, a general description of the changes that made the amendment necessary (an additional description of changes can be inserted as an attachment to the log, if necessary), pages affected, signature of the person making the changes, and notation whether the changes were significant enough to warrant re-certification by a Professional Engineer. If the plan is determined to be satisfactory through this review, then the entry shall note that no changes were made and will include the signature of the reviewer. Any changes to the plan made as a result of the scheduled review shall be made as soon as possible, but no more than six months from the time of the

review.

3.3 Re-Certification [40 CFR 112.5(c)]

Significant amendments to the plan shall require re-certification by a Registered Professional Engineer. If re-certification is necessary, a new certification page shall be signed and inserted into the Plan. Minor changes, such as name changes of response team personnel or environmental coordinator do not require re-certification, but still must be noted in the Review and Amendment Log.

4.0 SPCC Plan [40 CFR 112.7]

The following sections contain the SPCC Plan for Keetac, located in Keewatin, Minnesota. The Plan has been prepared in accordance with good engineering practices, conforms to the requirements in 40 CFR 112.7, and has the full approval of management at a level with authority to commit the necessary resources to fully implement the plan. The sequence of the Plan follows that of the requirements set forth in 40 CFR Part 112.7 and 112.8.

4.1 Facility Conformance [40 CFR 112.7(a)(1) and (2)]

The facility complies with 40 CFR Part 112 with no exceptions.

This Plan calls for frequent visual inspection alone of shop-built oil storage containers that are visible on all sides and/or located over impermeable surfaces such that loss of even small quantities of oil from the container would be evident. This is based on good engineering practice considering the size, design, installation and alternative measures for assessing tank integrity implemented by the facility. The capacity of the tanks not subject to testing beyond visual inspection is 30,000 gallons or less.

The personnel performing these inspections and observations are knowledgeable regarding the requirements of this SPCC Plan, the content of each oil storage container, the container designs, and how to conduct inspections aimed at early leak detection. A visual inspection is a visual check of the entire accessible circumference of the exterior of a tank, including any associated aboveground piping and containment basins, from a distance close enough to see whether or not substance has seeped or flowed from the tank or piping, for evidence of leaks, distortion, corrosion, or settlement, including a check of all telltale pipes or similar leak detection systems.

This facility is not fully fenced due to its remote location and vast size. Security equivalent to fencing is provided by the security system along with constant surveillance by personnel, particularly in areas

where oil is stored. The facility is manned 24 hours a day, seven days a week and is guarded and secured with fencing and/or locked entrance gates. A gate pass is required for any person to enter the property that also restricts unauthorized entrance. Boundaries located near populated areas are fenced and the facility is patrolled daily.

4.2 Facility Description [40 CFR 112.7(a)(3)]

Figure 3-1 is a facility diagram that marks the location of each tank used to store oil on the property. Table 4-1 lists the type of material stored in each container and the capacity of each tank, and Table 4-2 lists the secondary containment of each tank. Tables 4-3, 4-4, 4-5, 4-6 and 4-7 list oil-filled equipment that contains 55 gallons or more of oil. Keetac keeps an inventory of absorbent materials on hand in each of its two warehouses that are accessible 24 hours a day, 7 days a week. Keetac also has access to response personnel 24 hours a day, 7 days a week with OSI Environmental.

Due to the size and vast locations of the ancillary equipment (e.g., facility equipment such as mill ring gears and other oil “in use”), rather than identifying all ancillary equipment on Figure 3-1, it is listed in Tables 4-3, 4-4, 4-5, and 4-6, which identify the product, approximate capacity and location. This equipment is located indoors and is contained within facility structures. Keetac uses a closed water system and any spill that would reach a sump or other water collection area would flow to either a process thickener or a mine pit. These areas are frequented by Keetac personnel daily and discovery of a discharge would be imminent. These areas do not connect directly to any navigable waters and therefore would not threaten U.S. waterways. If an oil spill were to reach a mine pit, pit sumps would be temporarily turned off if necessary and cleanup activities would be initiated.

Ancillary equipment is inspected once per shift by maintenance personnel to ensure proper operating conditions and fluid levels. The facility also has oil “in use” in transformers located as described in Table 4-7.

Material recovered from a release shall be contained by means outlined below for the appropriate media. Liquid petroleum products shall be recovered and used, if possible. If not possible, the product shall be collected with absorbent pads, pumps, or mechanical means and stored in 55-gallon drums for proper disposal by OSI. Contaminated soil shall be contained and arranged for removal to an approved treatment/disposal facility by the Environmental Department. For spilled product other than a petroleum product, the Environmental Department shall be contacted for assistance.

In the event of a spill, an incident shall be entered into the Environmental Incident Reporting System (EIRS) and the procedure outlined below will prevent any spill from reaching navigable waters and

limiting the effect on the environment.

4.3 Countermeasures for Discharge Discovery, Response and Cleanup [40 CFR 112.7(a)(3)(iv)(v) and (vi)]

No significant release of oil or any hazardous substances into waters or other natural resources covered by 40 CFR 112.1(b) have been reported at the Keetac facility in the 12 months prior to implementation of this revision of the SPCC plan. Any spill or release that enters the waters of the United States in harmful quantities must be reported to the governing agency. "Harmful quantities" generally is defined in 40 CFR Part 112 as discharges that affect the water quality standards or cause a film or sheen upon or discoloration of the water or adjoining shorelines. If a discharge occurs in excess of 1,000 gallons in a single event, or two discharges of more than 42 gallons each within any 12-month rolling period, within 60 days of the triggering discharge the information identified at 40 CFR 112.4(a)(1) through (9) must be submitted to the Regional Administrator of the USEPA and to the state agency in charge of water pollution control activities at the following addresses:

Regional Administrator
USEPA Region V
230 South Dearborn Street
Chicago, Illinois 60604
(312) 353-2000

Minnesota Pollution Control Agency
520 Lafayette Road North St.
Paul, MN 55155-4194
(651) 296-6300

Oil Spill Contingency Plan

1) Upon discovery of a spill, the discovering party shall notify his/her supervisor and contain the spill, if it can be done without personal harm.

2) The supervisor shall assess the situation for cleanup options and enter the incident in the EIRS, found on the Environmental intranet website for Keetac. In the event of any spill, the supervisor shall notify a Qualified Individual (listed below) for spill response.

3) If the spill is a) greater than 5 gallons and could potentially reach navigable waters or b) the spill (of any quantity) is a substance other than a petroleum product, the Environmental Department shall then notify the MN Duty Officer and the cleanup contractor, if the spill requires such actions based on an assessment. If the petroleum spill is greater than 10,000

gallons, the MN Duty Officer and the National Response Center shall be contacted. If the spill reaches a navigable waterway or leaves Keetac property then the EPA 24-hour hotline shall be called.

4) In the event of a small or medium spill manageable without outside assistance, cleanup can be completed with equipment located in either the warehouse, oil rooms, or in spill kits located at the pit fueling station, guard shack, at Crusher #1, Crusher #2 and the plant fueling station (Tank 11). A boat and spill response kit is also available if necessary to respond to water-borne spills. Used absorbents shall be placed in one or more 55-gallon drums, as needed, labeled, and placed in one of the storage areas, as shown in the facility diagram. The spill area should be cleaned until it is returned to as near as the original state as possible.

5) In the event of a spill, the supervisor shall notify a Qualified Individual for spill response.

Qualified Individuals (QI):

Chrissy Bartovich, Director – Environmental
Work Phone: (218) 749-7364
Cell Phone: (218) 780-9816

Stephani Campbell, Environmental Control Engineer
Work Phone: (218) 778-8684
Cell Phone: (218) 929-7208

Wade Klingsporn, Environmental Control Engineer
Work Phone: (218) 550-5873
Cell Phone: (218) 404-6272

Bethany Jones, Environmental Control Engineer
Work Phone: (218) 749-7433 (Minntac)
(218) 778-8672 (Keetac)
Cell Phone: (218) 421-5154

Pursuant to the Minnesota Spill Bill, the individuals identified in this plan have full authority to implement the actions described within this plan.

If the QI determines that the situation will threaten facilities or the environment outside of the plant boundaries, require assistance from outside forces, or use of emergency facilities, the following notifications will be made:

St. Louis County Sheriff's Office 911

City of Keewatin	778-6517
Keewatin Police Department	911
Nashwauk-Keewatin Schools	778-6511
Minnesota Duty Officer	800-422-0798
National Response Center	800-424-8802
Fairview University Medical Center – Mesabi	262-4881

Other personnel as required to implement appropriate response in accordance with the nature of the emergency.

Travis Kolari – Plant Manager	(W) 218-778-8776 (M) 218-750-2477
John Kingston – Area Manager	(W) 778-8664
Lukas Klemke – Area Manager	(W) 218-749-7363 (M) 218-404-4278
Susan Wiirre – Manager – Employee Rel.	(W) 749-7455
Tim Kalisch- Plant Area Manager	(W) 218-749-7223 (M) 218-969-9786
Steven Andrie- Mine- Area Manager	(W) 218-749-7523 (M) 218-966-9287

4.4 Prediction of Direction, Rate of Flow, and Quantity of Discharge [40 CFR 112.7(b)]

Aboveground Storage Tank (AST) spills can occur as a result of structural failure, leaking valves, or transfer activities. A complete list of aboveground storage tanks at the Keetac facility is included in Table 4-1. This table contains information concerning the storage capacity of each storage unit, the material stored, predicted direction of runoff if structural failure occurs of any secondary containment, and rate of flow in the event of major equipment failure.

The Site Drainage Plan (Figure 4-1) indicates the locations of storage units at the facility and indicates expected runoff paths. The following paragraphs describe the potential drainage paths from catastrophic failure of certain oil storage units. Each of these scenarios assumes a worst-case catastrophic failure with a flow rate that would be impractical to estimate.

An assessment of the AST secondary containment areas indicates that surface waters within the Keetac property could potentially be impacted in the event that a spill or leak occurred and both secondary containment and spill control measures failed. The area identified as being the worst-case discharge is the Pit Fueling Area and Pit Lube Station. Secondary containment failure or malfunction of loading/unloading equipment would possibly allow the overland flow of product, in a

down gradient direction, to mining Section 18 sump, which is pumped to the Carlz Pit.

A small spill scenario could involve ASTs located inside the plant buildings. In the event that a spill from the ASTs located inside the concentrator and pellet plant areas was not contained, product could potentially enter the floor drain overflow system and discharge to the Bennett Pit through the 48-inch storm drain. This material could potentially discharge to the Russell Pit and subsequently be pumped to the Carlz Pit. However, due to the facility's closed water system, material could be recovered before discharge to a stream, river, lake or other water of the state.

4.5 Description of Containment and Diversionary Structures [40 CFR 112.7(c)]

Each AST described in Section 4.4 is located within a building or secondary containment structure. Calculations of containment volume, where applicable, are presented in Appendix B. Containment capacity was calculated from construction drawings or field measurements by determining the gross volume of the containment areas and then subtracting the volume displaced by tanks and other structures or equipment within the area. Containment capacities meet the requirements of 40 CFR Part 112 for oil storage (100% of the largest single container capacity plus allowance for freeboard) and Minnesota Statute Chapter 115E (Minnesota Spill Bill).

A description of containment for each outdoor AST at the Keetac facility is included in Table 4-2. Table 4-2 includes a description of the type of containment, material of construction, containment capacity, and failsafe controls in place for each containment area. Additional descriptions of certain containment areas follow.

Keetac has a total facility oil storage capacity of over 130,000 gallons. This includes 98,480 gallons of above ground storage tank volume, along with operational equipment storage capacity. The principal spill prevention system for the ASTs at the facility is secondary containment. Tanks are gauged before filling to ensure tanks are not overfilled (except the unleaded gas UST, which has automatic tank gauging).

The ASTs at the plant, pit and shops are maintained in cast-in-place concrete secondary containment dikes or are located inside facility buildings with impervious floors and indoor berms, curbs, walls, drains or sloped floors that can contain spills. The holding capacities of the secondary containment dikes have been determined to be sufficient to retain the entire contents of the largest single tank plus adequate freeboard for precipitation. Table 4-1 summarizes each tank location, size and contents with associated secondary containment information.

Releases of oil "in use" from transformers and other equipment is contained by containment systems as described in Section 5.1(3) below as well as the facility process water systems and drainage systems that retain water on site in a manner that would allow recovery of spilled oil prior to leaving the site.

4.6 When Installation of Structures or Equipment is not Practicable [40 CFR 112.7(d)]

Specific secondary containment is provided for all ASTs containing oil at the Keetac facility by building containment, berms, dikes, or other diversionary structures as described in the preceding section. Therefore, this section is not applicable and an oil spill contingency plan following the requirements of 40 CFR 109 is not required. Pertinent requirements of the Minnesota Spill Bill, regarding AST hazardous substance storage and handling, have been incorporated into the facility SPCC Plan. The prevention and response components of the Plan are consistent with the requirements under national or area contingency plans developed under the Oil Pollution Act of 1990. Keetac is continuously manned 24 hours a day, 7 days a week and keeps an adequate inventory of absorbent materials and supplies in stock to expeditiously control and remove any quantity of oil which may be harmful.

4.7 Inspections, Tests, and Records [40 CFR 112.7(e)]

Keetac has implemented an Inspection Program that is designed to meet the requirements of environmental and worker safety. The QI has the authority to ensure that emergency prevention, safety, and emergency control equipment is available and functioning properly and that inspection logs are being properly filled out.

Spill kits are located at various locations throughout the facility as shown on Figure 3-1. These kits shall be inspected on a monthly basis and recorded on the inspection tag located on the spill kit.

The four secondary containment areas requiring periodic inspection of collected rainwater are the North Truck Shop (Area F), Pit Fueling Station (Area H), Plant Fuel Station (Area I) Magnesium Chloride, and Haz/Nonhaz Drum Storage. Environmental Department personnel are responsible for these inspections.

The periodic inspections are performed, at a minimum, once a week. The inspections include visual observation of the collected rainwater to ensure compliance with applicable water quality standards prior to discharge. Collected rainwater in secondary containment areas is discharged, after inspection, through drainpipes with manually operated valves, which are locked in the closed position when not in use.

Appropriate chemical analysis of collected rainwater may be required if the visual inspection indicates possible contamination. In the absence of a visible sheen, there is the potential for a de minimus level of hydrocarbons. On an annual basis after snowmelt, Keetac will inspect secondary containments for the presence of an oil sheen. If a sheen is present, a sample of rainwater may be collected and analyzed for petroleum hydrocarbons (gasoline range organics (GRO) (WI GRO method) and diesel range organics (DRO) (WI DRO method) as appropriate based on the contents of the tank. If laboratory analysis
indicates that detectable concentrations of GRO or DRO are present, water shall be disposed of appropriately. Alternatively, absorbent pads may be used to remove the oil from the water prior to draining. If the collected rainwater exhibits no sheen, the responsible facility personnel shall unlock the drain valve, drain the containment area and re-lock the drain valve in the closed position. The responsible facility personnel shall make a record of rainwater drainage events on the Secondary Containment Drainage Log located in the Environmental Department, by including the following information:

- Date of drainage event
- Name of containment area
- Comment section for any water quality issues to be noted
- Confirmation that drain valve was closed and locked
- Name of person designated to perform tasks

Completed logs for the Inspection Program are maintained by the Environmental Department for a minimum of three years.

Outdoor ASTs are visually inspected by designated facility personnel on a weekly basis for signs of deterioration, leaks which may cause a spill, and accumulation of product inside the containment structure. An example of the weekly inspection form is included in Appendix C. The Environmental Department is responsible for inspecting the ASTs within the secondary containment structures. Personnel shall make observations of indoor tanks and oil storage areas several times per day such that significant discharges or accumulation of oil inside diked areas are observed and addressed before a scheduled inspection occurs. Indoor tanks shall be inspected and documented on a quarterly basis. The quarterly inspection form is included as Table 4-2.

The concrete containment for the Pit fueling station is secondary containment for the loading/unloading area and associated garage. This containment is inspected on a weekly basis along with the ASTs.

A review of the structural integrity of all containment structures, AST supports, foundations, above ground piping, piping supports and valves is included in the inspections. Visible leaks noted from tank seams, gaskets, rivets, and bolts shall be reported to the Environmental Department and corrected promptly. Noted leaks and repair actions shall be recorded as part of the inspection record and maintained by the Environmental Department for a minimum of three years.

As buried pipelines are exposed, visual inspections shall be made for signs of deterioration and/or leaks. Any piping deficiencies shall be corrected promptly prior to backfilling exposed pipelines. Additional anti-corrosive compounds and wrapping shall be applied when necessary to ensure integrity of the piping system. When possible, new pipeline systems shall be located above ground.

Although official SPCC inspections occur at the frequency described above, unofficial inspections occur at a much more frequent basis. The process equipment shall be inspected once per shift by the Maintenance mechanics. Drums used as keep-fills shall be inspected for leaks at the same time. Storage area (SA#) located on the facility diagram (Figure 3-1) indicates areas where drums are stationed. These areas shall also be frequented once per shift by the maintenance mechanics and any leaks would be noticed immediately and contained within the building. All plant equipment shall be manually filled reducing the risk of an unnoticed release.

4.8 Personnel Training [40 CFR 112.7(f)]

1) The QIs and any operations and maintenance personnel designated as emergency responders, to assist in controlling spills at the facility, are required to receive at least the minimum training as specified in 40 CFR 112.7(f). All designated personnel are required to be trained in the use of protective clothing and breathing apparatus deemed compatible with the materials likely to be handled in response to a facility spill incident.

2) All personnel in the Environmental Department are designated as the individuals accountable for oil spill prevention and reporting to senior management.

3) Oil-handling operating and maintenance personnel are briefed at least once per year to ensure adequate knowledge and understanding of the SPCC Plan and familiarity with spill prevention measures, as well as operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, & regulations; and general facility operations. Such briefings shall be conducted by foremen at regular tailgate meetings or as directed by the Environmental Department, at a minimum of once a year. Periodic drills and

unannounced response drills (including equipment testing and deployment) shall be conducted at a frequency necessary to ensure that the persons and equipment are ready for response.

Entries shall be made in personnel records that training has been received. Training documentation will be recorded for the trained employee and retained in the training system for the working term of the employee.

4.9 Security [40 CFR 112.7(g)]

1) The facility is manned 24 hours a day, seven days a week and is guarded and secured with fencing and/or locked entrance gates. A gate pass is required for any person to enter the property that also restricts unauthorized entrance. Due to the size and remote location of the facility, the entire property boundary is not fenced. Boundaries located near populated areas are fenced and the facility is patrolled daily.

2) Master flow and drain valves and any other valves that will permit direct outward flow of the tank's contents to the surface are securely locked in the closed position when in non-operating or non-standby status. The secondary containment drain valves are all chained and padlocked.

3) Starter controls on pumps are not locked in the "off" position but are accessible only to authorized personnel and security is provided as described in Section 4.1 by restricting access to the property. All primary electrical controls and starter controls are within locked buildings or within controlled fenced areas.

4) Loading/unloading connections of oil piping are securely capped or blank-flanged when not in service, or when in standby service for an extended period of time.

5) The facility is illuminated after dark by lighting for 24-hour visibility to aid in the discovery of spills and prevention of spill due to vandalism.

4.10 Facility Tank Car and Tank Truck Loading/Unloading Rack [40 CFR 112.7(h)]

SPCC regulations define a loading/unloading rack as "a fixed structure (such as a platform, gangway) necessary for loading or unloading a tank truck or tank car that includes a loading or unloading arm, and may include any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personal safety devices."

Because flexible hoses, not a fixed loading/unloading arm, are used to transfer oil to and from tanks at

Keetac the facility does not have any loading or unloading racks as defined by EPA. Therefore 40 CFR 112.7(h) does not strictly apply. The facility does have many areas where fuel transfer occurs. It is within good engineering practice to establish procedures and facilities intended to minimize releases associated with all oil transfer operations. The remainder of this section describes those procedures.

Vendors shall be responsible for the transfer of product from vendor trucks into the appropriate oil containers, including ASTs, during filling operations. Product shall not be transferred until containers have been gauged to determine existing product level.

1) Oil transfer operations are performed manually. Drip pans are placed under all connections during transfer of oil in or out of oil storage containers, transformers, and other oil-filled equipment. Fill lines are capped and inoperable at all times unless actually in use. Tank car loading/unloading procedures follow the requirements and regulations established by the U.S. Department of Transportation and applicable environmental regulations.

   Spill kits/materials located at the sites noted under Section 4.3 above are readily available to assist with containing and remediating releases. Additional response material can be obtained from either warehouse.

   Tank trucks unload petroleum products (# 2 Fuel Oil) at the pit fueling station tanks (Tanks #1 & #2). At locations not yet equipped with permanent drip pans truck drivers are required to place spill buckets under each connection. Spill kits are located at each transfer area and are inspected as described in Section 4.7.

   Pit fueling tanks are filled via a3-inch hose that connects to the fuel delivery truck inside the secondary containment. The surroundings are active mining areas that consist of mainly crushed rock, taconite, and overburden. The fueling area is located just west of the midpoint of a hill. The direction of flow of a release from the fuel truck itself would depend on the location of the truck at the specific time. Flow towards the west would be contained within berms and a low area adjacent to the tanks. The possibility of flow towards the east has been prevented by a clay berm that eliminates the potential to reach Section 18 pit, which would act as a detention pond for the release.

   Bulk oil transfer operations are required to be overseen by the oil delivery vehicle driver at all times. Releases are reported immediately upon discovery, minimizing the chance for any water impact.

The remaining tanks are all filled either indoors or from tote tanks by vendors. The tank list in Table 4-1 details the location, capacity, and product of each tank. Any release during oil transfers would be contained inside the building or be released to the soil with no water impacts.

2) Warning signs are located at vendor unloading areas to remind drivers and prevent vehicular departure prior to disconnecting transfer lines.

3) The truck driver shall be responsible for inspecting connections, valves, and pipelines for leaks prior to filling and prior to departing the transfer area. Connections or valves are tightened as necessary prior to filling or departing the site to ensure that leakage does not occur. Truck drivers shall provide a catchment basin or drip pan under all hose connections to contain spills or drips during transfer operations.

4.11 Field Constructed Aboveground Container Requirements [40 CFR 112.7 (i)]

The facility has no in-service field-erected tanks.

4.12 Additional Requirements [40 CFR 112.7 (j)]

Keetac shall comply with the applicable requirements and other effective discharge prevention and containment procedures listed in 40 CFR 112 or any applicable more stringent Minnesota rules, regulations, and guidelines.

Minnesota has the following rules and regulations regarding spill prevention and containment that are more restrictive than 40 CFR § 112.

Overfill Protection (Minn. R. 7151.5700)

ASTs filled by transfers of more than 55 gallons at one time must have overfill protection. Options for overfill protection include an automatic shut-off device, a permanently mounted sight glass or gauge, a high-level alarm or a person manually gauging the product level in the tank. Double walled tanks must also meet state overfill protection requirements, with the options limited to high-level alarms or automatic shut-off systems, unless the tank is located within a secondary containment area. Overfill protection is provided for Tank #22 by an audible alarm system. Overfill protection for the other oil storage units is provided by visual or manual gauging systems.

Maintenance (Minn. R. 7151.7300)

Owners and operators of all new ASTs (installed on or after November 2, 1998) are required to

minimize rust on the tank exterior and dispose of water drawn from the bottom of the tank according to applicable state and federal laws.

Secondary containment and substance transfer areas must be maintained free of cracks, open seams, open drains, siphons and vegetation. These inspection items shall be addressed on the Weekly Tank & Hazardous Waste Inspection Form.

Release Reporting

The State of Minnesota requires immediate reporting of the discharge of any substance or material that, if not recovered, may pollute the waters of the state. The responsible person must recover the discharged substance or material as rapidly and as thoroughly as possible and immediately take actions that may be reasonably possible to minimize or abate the pollution of State waters. The phone number for the Minnesota Duty Officer to whom reportable spills shall be reported is provided in Section 4.3 of this plan.

Qualified Oil-filled Operational Equipment [40 CFR 112.7(k)]

40 CFR 112.7(k) (added as part of the December 2006 rule revisions) offers an alternative to the general secondary containment requirements for qualified oil-filled operational equipment when a facility meets a spill history qualifying criterion. Specifically, if a facility has oil-filled operational equipment such as transformers and has not had a discharge from the oil-filled equipment in the last three years that reached navigable waters where the spill exceeded 1,000 gallons or two spills exceeding 42 gallons in a twelve month period, then the facility may implement an inspection and monitoring program, develop an oil spill contingency plan, and provide a written commitment of resources to control and remove oil discharged, for qualified equipment in lieu of secondary containment for the oil-filled operational equipment.

The facility has elected to provide general secondary containment adequate to prevent migration of a spill from oil-filled equipment off-site. As such 40 CFR 112.7(k) is not applicable.

5.0 Conformance with Other Applicable Guidelines [40 CFR 112.8]

The following Sections contain information to conform to 40 CFR 112.8.

5.1 Facility Drainage [40 CFR 112.8(b)]

1) Containment areas at the Keetac facility are equipped with drain valves, which are maintained in a

closed position and locked at all times, unless the containment is being manually drained. Other containment areas shall be emptied by pump truck when necessary. Records of containment area inspection for sheen and drainage shall be kept as described in Section 4.5.

2) Flapper-type drain valves are not used for containment area drains. Containment area drain valves are manually operated gate valves and ball valves. Retained storm water shall be drained directly to the surface outside each containment area after inspection as described in Section 4.7.

3) The sedimentation tank by the Truck Shop and the sump by the Pit Fueling Station also serve to capture oil spills from sources other than oil storage containers. The Truck Shop sedimentation tank is cleaned an average of once per year by removing the oil/water, decanting the water and solidifying the remaining sludge for off-site incineration. The pit fueling station sump is pumped several times a year with minimal solids or oil encountered. Containment systems for undiked areas with potential for oil discharges are also described in detail in Sections 4.1, 4.2 and 4.4.4) SPCC rules require that "where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility." Back-up pumps for drainage water treatment are not required at the facility to prevent a discharge of oil offsite. Facility drainage is engineered as required by 112.7(b)(3) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility.

4) Part 112.8(b)(4) is not applicable because drainage waters are not treated prior to discharge.

5.2 Bulk Storage Containers (excluding production facilities) [40 CFR 112.8(c)]

1) Storage containers are constructed and used in accordance with the implied intent of the manufacturers. All containers are fully compatible with the material they hold and the environmental conditions to which they can be reasonably expected to be subjected (e.g., pressure, temperature). Oil storage units installed at the facility in the future shall be compatible with the materials that will be stored in them and with the conditions of storage. The Environmental Department shall be notified prior to any new installation or change in service of an existing AST. The Environmental Department shall determine the category (process, storage, etc.) the AST falls into and update the necessary tables in this plan. The Environmental Department shall also assign a unique number to the AST and arrange for this information to be placed on the tank. Note that throughout this section of the plan, the term

"ASTs" is used to refer to the broader term "bulk storage containers."

2) On-site ASTs are located within a building or within secondary containment structures large enough so that the entire contents of the largest single tank within that containment, plus free board for accumulated precipitation, would be contained in the event of a catastrophic release. No ASTs containing oil at the Keetac facility are located outside of a building or secondary containment structure. Table 4-2 presents the containment capacity of all containment areas around ASTs at the site as well as ASTs containing other potentially hazardous materials. The containment areas for all tanks are sufficiently impervious to prevent oil from escaping as described in Section 4.~~3~~5 above.

   Containment capacity was determined from construction drawings or field measurements by calculating the gross volume of the containment areas and then subtracting the volume displaced by tanks and other structures or equipment within the area. Containment capacities meet the requirements of 40 CFR Part 112 for oil storage (100% of the largest single container capacity plus freeboard). Containment capacity calculations are presented in Appendix B.

3) Each containment structure shall be inspected after heavy rainfall as described in Section 4.7.

   Small amounts of collected rainfall are allowed to evaporate. When accumulated water starts to approach a volume that may compromise the containment capacity of the structure, the water shall be removed following the procedure as outlined in Section 4.7. Uncontaminated rainwater shall be released through drain valves to the on-site storm water drainage ditches and detention ponds and then to the permitted storm water outfall from the facility. Water exhibiting a surface sheen shall not be released unless absorbent pads are used to remove the oil. Alternatively, it may be pumped out and disposed at a certified off-site facility. Any discharge of contained water to storm water will be noted on the Secondary Containment Drainage Log located in the Environmental Department. Water exhibiting any abnormal attributes shall not be drained. It shall be noted in the comments section of the form, pumped out and disposed at a certified off-site facility. The current form is located on the Environmental Website and shall be used to record any discharge of contained water to navigable waters.

4) Part 112.8(c)(4) deals with buried metallic storage tanks. There is one 10,000 gallon capacity, double-walled underground storage tank at the Keetac site. The tank is regulated under Minnesota's state UST program (per 40 CFR Part 281 and 282.72) and is therefore not subject to SPCC regulations.

5) Part 112.8(c)(5) deals with partially buried metallic tanks. There are no partially buried or bunkered

oil storage metallic tanks at the Keetac facility. Therefore, this Part is not applicable.

6) The following items associated with oil bulk storage containers shall be inspected for deterioration, spills from malfunction, and leaks at least quarterly: all above-ground piping, containment areas, valves, tanks, supports, containment structures, and equipment locking devices. Routine inspections shall be performed as described in Section 4.7. Signed and dated records of inspections and other pertinent information, such as spills, containment area drainage, removal/disposal of contaminated material, replacement and/or repair of equipment, and training sessions shall be kept in the Environmental Control Department for a minimum of three years.

   Periodic testing shall be conducted to verify integrity of Tanks 1, and 2. The tanks will undergo an external "In Service" inspection, following test method STI SP 1000 and an internal "Out of Service" inspection as recommended by the test method. The exact schedule shall be determined by the last "In Service" and "Out of Service" inspections completed at the facility. A file with records of these tests shall be maintained by the Environmental Department for the life of the tank. Testing shall be completed following repair, alteration, reconstruction, or change in service.

   Keetac staff shall inspect outdoor tanks on a weekly basis, as described in Section 4.7, for signs of deterioration, discharges or accumulation of oil inside diked areas. Personnel shall make observations of the facility several times per day such that significant discharges or accumulation of oil inside diked areas are observed and addressed before a scheduled inspection occurs. It is within good engineering practices to consider visual inspection adequate integrity testing for shop-built oil containers less than 30,000 gallons in size that are not in contact with the ground and are visible from all sides. Field erected tanks and tanks that are set on or directly in contact with the earth require additional API or equivalent non- destructive testing inspection.

7) Part 112.8(c)(7) deals with internal heating coils inside oil bulk storage containers. There are no internal heating lines at the Keetac facility; therefore, this Part is not applicable.

8) Fail-safe engineering and spill prevention devices have been built into oil bulk storage containers at the facility. The possibility of a significant discharge is reduced by the following equipment/procedures:

- Manual control over and physical presence of trained facility employees at all movements of oil products.
- Regular inspections of tanks and auxiliary equipment.
- Training regarding procedures for tank filling.

Best engineering practices are used at the facility to minimize the risk of leakage or spills.

9) The facility wastewater treatment plant outfall is routinely inspected in order to detect possible system upsets that could cause an oil release.

10) Any visible leaks that could result in a loss of oil from a bulk storage container (e.g., from seams, gaskets, piping, pumps, valves, rivets and bolts) detected during scheduled inspections or routine observation, will be promptly corrected.

11) Mobile or portable oil storage containers, including drums and totes, will be positioned or located so as to prevent spilled oil from reaching navigable waters. Spill kits shall be located near these storage containers and shall be inspected as part of the scheduled inspections described in Section 4.7. Tote tanks are tanks that are 1100 gallons or less, located onsite less than 180 days, and are not filled or refilled onsite. These tanks are not required to be registered by the MPCA but will be placed in an area so as to prevent spilled oil from reaching navigable waters.

When not in use, refueling trucks that are subject to SPCC are parked in the truck maintenance shop which provides secondary containment. Also, spill absorbent materials are located throughout the shop. When in use, these vehicles operate within areas such that a release from fueling operations would be contained by excavated soil/fill and would be expeditiously removed by area equipment.

5.3 Facility Transfer Operations, Pumping, and Facility Process [40 CFR 112.8(d)]

1) Buried piping installations in the pit are provided with cathodic protection. Whenever existing buried pipelines are exposed through excavation, it will be visually inspected for corrosion and repaired or replaced as necessary. All replacement piping shall be wrapped, coated, and catholically protected at time of installation. Any wrapped buried piping shall be re-wrapped prior to backfilling. Inspection records shall be maintained in the office of the Environmental Department.

2) When a pipe is not in service or is in standby service for extended lengths of time, valves shall be kept closed and locked, bull plugged, or blank-flanged and marked as to their origin.

3) Pipe supports are designed to minimize abrasion and corrosion and to allow for expansion and contraction. Pipe supports shall be routinely inspected as part of the general facilities inspection as described in Section 4.7.

4) All above ground valves, pipelines, and appurtenances shall be routinely inspected as described in Section 4.7.

5) Vehicular traffic is warned by signs to be sure that the vehicle, because of its size, will not endanger above ground piping or other transfer operations.

6.0 Disclaimer Statements for Remaining Facility Requirements

6.1 Oil Production Facilities (Onshore) [40 CFR 112.9]

The Keetac site is not an oil production facility, so this Part is not applicable.

6.2 Oil Drilling and Workover Facilities (Onshore) [40 CFR 112.10]

The Keetac facility is not an oil drilling or workover facility, so this Part is not applicable.

6.3 Oil Drilling, Production, or Workover Facilities (Offshore) [40 CFR 112.11]

The Keetac facility is not an offshore facility, so this Part is not applicable.

6.4 Subpart C Requirement for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oils; and for Vegetable Oils, including Oils from Seeds, Nuts, Fruits, and Kernels [40 CFR 112.12-112.15]

The Keetac facility does not produce, distribute, or store this category of oils, so these Parts are not applicable.

7.0 Facility Response Plan [40 CFR 112.20]

The facility is not required to maintain a Facility Response Plan.

TABLES

Table 2-1: Review and Amendment Log

Date of Review of Amendment	General Description of Changes Made (if any)	Page Numbers of Changes Made	Re-Certification by P.E. (yes/no)	Signature of Reviewer
Oct-2000	Reconstruction of secondary containment structures at Areas C and D, and change format of plan	All	Yes	Brian O'Neil, P.E. ENSR Consulting and Engineering
Dec-2004	Construction of secondary containment structure at Area I, change of piping at Tank 10, and change format of plan	All	Yes	Steven E. Marshik, P.E Barr Engineering Company
May-2009	Update plan for recent SPCC amendments, change format of plan	All	Yes	
Jul-2011	Update personnel and spill reporting procedure	All	No	Tracy Muck, Environmental Control Department, Keetac
September 2016	Removal of references to Tank 10 and the FRP.	All	Yes	David S. King, Northeast Technical
February 2019	Update personnel	15-16	No	Bethany Jones, Environmental Control Department, Keetac
January 2023	Update figures, update personnel, remove Tank 10	All	Yes	Thomas L Holstrom, PE Barr Engineering Co.

Table 4-1: Storage Tank Information

Tank Number/ Description	Material Stored/ Material of Construction	Storage Capacity	Location	Secondary Containment	Direction of Runoff of Potential Release from Unit	Inspection Comments
1	Diesel	20,000	Pit Fueling Station	Yes – Area "H"	Refer to Figure 4-1	
2	Diesel	20,000	Pit Fueling Station	Yes – Area "H"	Refer to Figure 4-1	
3	Hydraulic Oil	500	Pit Fueling Station	Yes – Building	Facility water system	
4	Motor Oil	500	Pit Fueling Station	Yes – Building	Facility water system	
6	Lube Oil	400	Crusher #1 – 6th Floor	Yes – Building	Facility water system	
7	Lube Oil	400	Crusher #2 – 6th Floor	Yes – Building	Facility water system	
9	Fuel Oil	500	Pit Fueling Station	Yes – Building	Facility water system	
11	Fuel Oil	6,000	East of Conc Crane bay	Yes- Area "I"	Refer to Figure 4-1	
18	Waste Oil	560	Truck Shop	Yes – Building	Facility water system	
19	Lube Oil	6,000	North Truck Shop	Yes – Area "F"	Refer to Figure 4-1	
20	Lube Oil	6,000	North Truck Shop	Yes – Area "F"	Refer to Figure 4-1	
22	Waste Oil	2,000	North Truck Shop	Yes – Area "F"	Refer to Figure 4-1	
23	Hydraulic Oil	2,000	North Truck Shop	Yes -– Area "F"	Refer to Figure 4-1	
24	Waste Oil	1,000	Pelletizer	Yes- Building	Facility water system	
25	Waste Oil	1,000	Concentrator	Yes-Double Walled	Facility water system	
27	Lube Oil	250	Inside Truck Shop	Yes- Building	Facility water system	
28	Motor Oil	250	Inside Truck Shop	Yes- Building	Facility water system	
29	Transmission Fluid	250	Inside Truck Shop	Yes- Building	Facility water system	
32	MgCl	10,000	South of Pellet Loadout	Yes- MgCl Containment	Refer to Figure 4-1	
33	T-Oil 30	2,000	North Truck Shop	Yes – Area "F"	Refer to Figure 4-1	
34	T-Oil 50	2,000	North Truck Shop	Yes – Area "F"	Refer to Figure 4-1	
37	Hydraulic Oil	1,000	Pit Fueling Station	Yes – Building	Facility water system	
38	Lube Oil	1,000	Pit Fueling Station	Yes - Building	Facility water system	
39	Lube Oil	3,000	Crusher #1 – 3rd Floor	Yes – Building	Facility water system	
40	Lube Oil	3,000	Crusher #1– 3rd Floor	Yes – Building	Facility water system	
41	Lube Oil	3,000	Crusher #2– 3rd Floor	Yes – Building	Facility water system	
42	Lube Oil	3,000	Crusher #2 – 3rd Floor	Yes – Building	Facility water system	
43	Lube Oil	150	Crusher #1 – 4th Floor	Yes- Building	Facility water system	
44	Lube Oil	150	Crusher #2 – 4th Floor	Yes – Building	Facility water system	
45	Hydraulic Oil	110	Crusher #1 – 3rd Floor	Yes- Building	Facility water system	
46	Hydraulic Oil	110	Crusher #2 – 3rd Floor	Yes- Building	Facility water system	
47	Motor Oil	250	Inside Truck Shop	Yes- Building	Facility water system	
48	Motor Oil	250	Inside Truck Shop	Yes – Building	Facility water system	
49	Transmission Fluid	250	Pellet Plant Loadout	Yes- Building	Facility water system	
50	Lube Oil	400	Pellet Plant Burner Floor	Yes- Building	Facility water system	
51	Motor Oil	600	Inside Truck Shop	Yes- Building	Facility water system	
52	Motor Oil	600	Inside Truck Shop	Yes- Building	Facility water system	

Notes: Estimated rate of flow assumes virtually instantaneous release of contents of each tank as worst-case scenario. Facility water system is defined as Keetac's internal process water system.

Date: Inspected by:_____

Table 4-2: Inventory of Secondary Containment Structures

Identification	Aboveground Storage Tanks	Material/Type of Construction of Containment	Maximum Single Tank Capacity (gallons)	Net Containment Capacity (gallons)	Fail-safe Controls in Place
Area F	Tanks 19, 20, 22, 23, 33, and 34	Concrete Floor and Dike	6,000	See Appendix B	Weekly Inspections
Area H	Tanks 1 and 2	Concrete Floor and Dike	20,000	See Appendix B	Weekly Inspections
Area I	Tank 11	Concrete Floor and Dike	6,000	See Appendix B	Weekly Inspections
See Appendix B for Containment Calculations					

Table 4-3: Crusher/Drive Tower Oil-Filled Equipment Listing

Equipment	Product	Gallons
#1 Primary N Gyrol	Lube Oil	75
#1 Primary Reducer	Lube Oil	175
#1 Primary S Gyrol	Lube Oil	75
#1 Tripper Gyrol	Lube Oil	65
#1 Tripper Reducer	Lube Oil	75
#2 Primary N Gyrol	Lube Oil	75
#2 Primary Reducer	Lube Oil	175
#2 Primary S Gyrol	Lube Oil	75
#2 Tripper Gyrol	Lube Oil	65
#2 Tripper Reducer	Lube Oil	75
Main Res #1	Lube Oil	1100

Table 4-4: Concentrator Oil-Filled Equipment Listing

Equipment	Storage Area	Product	Gallons
1 secondary circulating lube		Lube Oil	2-55 gal
2 secondary circulating lube		Lube Oil	2-55 gal
3 secondary circulating lube		Lube Oil	2-55 gal
North MCC room roof	**SA6**	Lube Oil	7-55 gal
Primary mill lube rooms	**SA7**	Lube Oil	14-55 gal
Primary mill floor - line 10	**SA8**	Lube Oil	12-55 gal
Cobber tails hydro platform	**SA9**	Lube Oil	6-55 gal
Cobber tails hydro mandoor area		Lube Oil	100 gal
Conc low rise elevator	**SA10**	Lube Oil	35-55 gal
by 2 secondary		Lube Oil	1-55 gal
Standby tails pump		Lube Oil	100 gal res
Normal tails pump		Lube Oil	100 gal res
tails drum area		Lube Oil	3-55 gal
1,2,3 secondary fine screens		Lube Oil	3-55 gal
1,2,3 secondary fine screens		Lube Oil	3-55 gal
4,5 secondary fine screens		Lube Oil	2-55 gal
Finisher floor lines 4 and 5		Lube Oil	2-55 gal
4,5 primary screens lube station		Lube Oil	2-55 gal
secondary mill feed tank area		Lube Oil	1-55 gal
1,2,3, primary screens lube station		Lube Oil	3-55 gal
North cobber floor repair area		Lube Oil	2-55 gal
4 & 5 Primary Screens		Lube Oil	100 gal res
7 & 8 hydros / secondary		Lube Oil	100 gal res
9 & 10hydros / mill floor		Lube Oil	100 gal res
Fine screen makeup 1-5		Lube Oil	5 -100 gal
Finisher makeup 1-3		Lube Oil	3 – 100 gal
Conc. slurry tank reducers		Lube Oil	100 gal res
Gyrol tail pump makeup normal		Lube Oil	100 gal res
Standby tails pump reducer makeup		Lube Oil	100 gal res
#4-5 Trunnion secondary makeup		Lube Oil	100 gal res
#4 Secondary / service pinion lube		Lube Oil	100 gal res
#4 Secondary pinion makeup		Lube Oil	100 gal res
#3 Secondary pinion makeup		Lube Oil	100 gal res
#1-3 Secondary pinion makeup		Lube Oil	100 gal res
#2 Secondary trunnion makeup		Lube Oil	100 gal res
#1 Secondary trunnion makeup		Lube Oil	100 gal res
Gyrol 1 tank makeup		Lube Oil	100 gal res
#1 Thickener makeup		Lube Oil	100 gal res
#1 Thickener drive		Lube Oil	100 gal res
#2 Thickener 1 tank makeup		Lube Oil	100 gal res
#3 Thickener 1 tank makeup		Lube Oil	100 gal res
#1 Secondary pinion service		Lube Oil	60 gal res
#2 Secondary pinion service		Lube Oil	60 gal res
#3 Secondary pinion service		Lube Oil	60 gal res
Portable Geary Spray		Lube Oil	100 gal res

Table 4-5: Pellet Plant Oil-Filled Equipment Listing

Equipment	Product	Gallons
Table feeder drive reducers (8)	Lube Oil	55
Balling line lube stations (8)	Lube Oil	55
Filterwear plates/journals	Lube Oil	2-55 gal
Open gear systems	Lube Oil	55
Grate drive	Lube Oil	250
Grate head shaft bearings	Lube Oil	55
1/4 kiln bearing reservoir	Lube Oil	300
West kiln drive	Lube Oil	250
East kiln drive	Lube Oil	250
Grate head shaft fill station	Lube Oil	55
5/8 kiln bearing reservoir	Lube Oil	300
Regrind mill reservoir	Lube Oil	60
Regrind mill fill station	Lube Oil	55
East grate bearing lube station	Lube Oil	55
Grate tail lube station	Lube Oil	55
Roll feed lube station	Lube Oil	55
side cast lube station	Lube Oil	300
Grate shaft bearing 1-12 lube station	Lube Oil	55
West grate bearings lube station	Lube Oil	55
Kiln bearing fill station	Lube Oil	350
Stationary cooler lube station	Lube Oil	100
Kiln pinion gear	Lube Oil	55
Kiln pinion bearing	Lube Oil	100
Regrind pinion	Lube Oil	55
Cooler spray system	Lube Oil	55
Plant grease fill system	Lube Oil	300
Side cast fill station	Lube Oil	200
Lube Room **SA12**	Lube Oil	12-55 gal
(2) Filter Press Hydraulic Tanks	Lube Oil	65 gal
(1) Coal Grizzly Hydraulic Tank	Lube Oil	66 gal
Raymond Bowl Mill	Lube Oil	250 gal

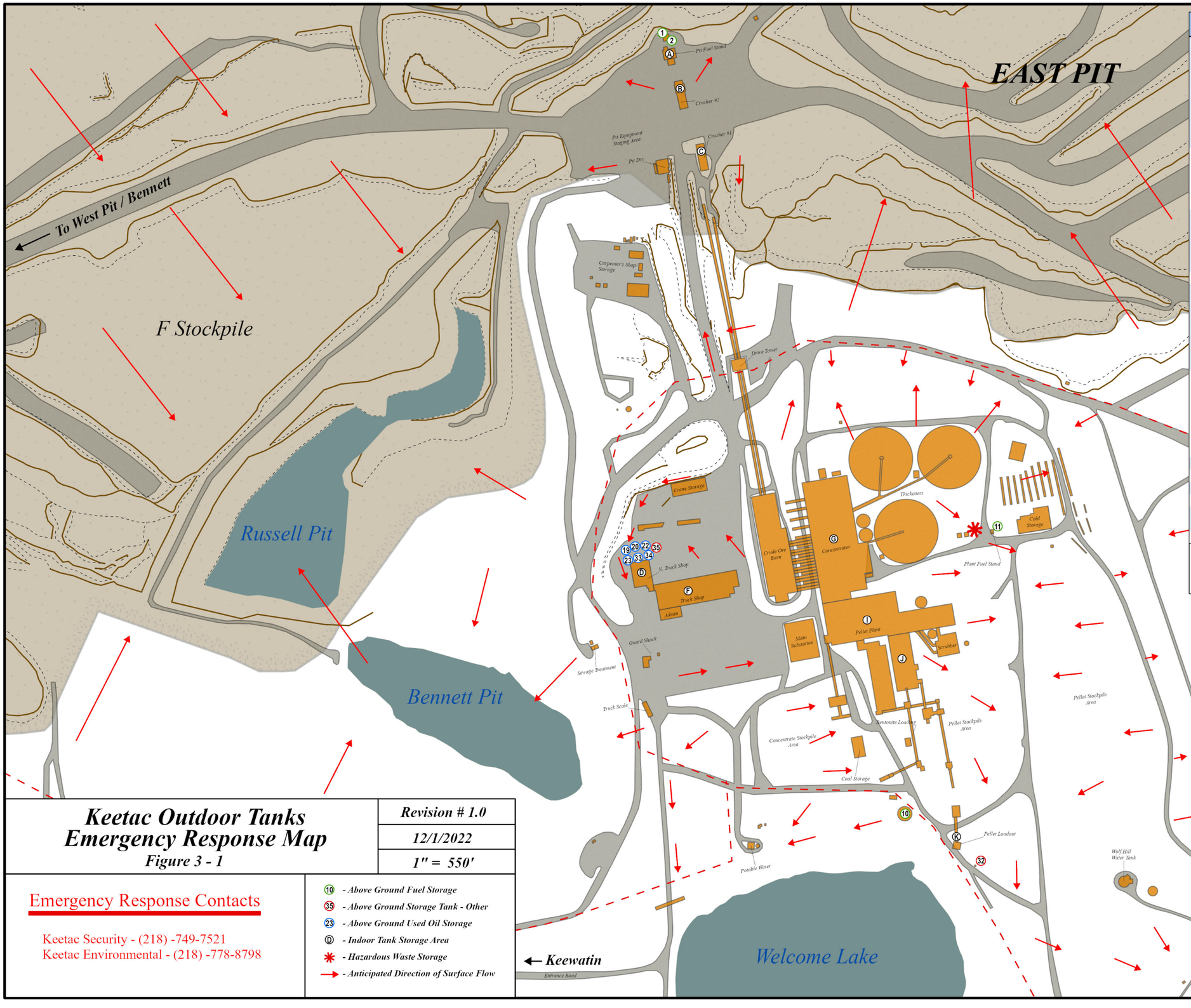
Table 4-6: Shop Oil-Filled Equipment and Portable Oil Storage Listing

Equipment	Substance	Gallons	Location
Keep fill - Repair	Transformer Oil	55	Electric Shop
Portable Oil Dispensers	Motor Oil	2-55 gal	Truck Shop
Portable Oil Dispensers	Motor Oil	2-55 gal	Truck Shop
Portable Oil Dispensers	Motor Oil	2-55 gal	Truck Shop
Small Fleet Maintenance **SA1**	Motor Oil	500	Truck Shop
Large Fleet Maintenance **SA2**	Motor Oil	500	New Truck Shop
Large Fleet Maintenance **SA3**	Motor Oil	2-250	New Truck Shop
Large Fleet Maintenance **SA4**	Motor Oil	2-250	New Truck Shop
Fleet Maintenance- Oil Room **SA5**	misc oils	13-55 gal	Truck Shop

Table 4-7: Oil-Filled Transformer Listing

Transformer Description	Substance	Capacity	Containment
Main Substation: 6 large transformers	non-PCB oil	~3000	none
Wolf Hill : 2 large transformers	non-PCB oil	~3000	none
Pit & Pond: 6 substations	non-PCB oil	~1000	none
Cold Storage: 3 substations	non-PCB oil	~1000	none
10 Portable substations	non-PCB oil	varies	none
R06 Main Substation	non-PCB oil	1800	none
Main Substation: 6 Circuit Breakers	non-PCB oil	1800	none
Cold Storage(Carpenters): 5 transformers	non-PCB oil	40	Diked (inside bldg)
Cold Storage (Carpenters): 1 transformer	non-PCB oil	750	none (near salt shack)
Cold Storage: 2 spares	non-PCB oil	1000	Diked (inside bldg)

FIGURES



Tank Number/ Description	Storage Capacity	Location	Material Stored/ Material of
1	20,000	Pit Fueling Station	Diesel
2	20,000	Pit Fueling Station	Diesel
3	500	Pit Fueling Station	Hydraulic Oil
4	500	Pit Fueling Station	Motor Oil
A 9	500	Pit Fueling Station	Fuel Oil
37	1,000	Pit Fueling Station	Hydraulic Oil
38	1,000	Pit Fueling Station	Lube Oil
53	1000	Pit Fueling Station	DEF
54	1000	Pit Fueling Station	DEF
6	400	Crusher #1 - 6th floor	Lube Oil
39	3,000	Crusher #1 - 3rd Floor	Lube Oil
B 40	3,000	Crusher #1 - 3rd Floor	Lube Oil
45	110	Crusher #1 - 3rd Floor	Hydaulic Oil
43	150	Crusher #1 - 4th Floor	Lube Oil
7	400	Crusher #2 - 6th floor	Lube Oil
44	150	Crusher #2 - 4th Floor	Lube Oil
C 46	110	Crusher #2 - 3rd Floor	Hydaulic Oil
41	3,000	Crusher #2 - 3rd Floor	Lube Oil
42	3,000	Crusher #2 - 3rd Floor	Lube Oil
D 18	560	Truck Shop	Waste Oil
19	6,000	North Truck Shop	Lube Oil
20	6,000	North Truck Shop	Lube Oil
22	2,000	North Truck Shop	Waste Oil
23	2,000	North Truck Shop	Hydraulic Oil
33	2,000	North Truck Shop	T-Oil 30
34	2,000	North Truck Shop	T-Oil 50
35	2,000	North Truck Shop	Antifreeze
27	250	Inside Truck Shop	Lube Oil
28	250	Inside Truck Shop	Motor Oil
29	250	Inside Truck Shoip	Transmission Fluid
F 47	250	Inside Truck Shop	Motor Oil
48	250	Inside Truck Shop	Motor Oil
51	600	Inside Truck Shop	Motor Oil
52	600	Inside Truck Shop	Motor Oil
G 25	1,000	Concentrator	Waste Oil
11	6,000	East of Conc Crane Bay	Fuel Oil
I 50	400	Pellet Plant Burner Floor	Lube Oil
J 24	1,000	Pelletizer	Waste Oil
10 (Permanently Closed)	1,757,860	Pellet Loadout	#2 Fuel Oil
K 49	250	Pellet Plant Loadout	Transmission Fluid
32	10,000	South of Pellet Loadout	MgCl

*Please See Tables 4-3, 4-4, 4-5, 4-6 and 4-7 in Plan for Locations of Oil Filled Equipment and Transformers

Keetac Outdoor Tanks Emergency Response Map

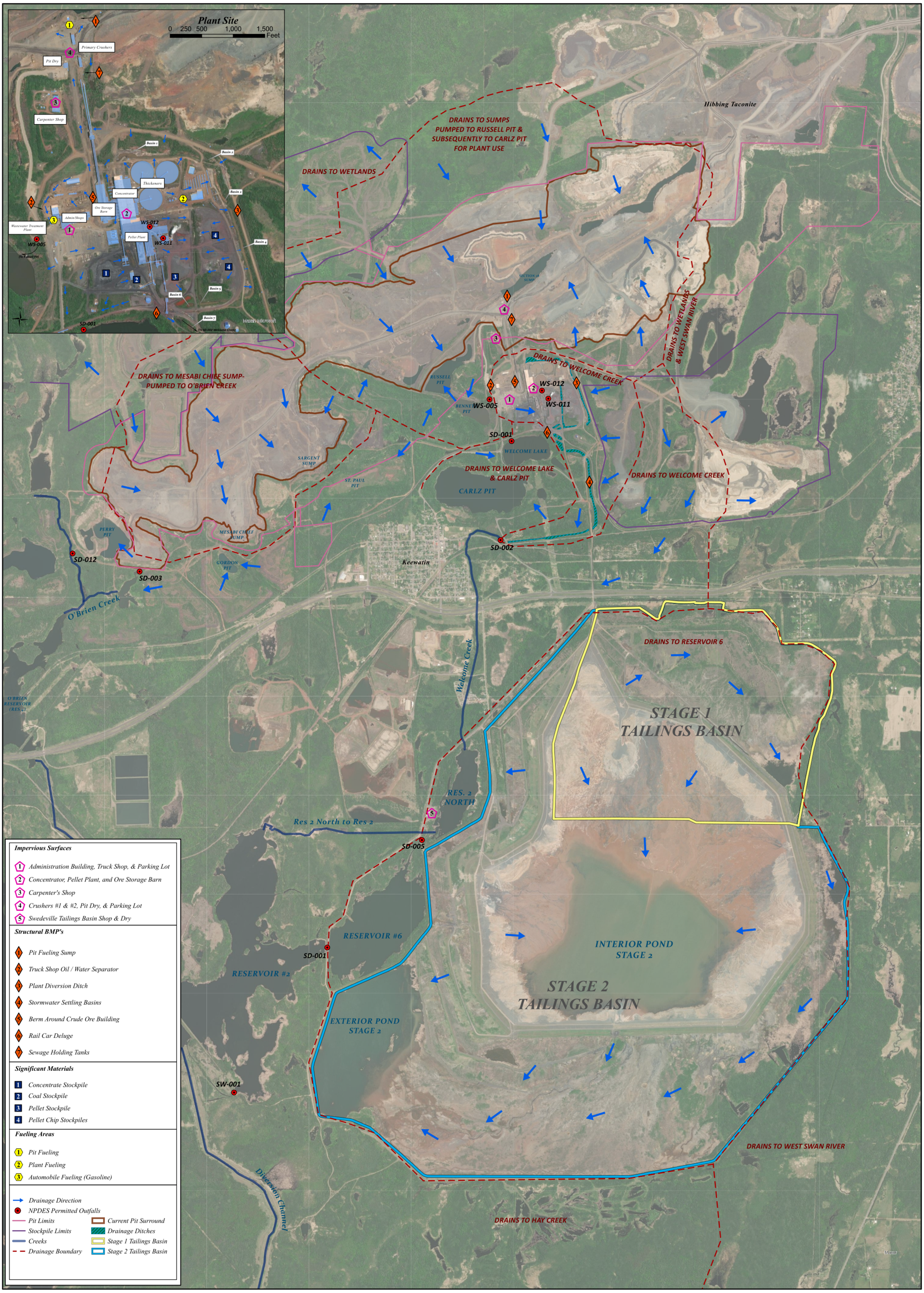
Figure 3 - 1

Revision # 1.0
12/1/2022
1" = 550'

Emergency Response Contacts

Keetac Security - (218) -749-7521
Keetac Environmental - (218) -778-8798

- 10 - Above Ground Fuel Storage
- 35 - Above Ground Storage Tank - Other
- 23 - Above Ground Used Oil Storage
- D - Indoor Tank Storage Area
- ✱ - Hazardous Waste Storage
- → - Anticipated Direction of Surface Flow



U. S. Steel - Keetac

SWPPP MAP

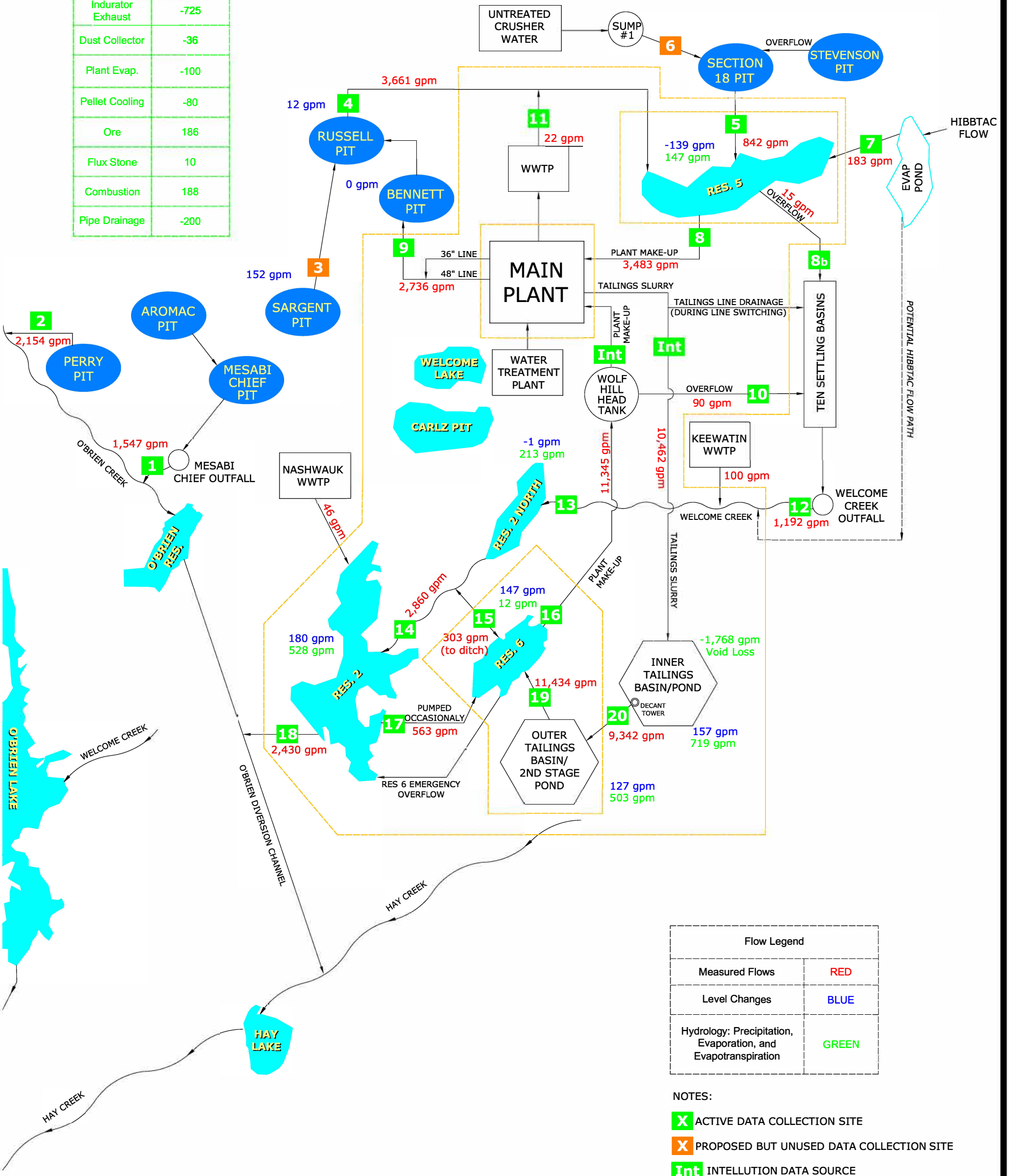
Figure 4-1

0 1,500 3,000 **F** 6,000 9,000 12,000 Feet

Date: 11/12/2021

Revision: 1

Main Plant Miscellaneous Flows	
Flow	gpm
Pellets	-61
Indurator Exhaust	-725
Dust Collector	-36
Plant Evap.	-100
Pellet Cooling	-80
Ore	186
Flux Stone	10
Combustion	188
Pipe Drainage	-200



Flow Legend	
Measured Flows	RED
Level Changes	BLUE
Hydrology: Precipitation, Evaporation, and Evapotranspiration	GREEN

NOTES:

X ACTIVE DATA COLLECTION SITE

X PROPOSED BUT UNUSED DATA COLLECTION SITE

Int INTELLUTION DATA SOURCE

RESERVOIR AND POND WATER ELEVATIONS RECORDED WEEKLY OR BI-WEEKLY TO QUANTIFY WATER LOSS OR GAIN

ON-SITE PRECIPITATION RECORDS MAINTAINED FOR GREATER RAINFALL ACCURACY IN HYDROLOGIC MODELING

DRAWING NOT TO SCALE

LIESCH HYDROLOGISTS•ENGINEERS•ENVIRONMENTAL SCIENTISTS

6000 Gisholt Dr. Suite 203, Madison, WI 53713, (608) 223-1532
13400 15th Avenue N, Minneapolis, MN 55441, (763) 489-3100
4300 N. Miller Rd., Suite 211, Phoenix, Az 85251, (480) 421-0853

U. S. STEEL - KEETAC

JUN 12

KEETAC WATER BALANCE
AUG 1, 2011 THROUGH MAY 31, 2012

FIGURE 4-2

MOK 12/5/08 1=1 WW/94257\CAD\KEETAC BALANCE SCHEMATIC.DWG

APPENDIX A: CERTIFICATION OF SUBSTANTIAL HARM

Facility Name: United States Steel Corporation - Keetac
Keewatin, Minnesota

If the answer to one or more of the following questions is yes, the facility is required to implement a Facility Response Plan (FRP) under the requirements of 40 CFR 112.20 (Section 5.0 of the SPCC Plan). If all answers are no, an FRP is not required and this form should be signed and inserted into the SPCC plan in Appendix A. Every three years, the Certification of Substantial harm should be re- certified as part of the triennial inspection to indicate no change in the status of the site regarding 112.20.

1. Does the facility transfer oil over water to or from vessels (ships) and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

   YES _____ NO __X___

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest above ground oil storage tank plus sufficient freeboard to allow for precipitation within any above ground oil storage tank area?

   YES _____ NO __X___

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   YES _____ NO _X____

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

   YES _____ NO __X___

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

   YES _____ NO __X___

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

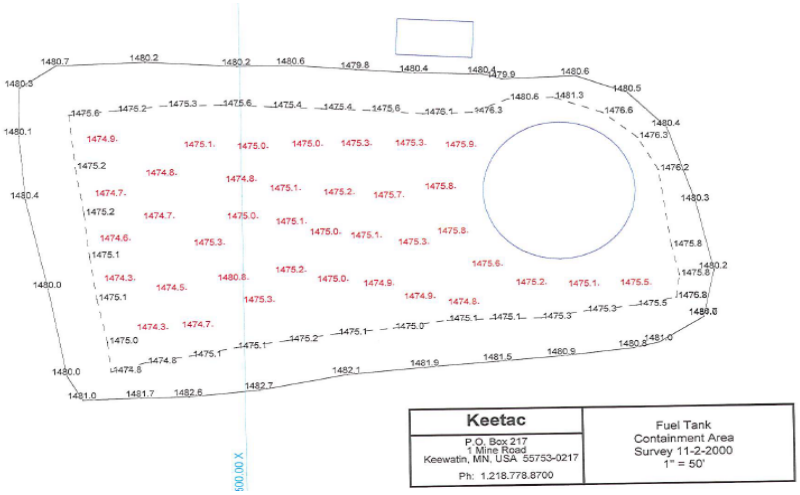
	Plant Manager
Signature	Title
Travis Kolari	
Printed Name of Person Signing	Date

APPENDIX B: CONTAINMENT CALCULATIONS

Area C

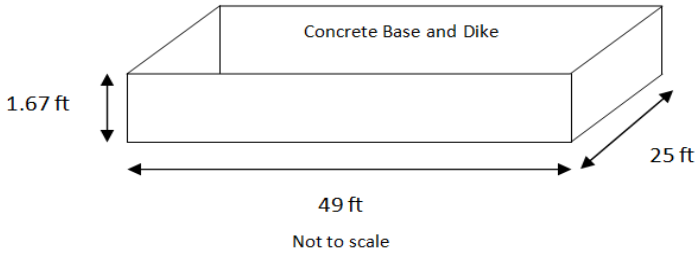
Clay Lined Base and Berm
Contains Tank 10 (1,760,000 gal)
From Finished Surface Elevation Survey:

Contour	Area (ft^2)	Depth (ft)	Volume (ft^3)
<1475	58	0.5	29
1,475.00	16,751.00	1.0	16,751
1,476.00	47,427.00	1.0	47,427
1,477.00	51,816.00	1.0	51,816
1,478.00	55,110.00	1.0	55,110
1,479.00	58,763.00	1.0	58,763
1,480.00	63,528.00	0.96	60,986.88
		Total (ft^3)	290,883
		Total (gal)	2,175,804
Volume Required (110% of Tank #10)			1,936,000



Area F Contains Tanks 19, 20, 22, 23, 33, 34 and 35
Largest tanks are 19, 20 and 21 (6,000 gallons each)

	Height (ft)	1.67
	Length (ft)	49
	Width (ft)	25.00
	Total (ft^3)	2,046
	Total (gal)	15,302
Volume Displaced by Other Tanks		
Tanks 19, 20 and 21:	Length (ft)	21
	Diameter (ft)	7
	Depth within Dike (ft)	0.5
	Volume Displace by three tanks (gal)	200
Tanks 22 and 23:	Diameter (ft)	7
	Depth within Dike (ft)	1.67
	Volume Displace by both tanks (gal)	240
Total Volume Minus Displaced Volume =		14,862
Volume Required (110% of Tank #10)		6,600



Not to scale

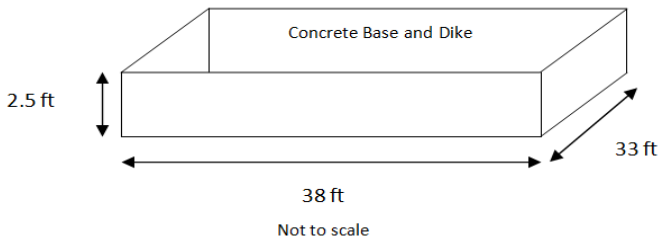
Area H Contains Tanks 1 and 2
Both tanks are 20,000 gallons

Height (ft)	2.5
Length (ft)	38
Width (ft)	33.0
Total (ft^3)	3,135
Total (gal)	23,450

Volume Displaced by Other Tanks

Tanks #2:	Length (ft)	125
	Diameter (ft)	15.75
	Depth within Dike (ft)	1.2
Volume Displace by three tanks (gal)		1,120.00

Total Volume Minus Displaced Volume =	22,330
Volume Required (110% of Tank #10)	22,000



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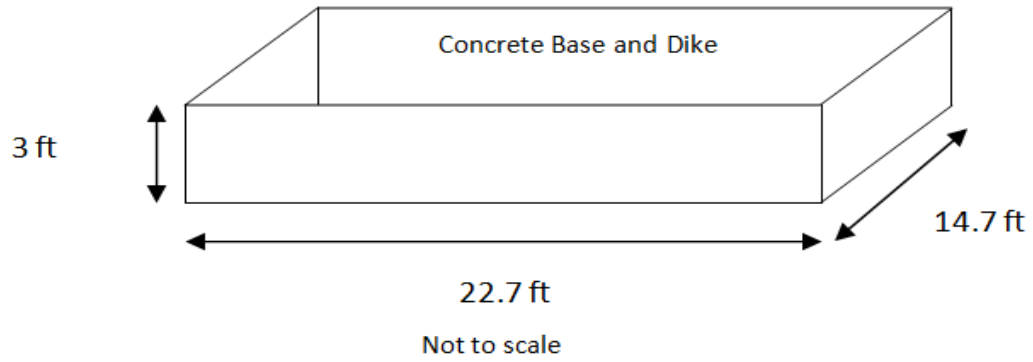
Area I Contains Tank 11

Tank Contains 6,000 gallons

Height (ft)	3.0
Length (ft)	23
Width (ft)	14.7
Total (ft^3)	1,001
Total (gal)	7,488



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APPENDIX C: Weekly Storage Tank Inspection List

DATE: **INSPECTOR:**

WEEKLY Aboveground Storage Tank Inspection

Tank #	Location	Volume	Contents	Comments
1	Pit Fueling Station	20,000	Fuel Oil 1 & 2	
2	Pit Fueling Station	20,000	Fuel Oil 1 & 2	
11	Plant Fueling Area	6,000	Fuel Oil 1 & 2	
19	North Truck Shop	6,000	Lube Oil	
20	North Truck Shop	6,000	Lube Oil	
22	North Truck Shop	2,000	Used Oil	
23	North Truck Shop	2,000	Hydraulic Oil	
32	MgCl – Pellet Loadout	10,000	Magnesium Chloride	
33	North Truck Shop	2,000	Motor Oil	
34	North Truck Shop	2,000	Motor Oil	
35	North Truck Shop	2,000	Antifreeze	

WEEKLY Hazardous Waste Storage Building

Number of Containers		Are containers closed?	Are containers labeled properly?	Do containers need to be shipped? (180 days after date)	Are there any spills or leaks?	Is the storage area free of cracks/debris?	Comments
Haz	Nonhaz						

MONTHLY Underground Storage Tank Sump Check

Are spill catchment basins free of oil, water and/or debris?	Comments

APPENDIX D: Secondary Containment Drainage Log

CONTAINMENT LOCATION	DATE	TIME OF OPENING	TIME OF CLOSING	SIGNATURE
NORTH TRUCK SHOP				
MgCl (Pellet Loadout)				
PLANT FUELING (T-11)				
NONHAZ STORAGE BUILDING				
PIT FUELING STATION				
Comments:				
NORTH TRUCK SHOP				
MgCl (Pellet Loadout)				
PLANT FUELING (T-11)				
NONHAZ STORAGE BUILDING				
PIT FUELING STATION				
Comments:				
NORTH TRUCK SHOP				
MgCl (Pellet Loadout)				
PLANT FUELING (T-11)				
NONHAZ STORAGE BUILDING				
PIT FUELING STATION				
Comments:				