309 East 11th St., Suite 2 • Austin, Texas 78701 • 512.477.1155 • www.citizen.org

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
P.O. Box 13087
Austin, Texas 78711-3087
*Via electronic submission.*

January 30, 2020

**Re: Air Quality Standard Permit, Registration No. 158474, Nomadic Aggregates, LLC**

Public Citizen appreciates the opportunity to provide these comments. We would welcome the opportunity to discuss our recommendations further. Please contact Adrian Shelley at ashelley@citizen.org, 512-477-1155.

**Nomadic Aggregates is sited in an Environmental Justice community**

Nomadic Aggregates is located in a residential neighborhood that is not suited to industrial uses. According to the American Community Survey, there are 1,116 people living within 440 yards of the proposed facility.[1] This is a dense residential community that should not be the site of a concrete batch plant. The community is 86 percent Hispanic with 74 percent of residents non-English speakers at home. Because of the high percentage of non-English speakers, the application should have been noticed in Spanish language publications and the application and all supporting documents should have been provided in Spanish.

Thirty-five percent of neighbors within 440 yards have a household income of $25,000 or less. The high percentage of low-income residents and the majority-minority nature of the population means that this is an environmental justice (EJ) community. The Texas Commission on Environmental Quality does not adequately consider the impacts to environmental justice communities of its permit decisions. EJ communities are particularly vulnerable to air pollution due to lower rates of health insurance, lower overall health, higher rates of asthma and other exacerbating conditions, and cumulative impacts of other neighboring facilities. The TCEQ should consider whether these and other factors present in this EJ community lead considerations of equity and public health to recommend denial of the permit.

**Nomadic Aggregates will create a health hazard in the residential community where it is located**

Concrete batch plants emit several air pollutants, with coarse and fine particulate matter of chief concern among them. Fine particulate matter (PM2.5) consists of particles smaller than 2.5 microns, which is small enough to pass from the lungs directly into the bloodstream. Exposure to particulate matter can cause everything from premature death to heart attacks, stroke, aggravation of asthma, decreased lung function, and an increase in respiratory symptoms such as irritation of the airways, coughing or difficulty breathing. If the concrete batch plant uses feedstocks that contain silica, then exposure to PM pollution from the plant could cause the lung disease silicosis.

[1] *See attached.*

PUBLICCITIZEN
309 East 11th St., Suite 2 • Austin, Texas 78701 • 512.477.1155 • www.citizen.org

Nomadic Aggregates is located in a residential community within the extraterritorial jurisdiction of the City of Houston, which has no city zoning ordinance. We acknowledge that City leadership is partly to blame for a situation in which an industrial facility can be sited next to homes. It must be said that Houston could alleviate this and other similar situations within its jurisdiction by enacting a zoning ordinance.

But even without zoning, it is possible for the TCEQ to use the issuance of a standard permit as an opportunity to work with the applicant to ensure that added controls will protect the health and safety of neighbors. We urge Nomadic Aggregates and the permit technicians at TCEQ to recognize the unique circumstances in Houston and craft a permit and plan for this facility that is as protective as possible of public health.

Concrete batch plant operators have an impressive array of control and mitigation strategies at their disposal. Including paving haul roads, using wet dust suppression, covering storage piles and conveyances, and purchasing electric vehicles with non-polluting engines. An extensive list of siting and mitigation considerations is attached to these comments.

Given Nomadic Aggregates location in a dense residential community and the collocation of other facilities emitting similar pollutants, Nomadic Aggregates should seriously consider all possible control strategies. We urge the applicant and TCEQ to review the attached list and incorporate as many control strategies as possible to reduce pollution and limit impact to a vulnerable community.

**The Cumulative Impacts of nearby industry should be considered**

Nomadic Aggregates is located approximately 1.25 miles east of Integrity Ready Mix, located at 2219 Hartwick Rd, Houston, TX 77093. There are other warehouses and facilities in the area that will contribute to truck traffic, air pollution, nuisance noise and odors, and other conditions not suited to a residential community.

The TCEQ must consider the cumulative impacts of all nearby facilities and sources of air pollution on the community. No air dispersion modeling analysis is required for a standard permit registration, and Nomadic Aggregates has not completed one. Integrity Ready Mix before it also did not complete air dispersion modeling. The fine particulate matter (PM2.5) design value in the region is approximately 10 $\mu g/m^3$, very close to the National Ambient Air Quality Standard (NAAQS) of 12 $\mu g/m^3$. In an area with a dense concentration of facilities all emitting the same pollutant—such as multiple concrete batch plants in a residential neighborhood—it becomes essential to consider cumulative impacts in permitting. Each facility considered in isolation may appear as if it will not cause or contribute to a NAAQS violations, but this becomes less likely as facilities accumulate in a community. The lack of air dispersion modeling of all facilities in the area and the lack of nearby ambient air monitors makes it impossible to determine if the NAAQS is met.

**The Operations Parameters are unclear**

The permit application for Nomadic Aggregates states that the facility will operate 24 hours/day, 7 days/week, 52 weeks/year, and 8760 hours/year. This is continuous operation. The project description by Westward Environmental states that the facility will have a “maximum operating schedule of less than 24

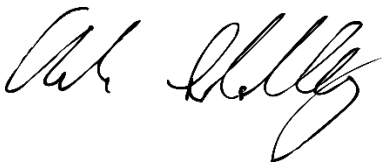
hours per day, 7 days per week, and 52 weeks per year." The maximum production rates for the facility are listed at 300 cubic yards/hour and 300,000 cubic yards/year. If the facility operated at the maximum hourly rate, it would only operate for 1,000 hours before it reached its maximum annual output of 300,000 cubic yards. Similarly, the maximum material mass flow rates are calculated using the same formula of hourly rate * 1,000 hours = yearly rate. The application does not explain how Nomadic Aggregates will limit its production to 300,000 cubic yards each year.

Because the emissions calculations for the facility are presumably based on both the hourly and annual production limits, the permit should clearly demonstrate how the applicant will limit production in order to stay within the annual production cap of 300,000 cubic yards. Will the facility operate all full hourly capacity for only 1,000 hours in a year? Will it operate beneath its full hourly capacity? Will it do both? How will compliance with these various production limits be measured?

**Conclusion**

Again, we appreciate the opportunity to provide these comments. If you wish to discuss the issues raised, please contact Adrian Shelley at ashelley@citizen.org, 512-477-1155.

Respectfully,



Adrian Shelley

Director, Public Citizen's Texas Office

# EJSCREEN ACS Summary Report

Location: User-specified point center at 29.882394, -95.330894
Ring (buffer): 0.25-miles radius
Description: Nomadic Aggregates

| Summary of ACS Estimates | 2013 - 2017 |
|---|---|
| Population | 1,116 |
| Population Density (per sq. mile) | 4,777 |
| Minority Population | 1,013 |
| % Minority | 91% |
| Households | 301 |
| Housing Units | 330 |
| Housing Units Built Before 1950 | 12 |
| Per Capita Income | 12,154 |
| Land Area (sq. miles) (Source: SF1) | 0.23 |
| % Land Area | 100% |
| Water Area (sq. miles) (Source: SF1) | 0.00 |
| % Water Area | 0% |

| | 2013 - 2017 ACS Estimates | Percent | MOE (±) |
|---|---|---|---|
| **Population by Race** | | | |
| Total | 1,116 | 100% | 618 |
| Population Reporting One Race | 1,095 | 98% | 1,116 |
| White | 920 | 82% | 614 |
| Black | 40 | 4% | 96 |
| American Indian | 2 | 0% | 16 |
| Asian | 0 | 0% | 13 |
| Pacific Islander | 0 | 0% | 13 |
| Some Other Race | 133 | 12% | 364 |
| Population Reporting Two or More Races | 21 | 2% | 99 |
| Total Hispanic Population | 965 | 86% | 590 |
| Total Non-Hispanic Population | 151 | | |
| White Alone | 103 | 9% | 181 |
| Black Alone | 40 | 4% | 96 |
| American Indian Alone | 2 | 0% | 16 |
| Non-Hispanic Asian Alone | 0 | 0% | 13 |
| Pacific Islander Alone | 0 | 0% | 13 |
| Other Race Alone | 2 | 0% | 13 |
| Two or More Races Alone | 4 | 0% | 30 |
| **Population by Sex** | | | |
| Male | 583 | 52% | 296 |
| Female | 533 | 48% | 403 |
| **Population by Age** | | | |
| Age 0-4 | 86 | 8% | 154 |
| Age 0-17 | 321 | 29% | 294 |
| Age 18+ | 796 | 71% | 295 |
| Age 65+ | 116 | 10% | 97 |

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2013 - 2017 .

# EJSCREEN ACS Summary Report

Location: User-specified point center at 29.882394, -95.330894
Ring (buffer): 0.25-miles radius
Description: Nomadic Aggregates

| | 2013 - 2017 ACS Estimates | Percent | MOE (±) |
|---|---|---|---|
| **Population 25+ by Educational Attainment** | | | |
| Total | 674 | 100% | 312 |
| Less than 9th Grade | 190 | 28% | 150 |
| 9th - 12th Grade, No Diploma | 153 | 23% | 132 |
| High School Graduate | 207 | 31% | 182 |
| Some College, No Degree | 100 | 15% | 99 |
| Associate Degree | 30 | 4% | 53 |
| Bachelor's Degree or more | 23 | 3% | 55 |
| **Population Age 5+ Years by Ability to Speak English** | | | |
| Total | 1,030 | 100% | 547 |
| Speak only English | 264 | 26% | 246 |
| Non-English at Home[1+2+3+4] | 766 | 74% | 427 |
| [1]Speak English "very well" | 192 | 19% | 293 |
| [2]Speak English "well" | 260 | 25% | 258 |
| [3]Speak English "not well" | 130 | 13% | 160 |
| [4]Speak English "not at all" | 184 | 18% | 185 |
| [3+4]Speak English "less than well" | 314 | 30% | 226 |
| [2+3+4]Speak English "less than very well" | 574 | 56% | 341 |
| **Linguistically Isolated Households*** | | | |
| Total | 133 | 100% | 123 |
| Speak Spanish | 133 | 100% | 122 |
| Speak Other Indo-European Languages | 0 | 0% | 13 |
| Speak Asian-Pacific Island Languages | 0 | 0% | 13 |
| Speak Other Languages | 0 | 0% | 13 |
| **Households by Household Income** | | | |
| Household Income Base | 301 | 100% | 105 |
| < $15,000 | 70 | 23% | 91 |
| $15,000 - $25,000 | 37 | 12% | 85 |
| $25,000 - $50,000 | 94 | 31% | 112 |
| $50,000 - $75,000 | 54 | 18% | 81 |
| $75,000 + | 47 | 16% | 69 |
| **Occupied Housing Units by Tenure** | | | |
| Total | 301 | 100% | 105 |
| Owner Occupied | 182 | 61% | 96 |
| Renter Occupied | 119 | 39% | 104 |
| **Employed Population Age 16+ Years** | | | |
| Total | 839 | 100% | 418 |
| In Labor Force | 475 | 57% | 305 |
| Civilian Unemployed in Labor Force | 45 | 5% | 100 |
| Not In Labor Force | 364 | 43% | 302 |

**Data Note:** Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

# EJSCREEN ACS Summary Report

Location: User-specified point center at 29.882394, -95.330894
Ring (buffer): 0.25-miles radius
Description: Nomadic Aggregates

| | 2013 - 2017 ACS Estimates | Percent | MOE (±) |
|---|---|---|---|
| **Population by Language Spoken at Home*** | | | |
| Total (persons age 5 and above) | N/A | N/A | N/A |
| English | N/A | N/A | N/A |
| Spanish | N/A | N/A | N/A |
| French | N/A | N/A | N/A |
| French Creole | N/A | N/A | N/A |
| Italian | N/A | N/A | N/A |
| Portuguese | N/A | N/A | N/A |
| German | N/A | N/A | N/A |
| Yiddish | N/A | N/A | N/A |
| Other West Germanic | N/A | N/A | N/A |
| Scandinavian | N/A | N/A | N/A |
| Greek | N/A | N/A | N/A |
| Russian | N/A | N/A | N/A |
| Polish | N/A | N/A | N/A |
| Serbo-Croatian | N/A | N/A | N/A |
| Other Slavic | N/A | N/A | N/A |
| Armenian | N/A | N/A | N/A |
| Persian | N/A | N/A | N/A |
| Gujarathi | N/A | N/A | N/A |
| Hindi | N/A | N/A | N/A |
| Urdu | N/A | N/A | N/A |
| Other Indic | N/A | N/A | N/A |
| Other Indo-European | N/A | N/A | N/A |
| Chinese | N/A | N/A | N/A |
| Japanese | N/A | N/A | N/A |
| Korean | N/A | N/A | N/A |
| Mon-Khmer, Cambodian | N/A | N/A | N/A |
| Hmong | N/A | N/A | N/A |
| Thai | N/A | N/A | N/A |
| Laotian | N/A | N/A | N/A |
| Vietnamese | N/A | N/A | N/A |
| Other Asian | N/A | N/A | N/A |
| Tagalog | N/A | N/A | N/A |
| Other Pacific Island | N/A | N/A | N/A |
| Navajo | N/A | N/A | N/A |
| Other Native American | N/A | N/A | N/A |
| Hungarian | N/A | N/A | N/A |
| Arabic | N/A | N/A | N/A |
| Hebrew | N/A | N/A | N/A |
| African | N/A | N/A | N/A |
| Other and non-specified | N/A | N/A | N/A |
| Total Non-English | N/A | N/A | N/A |

**Data Note:** Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2013 - 2017.
*Population by Language Spoken at Home is available at the census tract summary level and up.

**CONCRETE BATCH PLANTS**
**MITIGATION TECHNIQUES**

**Noise management measures:**

- Temporary acoustic barriers for static activities where necessary and practicable
- Well maintained plant and equipment which complies with EU noise emission limits
- Selection of quieter plant
- Reduction of need for reversing of equipment
- Acoustic covers on plant and equipment to be closed at all times
- Materials to be delivered to site during daytime where possible. Vehicle movements during the night may be required due to the constraints imposed by the need for tidal working, but this will be limited where possible
- Specific training to all personnel regarding noise reduction
- Minimizing drop heights of materials
- No idling engines
- No use of vehicle horns except in an emergency
- Limit noise at night and in the early morning .
- Use broadband reversing alarms on trucks and front-end loaders .
- Enclose stationary noise sources such as compressors, motors and pumps .
- Use acoustic screens or barriers around noise sources such as aggregate loading bins, truck loading bays or slumping stands .

Structural Strategies to reduce noise include:

- Strategically locate plant and significant noise sources, such as the truck rinse/slump rack and aggregate handling facilities, to minimize possible disturbance to existing and potential future neighbors.
- Construct berms, sound walls or solid fencing to serve as effective sound barriers for the plant.
- Plant vegetation to serve as sound barriers for the plant.

Operational Strategies to reduce noise include:

- Replace buzzers, horns and/or loudspeakers with lights and directional arrows.
- Set truck backup alarms to minimum legal limit.
- Only use silo and baghouse vibrators during normal work hours.

**Lighting impacts:**

- Safe and suitable for the task.
- Directed towards the working area and A way from site boundaries to minimize light spill
- Switched off when not required (this will also help to save energy).
- Regularly assessed for need and appropriateness.

Dust Source Control Measures

Traffic

- All construction traffic will follow routes that minimize travel distance and avoid residential areas where possible
- Speed limits will be put into place on site for all vehicular movements of 5mph on unsurfaced site roads and 10mph on properly surfaced and maintained site roads.
- All vehicles carrying loose material will be covered.
- Reducing the need for vehicle movements through residential areas where possible.
- Site visitors and operatives to be discouraged from car use and encouraged to walk or cycle. In poor weather, the use of minibus may be required to transport operatives to/from the site.
- Minimizing the requirement for night transport.
- All operatives will be advised to drive considerately, at sensible speeds and with due care for other road users, including cyclists and pedestrians.
- Regular reminders of these requirements will be given.
- Adequate safety signage in the vicinity of the site entrance to warn road users and remind operatives of the need for careful driving and vigilance.
- Use of a road sweeper to ensure that road movements associated with the concrete batching plant do not give rise to mud or materials on the roads.
- Wheelwashing facilities will also be provided if required.

Employee Parking

- Designate reserved parking spaces for carpool vehicles (2 or more passengers.) The number of designated carpool spaces should be equal to at least 5% of the total parking capacity, or 2 parking spaces, whichever is greater.
- Designate reserved parking spaces for hybrid and/or alternative fuel vehicles. The number of designated hybrid and/or alternative fuel vehicle spaces should be equal to at least 5% of the total parking capacity, or 2 parking spaces, whichever is greater.
- Facilitate a vanpool program to reduce single occupant vehicle use and/or develop a carpooling program and provide assistance in coordinating rideshares for employees
- Have a plant location within ¼ mile of a commuter rail station, subway
- station or bus station.
- Provide at least one incentive to encourage employees to use public transportation or alternate transportation modes. Potential incentives could
- include transit pass or vanpool subsidies, purchase of public transportation passes on a pretax basis or an Emergency Ride Home program to assist employees who carpool to leave work in the event of an emergency.

Highways

- Where appropriate, use of road sweepers will be incorporated to ensure highways remain clear of dust and mud.

- Road edges and pathways will be swept by hand and damped down as necessary.
- Retrofit trucks using engines that meet current emissions standards.
- Track fleet maintenance intervals.
- Park vehicles and maintain equipment in the same locations, to help locate spills and leaks.
- Pave parking and maintenance areas where possible.
- Use alternative fuels and/or high-efficiency fuel types such as ultra low sulfur diesel/biodiesel and/or natural gas.
- Require NRMCA truck certification, or equivalent, for all trucks.

Process source emissions reduction strategies include:

- Regulate the loading rate of materials (loading more slowly may reduce dust emissions).
- Regulate the loading sequence of materials.
- Enclose the batch plant.
- Develop and post procedures for delivery and off-loading of cement and aggregate.

Batching, Slumping, and delivery strategies

- Roof and enclose truck loading bays .
- Install dust control equipment at loading bays .
- Use recycled water for slumping .
- Use wheel-wash facilities to stop the spread of waterway contaminants .

Process source emissions control devices (in good working order) include:

- Silo top baghouse or central vacuum collector system for cement/SCM silos.
- Silo overfill warning system (high bin indicators) for cement/SCM silos.
- Pinch valve, alarm system, or other high pressure protection system for cement/SCM silos.
- Batcher filter vent or central dust collector at weight batcher(s).
- Underground or covered transfer for coarse and fine aggregates.
- Adjustable boot at truck loading hopper or mixer loading.
- Shroud or central dust collector at truck loading hopper (dry batch plant).
- Spray bar used at truck loading hopper (dry batch plant).
- Central dust collector or baghouses at central mixer (central mix plant).
- Dust collected in the filter system should be recycled back into the respective silo storage

Fugitive dust emissions reduction strategies include:

- Dust suppression with water spray on plant roadways and yard.
- Plant enclosure.
- Post and enforce a speed limit of 5 mph (8 km/h) on plant grounds.
- Pave roadways and necessary process areas.
- Sweep paved areas with vacuum sweeper or mist paved areas.

- Use chlorides or other dust control chemicals on unpaved process areas where allowed by applicable regulatory agencies.
- Add vegetative cover on non-paved plant grounds.
- Cover conveyor belts(s).
- Install drive-over hopper(s).
- Install underground aggregate bunkers.
- Enclose aggregate stockpiles in bins (the height of the enclosed stockpiles should not exceed the height of the bins).
- Sprinkle coarse and lightweight aggregate stockpiles.
- Use of water sprays to damp down dry/dusty working areas as required.
- Suppression activity to be increased during dry and/or windy periods.
- Use of hoardings and/or sheeting of stockpiles to reduce dust migration.
- Deliveries of dusty materials to be sprayed with water
- Keep cement and fly ash out of stormwater drains and waterways .
- Prevent storage silos from overfilling with an automatic shutdown switch .
- Use equipment such as a reverse pulse filter to control dust from storage silos .
- Install an emergency shutdown on storage silos to prevent spills .
- Dampen materials being delivered to control dust .
- Shield stockpiles from the wind or store them in bins .
- Enclose or cover conveyors and fit them with belt cleaners .
- Clean up spilt material immediately to prevent contamination of waterways .

Monitoring

- Review and Monitoring of potential dust sources and control & mitigation measures to be undertaken on regular basis, both on and off site to ensure no migration of dust. Monitoring will check for visible signs of dust emissions and deposition originating from site.
- Regular reviews of mitigation methodology to be undertaken by Environmental
- Manager and Project Manager for site.

Water Management

- Minimize the use of fresh water.
    - Encourage specifications for water in accordance with ASTM C 1602, maximizing use of recycled water.
    - Implement and/or increase the use of water reducing chemical admixtures (water reducers, high and mid-range superplasticizers, etc.).
    - Optimize mix proportions to minimize the amount of cement, SCM, and water in the mix
- Limit the generation of process water.
    - reducing overfilling of mixer truck water tanks, reducing water used to wash out mixer drums and reducing water for truck exterior washing.
- Collect, treat, and reuse as much process water as possible.
    - Implement a program to reuse/recycle process water in plant operations to supplement fresh water from municipal, surface water, or groundwater

sources. This could include process water reuse in concrete batching, washing activities and dust control.

- Manage stormwater to prevent commingling with process water or otherwise becoming polluted.
    - Implement a program to prevent the commingling of stormwater and process water that results in the generation of additional process water. This could include curbing and grading the site to prevent the commingling of process water and stormwater.
    - For process water that is discharged, implement site features to ensure that the discharge complies with all aspects of the discharge requirements of the plant's permit. If appropriate, establish a settling basin system with appropriate solids removal facility, pH treatment area, and discharge location. Line sedimentation basins to minimize potential seepage. It may be helpful to engage an environmental manager or consultant about establishing a new or modifying an existing process water treatment system. An alternative might be to use slatted conveyor belts to remove solids from process water. Diatomaceous earth rollers and flocculants may serve similar purposes.
    - Structural strategies that will help minimize the commingling of stormwater with process water include:
        - Provide paved, curbed and appropriately graded surfaces at the following main process locations:
          i. Truck loading
          ii. Truck rinse station
          iii. Truck slump rack
          iv. Truck washout area, preferably lined
          v. Reclaiming unit area
          vi. Reclaimed solids storage area
          vii. Returned concrete processing area
          viii. Aggregate storage bins
        - Install and maintain underground stormwater drainage system (catch basins and pipes).
    - Operational strategies that will help minimize the commingling of stormwater with process water include:
        - Minimize traffic, vehicle and employee, through process water collection areas.
        - Appropriately locate and/or contain aggregate stockpiles.
- Collect and use stormwater for batching and other plant operations.
    - Ensure that stormwater leaving the concrete plant site (being discharged) is as clean as possible by avoiding contact with source materials and is in compliance with all discharge requirements of the plant's stormwater discharge permit.
    - Avoid commingling of stormwater with process water.
    - Collect stormwater whenever possible to supplement fresh water obtained from municipal, surface water or groundwater sources, a technique known as stormwater harvesting.

Successful management of chemical and petroleum products in a ready mixed concrete plant should incorporate, but is not limited to, the following elements:
• Designated contacts and emergency coordinators
Order and store chemicals in the smallest quantities possible .
• Store chemicals (including admixtures) and fuel within a bunded, covered and signed area .
• Always clearly label all chemicals and keep safety data sheets .
• Prepare a spill response plan and keep clean-up equipment close to chemical and fuel storage areas
• Properly designed and maintained facilities for storage and transfer
• Adequate spill containment
• Adequate spill cleanup supplies and equipment
• Periodic inspections
• A documented employee training plan
• Established emergency response procedures

Best management practices for chemical and petroleum product management include:

- Provide overfill alarms on all ASTs and USTs.
- Provide spill containment (curbing or a fuel port) at AST, or underground tank fill locations.
- Provide breakaway hose connections at fueling stations.
- Pave the truck/equipment fueling area.
- Provide adequate lighting at fueling stations.
- Provide and clearly label the emergency shut off switch at the fueling station.
- Provide security fencing of the plant perimeter or at a minimum for all required exterior petroleum storage tanks, pumps, piping, and hoses.
- Protect ASTs from impact by installing bollards or other barriers.
- Store admixture tanks in a covered or enclosed location.
- Clearly identify and label the contents of all tanks and drums.
- Maintain emergency response equipment, materials, and an Emergency Spill Kit in a central and accessible location.

Strategies for secondary containment include:

- Provide appropriately sized secondary containment for all petroleum products and chemicals.
- Provide a locking valve at all secondary containment discharge locations.

Develop an Employee Training Program for chemicals and petroleum products. This should include:

- Review of MSDS sheet terminology and sheet location.
- Review of site plan and storage locations for chemicals and petroleum products.
- Provide written safety and handling requirements of chemicals and petroleum products.
- Review locations of spill response and personal protective equipment.
- Provide written emergency contact list in the event of a spill.

Write and post Emergency Response Procedures (or equivalent) for chemical and petroleum product spills. This should include:

- Written emergency contact list (including 24 hr phone numbers) of plant personnel or other emergency contacts.
- Verbal and written notification requirements for federal, state, and local agencies in the event of a spill or discharge (including the information required to be submitted in the report).
- Designated Emergency Spill Coordinator and Alternate Emergency Spill Coordinator responsible for ensuring the reports are submitted in a complete and timely manner.
- Step-by-step response procedures in the event of a spill.